

CONVENCIÓN SOBRE EL COMERCIO INTERNACIONAL DE ESPECIES  
AMENAZADAS DE FAUNA Y FLORA SILVESTRES



Vigésimo sexta reunión del Comité de Flora  
Ginebra (Suiza), 5 – 9 de junio de 2023

Conservación y comercio de especies

Flora

PRODUCTOS QUE CONTIENEN ESPECÍMENES DE ORQUÍDEAS DEL APÉNDICE II  
(ORCHIDACEAE SPP.)

1. Este documento ha sido preparado por la Secretaría.
2. En su 19ª reunión (Ciudad de Panamá, 2022), la Conferencia de las Partes adoptó las Decisiones 19.246 a 19.248 sobre *Productos que contienen especímenes de orquídeas del Apéndice II (Orchidaceae spp.)*, como sigue:

***Dirigida a la Secretaría***

**19.246** *La Secretaría deberá:*

- a) *presentar los resultados del estudio sobre el comercio internacional de orquídeas comestibles (documento informativo CoP19 Inf. 9) a la consideración del Comité Permanente, junto con recomendaciones sobre cómo se puede aplicar mejor la Convención para las especies en cuestión.*
- b) *sujeto a la disponibilidad de financiación externa, consultar a las Partes y realizar un estudio para recopilar un resumen de los taxones de orquídeas del Apéndice II que son particularmente afectados por la extracción del medio silvestre para el comercio internacional a fin de aportar información para las evaluaciones siguientes:*
  - i) *una evaluación de las repercusiones para la conservación de eximir de las disposiciones de la CITES a los taxones reproducidos artificialmente de orquídeas del Apéndice II, incluso como se establece en la anotación de la nota de pie de página 10 (después de la CoP19, Anotación de la nota de pie de página P3) en los Apéndices de la CITES, teniendo en cuenta los problemas de identificación y de semejanza; y*
  - ii) *una evaluación de las repercusiones para la conservación de eximir de las disposiciones de la CITES a los derivados y/o productos acabados de determinados taxones de orquídeas incluidos en el Apéndice II mediante enmiendas de la anotación #4; e*
- c) *informar al Comité de Flora.*

***Dirigida al Comité de Flora***

**19.247** *El Comité de Flora deberá considerar los estudios realizados con arreglo a la Decisión 19.246 y formular recomendaciones acerca de cómo mejorar la aplicación de la CITES para las orquídeas incluidas en el Apéndice II al Comité Permanente o a la Conferencia de las Partes, según proceda.*

## **Dirigida al Comité Permanente**

**19.248** *El Comité Permanente deberá examinar las recomendaciones del Comité de Flora y formular recomendaciones a la Conferencia de las Partes, según proceda.*

### Progresos en la aplicación del párrafo a) de la Decisión 19.246

3. De conformidad con el párrafo a) de la Decisión 19.246, la Secretaría ha incluido en los anexos 1 y 2 del presente documento el estudio titulado *A Review of the Edible Orchid Trade* [Estudio del comercio de orquídeas comestibles] y su Anexo 2, que fueron presentados a la Conferencia de las Partes en el documento informativo CoP19 Inf. 9 y su Anexo 2. La Secretaría encargó a Royal Botanic Gardens Kew (RBG Kew) en abril de 2022 que realizara el estudio con financiación suiza y realizó contribuciones a los autores durante la preparación del estudio. En este se enumeran las especies de orquídeas documentadas como comestibles, se recopila información sobre el comercio internacional de productos alimenticios que contienen especímenes de orquídeas, se analiza si ese comercio está registrado en la Base de datos sobre el comercio CITES y se examina la información disponible sobre los efectos de ese comercio sobre la conservación.
4. En el estudio se señala que 374 especies de orquídeas están documentadas como comestibles en las referencias bibliográficas. Los tubérculos subterráneos de 188 de estas especies se extraen para elaborar productos alimenticios y se comercializan con los nombres de “salep” o “chikanda”:
  - a) El comercio de salep se produce principalmente en Oriente Próximo y Medio, pero este producto también se comercializa a través de Internet y se puede encontrar en todo el mundo. Se informa de que existen empresas comerciales a gran escala en Türkiye, donde se concentra la mayor demanda. Los principales países en los que se extraen orquídeas para elaborar salep son Albania, Grecia, la República Islámica del Irán y Türkiye. Los principales géneros recolectados para estos fines son *Dactylorhiza*, *Ophrys* y *Orchis*.
  - b) Al parecer, la chikanda se comercializa ampliamente en mercados y redes regionales de África central. La demanda principal se produce en Zambia, que se abastece principalmente de la República Unida de Tanzania, Malawi y los países fronterizos. Los informes indican que la demanda de este producto está en aumento y las transacciones se producen cada vez más con fines comerciales. Los principales géneros que se recolectan para estos fines son *Disa*, *Habenaria* y *Satyrium*.
5. La información disponible indica que los tubérculos de orquídeas que se extraen son silvestres y que se destruye toda la planta; además, se recolectan muchas decenas de millones de ejemplares cada año y también se extraen otros taxones de orquídeas tuberosas de forma bastante indiscriminada en caso de no encontrar los géneros preferidos. De las 374 especies de orquídeas comestibles que se citan en el estudio que figura en el Anexo 1, solo unas cuantas han sido evaluadas en la Lista Roja de la UICN. De estas, el resultado más común de la evaluación ha sido la clasificación de “Preocupación Menor”. No obstante, al menos 63 especies de orquídeas comestibles están clasificadas como amenazadas en evaluaciones de Listas Rojas nacionales o regionales. Se ha informado sobre graves disminuciones locales y regionales de orquídeas, incluso dentro de áreas protegidas, en Estados del área de distribución tales como Malawi, la República Islámica del Irán, la República Unida de Tanzania, Türkiye y Zambia.
6. Es interesante señalar que las investigaciones recientes indican que el comercio internacional de salep podría ser más complejo y valioso y producirse a una escala más mundial de lo que se pensaba anteriormente. Masters et al. (2020) encontraron 244 solicitudes de patentes que hacían referencia al Salep entre 1855 y 2018, con un aumento considerable de las solicitudes a partir de 1985. De estas, se concedieron 89 patentes. Los Estados Unidos de América son la jurisdicción geográfica con el mayor número de solicitudes, seguidos solicitudes calificadas como “mundiales” y solicitudes de China, Alemania y el Japón. En las solicitudes se hace referencia al salep en el contexto de innovaciones en los siguientes ámbitos, entre otros: agentes coloidales, aplicaciones dentales, explosivos, sistemas de levantamiento por gas relacionados con la perforación y la fracturación hidráulica, aceites industriales, intubación médica, nutracéuticos, formulaciones farmacéuticas, textiles y floculantes para aguas residuales. Se citan cinco especies de orquídeas como componentes del salep en al menos 30 solicitudes: *Orchis mascula*, *O. militaris*, *Anacamptis morio*, *A. pyramidalis* y *Platanthera bifolia*. También se mencionan los géneros *Aceras*, *Dactylorhiza*, *Himantoglossum*, *Neotinea*, *Ophrys* y *Serapias*.
7. Aunque este comercio internacional de los productos de orquídeas tuberosas debería estar regulado en el marco de la CITES, al parecer se registra muy poco de este comercio o ninguno en la Base de datos sobre

el comercio CITES. Según se describe, casi todos los aspectos de este comercio son opacos. Es importante observar que el estudio indica que la mayor parte de este comercio internacional se está produciendo sin que sea regulado por las disposiciones de la CITES y que, al parecer, se han producido graves disminuciones locales de algunos géneros de orquídeas tuberosas que son objeto de este comercio en los Estados del área de distribución de África central y Oriente Próximo y Medio.

8. Como se señala en las observaciones de la Secretaría sobre el documento CoP19 Doc. 86, la Secretaría considera que se deberían tomar medidas para atajar esta cuestión. El Comité de Flora, al aplicar la Decisión 19.247, podría formular recomendaciones al Comité Permanente sobre cómo mejorar la aplicación de la CITES y hacer que este comercio se ajuste al marco reglamentario de la CITES.

En lo que respecta al párrafo b) de la Decisión 19.246

9. La Secretaría calcula que el costo del estudio mencionado en el párrafo b) de la Decisión 19.246 asciende a 40.000 dólares de los EE. UU. En el momento de redactar este informe, aún no se habían obtenido estos recursos externos (véase la Notificación a las Partes No. 2023/024, *Situación de la financiación destinada a la aplicación de las decisiones en vigor después de la CoP19*). La Secretaría preparó el proyecto de mandato del estudio a partir de la decisión (Anexo 3) y agradecería recibir asesoramiento del Comité de Flora sobre el mandato y el alcance más adecuado para el estudio.

Recomendaciones

10. Se invita al Comité de Flora a:
  - a) examinar el presente documento y sus anexos;
  - b) asesorar a la Secretaría sobre el proyecto de mandato del estudio al que se hace referencia en el párrafo b) de la Decisión 19.246, incluyendo el alcance más adecuado; y
  - c) de conformidad con la Decisión 19.247, formular recomendaciones al Comité Permanente o a la Conferencia de las Partes, según proceda, sobre cómo mejorar el cumplimiento de la CITES en lo que respecta a las orquídeas incluidas en el Apéndice II.

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA

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Nineteenth meeting of the Conference of the Parties  
Panama City (Panama), 14 – 25 November 2022

A REVIEW OF EDIBLE ORCHID TRADE

1. This information document is submitted by the Secretariat in relation to document CoP19 Doc. 86 on *Products containing specimen of Appendix-II orchids*.\*
2. The report of the study on international trade in edible orchids commissioned by the Secretariat in support of the implementation of Decision 18.237 and referred to in draft Decision 19.AA in paragraph E of the Secretariat's comments is attached as an Annex to the present information document.

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# A Review of the Edible Orchid Trade

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Royal Botanic Gardens  
**Kew**



Department  
for Environment  
Food & Rural Affairs



## A Review of the Edible Orchid Trade

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## Executive summary

The entire orchid family is listed on CITES to ensure international trade is not detrimental to wild populations. It is the largest family listed with at least 30,000 species. Despite this listing, CITES signatories are aware there are implementation issues in enforcing legal orchid trade.

Orchids are used for food, medicine, cosmetics, and ornamental purposes. Due to the enormity of orchid collection, compiling a list of all orchids in trade has been difficult. This review focuses on one use type of orchids (food, including food additives), identifying those that are edible, their uses and existing trade to provide an understanding of orchid use regionally and globally with a view to providing a starting point for the facilitation of legal trade.

The primary aim of this study is to review the international trade in, and conservation impacts of, food products containing orchid specimens with a focus on chikanda use in Africa and salep use in Central Asia and Europe. An additional aim is to identify other orchids documented as being edible.

This was a desk-based study which included a literature search, trade search using manual crawling techniques and an automated algorithm, and the inclusion of qualitative data from key experts. The project brought together specific CITES knowledge and orchid consumption and trade expertise.

The literature identified 374 edible orchids. Those with documented use for the products known and traded as chikanda and salep accounted for just under half of all identified with 186 species and 188 identified as 'Edible'. For many of the other species, the literature did not provide documentation of use, only edibility. For those with use documentation, it was not always clear if the historical use is currently in practice. Most edible orchid species did not have an IUCN Red List assessment. Of those that did, most were categorised as Least Concern. Of those that did not, many had a national or regional assessment completed, with 63 being categorised as Threatened.

Chikanda, a food "cake" made with ground terrestrial orchid tubers, is eaten across several African countries, predominately Zambia. The genera most used to make chikanda are *Disa*, *Satyrium* and *Habenaria*. Salep, a powder also made from ground terrestrial orchid tubers, is used in Iran, Greece and predominately Turkey. The genera most utilized when making salep were *Ophrys*, *Dactylorhiza*, and *Orchis*.

Both chikanda and salep are made with terrestrial tubers which are exclusively taken from the wild. They are largely collected indiscriminately, with the destruction of the whole plant. Species level identification is difficult for collectors who rely on tuber traits such as taste and texture rather than above-ground plant characteristics to determine whether they are suitable for trade. There was evidence of some knowledge of the need for and the success of some small-scale sustainable harvesting, as well as the use of substitute ingredients for salep. However, while chikanda tuber collectors noted the scarcity of edible orchids, evidence suggests they travel much longer distances to harvest rather than attempt sustainable harvesting. In addition, the protection of areas such as national parks has not prevented the harvesting of chikanda orchids in those areas.

Salep is now readily accessible in a variety of forms to consumers around the world via well-known online marketplaces. Every aspect of this trade was found to be opaque and, while all the listings offered international shipping, none referred to CITES regulations. This appears to be a clear example of the use of online marketplaces by vendors and consumers who are either unaware of, or willing to circumvent, CITES controls. Without the use of CITES permits and authentication of product ingredients and vendor claims, the impact upon wild populations cannot accurately be assessed, although it is potentially significant.

Both salep and chikanda products have seen a rise in demand and collectors of both have reported seeing a decline in edible orchid populations. The countries with the highest demand for products are increasingly reliant on tubers harvested from other countries. While cross border trade was evident, there was no evidence of CITES registration or declaration. Online trade in chikanda products and raw ingredients is currently limited, suggesting that online international trade is rare.

This scoping review has provided an insight into the extent of edible orchids, and the salep and chikanda trade. It has shown that this trade appears unregulated and is a threat to wild populations. However, it is vital to consider that the trade outlined in this report is an important part of many people's livelihoods. Recommendations from this study include field research and consultations with range states to understand further the potential for cultivated systems for tubers or work towards sustainable harvesting and monitoring practices. Further details are required at a country level for range states for these trades including population data, harvest and regeneration data with support from CITES signatories. A preliminary list of genera and species in the edible orchid trade will facilitate future discussions on CITES orchid exemptions.

## Introduction

This report was commissioned by the CITES Secretariat with support from the UK Department of Food and Rural Affairs to contribute to CITES decisions 18.327 - 18.330 on products containing specimens of Appendix-II orchids. It evaluates the threats to wild species posed by the edible orchid trade and the dynamics of the trade to inform discussions on the impact of exempting orchid products and derivatives in line with Decision 18.327(a)(b). Additionally, one of the outcomes of this scoping project aims to inform the Plants Committee on an understanding of the knowledge gaps and research priorities for the edible orchid trade, as suggested in Decision 18.327(c).

All orchids are listed on CITES to ensure international trade is not detrimental to wild populations. There are at least 30,000 species in the orchid family, making it the largest family listed. Orchids are used for food, medicine, ornamental display and cosmetics, in addition, they provide many ecological functions (Hinsley et al., 2018). CITES signatories are aware there are implementation issues in enforcing legal orchid trade. To-date case studies of orchid use have been put forward to CITES, but due to enormity of the orchid family collecting a list of all orchids in trade has been difficult to compile. This report focuses on one use type of orchids, to provide a starting point for the facilitation of legal trade through a deeper understanding of orchid use regionally as well as globally.

We aim to review the international trade and conservation impacts of food products that contain orchid specimens with a focus on chikanda use in Africa and salep use in Central Asia and Europe, and to provide an overview of edible orchids globally. This is a desk-based study with a literature search, trade search using manual and automated crawling techniques, in addition to qualitative data from key experts.

In this study we classified edible as food or a food additive suitable for human consumption. We noted close synergies between edible orchids and medicinal and aromatic orchids, but the focus of this review was on orchids used for food. We found 374 edible orchids documented in the scientific and grey literature as well as databases. This number is likely an underestimate as it is based on available data. Edible orchids are used as flavouring agents in food, and to make dishes such as ice-cream, chikanda, edible flower decorations and consumed as drinks such as salep and teas. Products with orchid specimens are consumed nationally, regionally and internationally.

The trade of orchid specimens has been discussed by CITES. At the 25<sup>th</sup> Meeting of the Plants Committee, the CITES Secretariat noted that the large trade of orchid tubers affected multiple species and that the data does not appear in the CITES trade database. The trade of orchid tubers is a threat to wild populations and the trade seems to be unregulated and not enforced (CITES, 2020).

## CITES context on edible orchids

### PC22

The origin of CITES discussions on orchid uses commenced at the 22<sup>nd</sup> Meeting of the Plants Committee (PC22, Tbilisi, 2015). An intersessional working group was established to discuss the potential risks and benefits of an exemption for orchid components particularly for orchid specimens used in cosmetics. This discussion stemmed from a trade survey commissioned by Switzerland which revealed 39 species of Orchidaceae are found in European commerce. Three of the 39 orchid species in the review were classified as a food supplement; *Cymbidium goeringii* (whole plant), *Dendrobium nobile* (aerial part; stem; whole plant) and *Orchis mascula* (flower, tuber and fecula of the roots, whole plant) (Brinckmann, 2014a). *C. goeringii* is consumed in the form of a pill with properties of antioxidant, hair and skin conditioning. *Dendrobium nobile* was found in pre-workout tinctures in the form of powders and extracts. *Orchis mascula* were found in herbal dietary supplements in the form of an extract either from the whole plant, tuber or flower.

Additionally, PC22 Inf. 6 by the IUCN SSC Orchid Specialist group presented a summary of the illegal collection and international trade of orchids for food and medicine including salep and chikanda. This document highlighted the breadth of commodities of orchid specimens in trade.

### COP17

Decisions were adopted at COP17 directed to the Plants Committee to continue the work of the working group in line with relevant discussions in the annotations working group. The decisions were for the working group to develop a questionnaire to seek information on the trade of orchid parts and derivatives (wild and artificially propagated) to consider the potential conservation impact of exempting orchid products from CITES controls. The questionnaire requested information on the trade in orchid products from source to final product, how NDFs are

made, traceability and identification along the trade chain and trade reporting. The breadth of details included orchid parts and derivatives used in cosmetics, nutritional supplements, traditional medicines, foodstuffs and conservation concerns for wild populations (CITES, 2016).

In response to Decision 17.318 adopted at COP17 Switzerland commissioned in-depth case studies on *Vanda coerulea*, *Vanda tessellata*, *Papilionanthe teres*, *Cypripedium parviflorum* var. *pubescens* and *Gastrodia elata*, and overviews of salep, chikanda, flower and vibrational essences, orchids and fragrances. The document noted *Gastrodia elata* is also found in herbal dietary supplements, but these are made from cultivated *G. elata* rhizomes, with little evidence it's found in the European market (CITES, 2017).

## SC69

At SC69, Inf. 39 submitted by the IUCN Orchid Global Trade Programme presented CITES implementation issues, including trade in edible, medicinal and ornamental orchids worldwide and an outline a series of priority actions for strengthening CITES implementation for orchids. Recommendations for orchids used for chikanda were to consult with key Parties (e.g., Zambia and Tanzania) and undertake field research to evaluate the scale of trade and primary trade routes. Recommendations for orchids used for salep were to consult with key Parties (e.g., Turkey) and domestic experts to determine whether artificial propagation is viable, and to evaluate the scale of trade and existing trade networks for wild plants.

## PC24

At PC24 the focus was on orchids used for cosmetic and personal care. Additionally, the working group agreed that additional consideration of the use of orchids in personal care products, medicinal, and foodstuffs is needed, and that such consideration will need to continue to the next intersessional period. The working group also agreed that the evaluation of the use of orchids in cosmetics and personal care products should be concluded before moving on to other sectors. A new set of decisions were adopted at CITES Cop18.

## PC25

At PC25 the CITES Secretariat produced a comprehensive assessment of the potential conservation impact of exempting orchid products and derivatives from CITES controls using four guiding questions. The document acknowledged food products such as salep and chikanda were produced from a large and indiscriminate selection of tuberous orchids, and highlighted challenges for the regulation of trade in wild orchids.

PC25 Inf 4 is a collation of all the commissioned reports for products containing orchid specimens. This is predominantly cosmetics, personal care, some perfume and a comprehensive report on salep and chikanda. The salep report identifies 78 species in trade. The chikanda report also identifies a list of 32 orchid species used in chikanda.

The report of the Plants Committee (Decision 18.330) was presented at SC74. This concluded further research is needed and future areas of research could focus on food and medicinal plants, but the scope of the research should be narrowed. To inform the discussions in CITES it is likely that field work is necessary to obtain accurate and sufficient data in source countries that have wild harvest of medicinal or edible orchids (CITES, 2022).

## CITES orchid listing

Orchidaceae species are listed on Appendix II of CITES, with the exception of the taxa listed on Appendix I. Appendix I orchids include the genus listings of *Paphiopedilum* and *Phragmipedium* along with the following species; *Aerangis ellisii*, *Cattleya jongheana*, *Cattleya lobata*, *Dendrobium cruentum*, *Mexipedium xerophyticum*, *Peristeria elata* and *Renanthera imschootiana* (Govaerts et al., 2019). Appendix II orchids are listed with annotation #4 as follows:

### COP18 #4

All parts and derivatives, except:

- a) seeds (including seedpods of Orchidaceae), spores and pollen (including pollinia). The exemption does not apply to seeds from Cactaceae spp. exported from Mexico, and to seeds from *Beccariophoenix madagascariensis* and *Dypsis decaryi* exported from Madagascar;
- b) seedling or tissue cultures obtained in vitro, in solid or liquid media, transported in sterile containers;
- c) cut flowers of artificially propagated plants;
- d) fruits, and parts and derivatives thereof, of naturalized or artificially propagated plants of the genus *Vanilla* (Orchidaceae) and of the family Cactaceae;
- e) stems, flowers, and parts and derivatives thereof, of naturalized or artificially propagated plants of the genera *Opuntia* subgenus *Opuntia* and *Selenicereus* (Cactaceae); and

f) finished products of *Aloe ferox* and *Euphorbia antisyphilitica* packaged and ready for retail trade.

## Aims and objectives

The aim of this project was to review the threats to wild species in the international edible orchid trade and evaluate the conservation impacts of food products that contain orchid specimens with a focus on chikanda and salep use.

Our objectives:

- Undertake a global scoping review of principal food products in international trade that contain orchid specimen using online data collection, literature analysis and expert interviews.
- Analyse geographic patterns and temporal dynamics of the availability, trade routes and pricing of salep and chikanda products, using the CITES Trade database, and systematic manual and automated online search for products in trade.
- Compile the taxa principally used in salep and chikanda products and available information on their biology, conservation, sources of harvest and estimated harvest volumes, using scientific and grey literature reviews, IUCN red listing information and expert and key informant interviews.
- Assess the conservation impact of trade in salep and chikanda products using the 9-step guidance for making CITES non-detriment findings for perennial plants.
- Identify knowledge gaps and priorities for follow-up research, including scope and methodologies of pertinent fieldwork.



# Materials and methods



## Materials and methods

A mixed methods approach was used to review the international trade and conservation impacts of food products that contain orchid specimens with a focus on chikanda and salep. The main methods for data collection were a literature search of scientific journals, grey literature and databases, a manual and automated online search for products in trade, and the elicitation of qualitative data from key experts.

### Global edible orchids literature review and database

For this study edible orchids were classified as food or food additives suitable for human consumption. A literature review and database were compiled using these data sources: scientific journals, grey literature, databases, books from Kew's ethnobotany library and personal communications. The databases used include Kew's Economic Botany Database, the World Checklist of Useful Plants, the World Checklist of Selected Plant Families, Plants of the World Online, the IUCN Red List and BGCI ThreatSearch. Additionally, CITES documents were reviewed to capture relevant information Parties have presented to-date. The database focuses on edible orchids at species level. The database collated the following information:

- Species name identified in the reference
- Accepted name and author
- Synonyms
- Common names
- Distribution
- Biological descriptions
- Conservation Status
- Local, regional, and international trade
- Source: wild, cultivated
- Trade route origin
- Trade route destination
- Use
- Part of the plant in use
- Use description
- Literature source or reference

The accepted names and synonyms were verified through the World Checklist of Selected Plant Families (WCSP). The WCSP is a collaborative global programme basing the acceptance of species on assessments of the literature, specialist advice and herbarium collections, it's managed by the Royal Botanic Gardens, Kew (Govaerts et al., 2021). Additionally, we requested a download from the WCSP for all species of Orchidaceae which have a tuberous geophyte lifeform.

Common names in various languages were captured from the literature review and the IUCN Red List when the information was available. Data on distribution and biological descriptions were collated from the World Checklist of Selected Plant Families, Plants of the World Online and additional online floras. Distribution occurrences were also obtained from the Global Biodiversity Information Facility (GBIF).

Conservation status was determined using the IUCN Red List and BGCI ThreatSearch and recorded with the year and scope of the assessment (national, regional, or global).

The use was defined by the Economic Botany Data Collection Standard (1995) using the categories; food and food additive, we noted whether the species had another use if recorded from the same data source. The use and trade were all recorded from the literature review and databases. The approach for the recording of information was to capture presence data only.

### Journal search for chikanda and salep

An in-depth literature search was conducted for salep and chikanda during January 2022. The systematic journal search adopted the methodology from the Collaboration for Environmental Evidence systematic review methodology (Livoreil et al., 2017). A test was run on different combinations of search terms pertinent to the research question before being finalised. The search terms were compared to a set of core papers found on the topic. The final search terms were "orchid\* AND chikanda OR salep OR edible AND trade (1975 – present)." The terms were searched on three scientific databases – SCOPUS, Web of Science and Google Scholar. All titles and abstracts of the papers were loaded into excel and duplicates were removed. These papers were then assessed against the inclusion and exclusion criteria (Table 1).



The criteria were based on the information in the title and abstract. The journal paper had to meet the geographic criteria to be included and one other criteria from consumption, conservation or trade. One limitation of the review was literature was only reviewed if it was in the English language.

Two reviewers read the first 50 papers and either accepted or rejected the papers based on the inclusion criteria. To determine the consistency of implementing the inclusion/exclusion criteria a Cohen's kappa coefficient was used to test the agreeability between the reviewers. The Cohen's kappa coefficient was ranked as 'near perfect agreement' (Kappa score 0.8165137). The remaining titles and abstracts were split between the reviewers to analyse. This resulted in 37 papers used in the literature review. The full text was then reviewed, and the relevant data extracted and recorded in excel, with more detailed relevant information captured in a word document. During the review process, the extracted data included any species or genera mentioned as edible in the paper, country of study, methodology used to collate data and year of study. Additionally, data relating to harvest volumes, trade routes, products mentioned, and scale of trade was also recorded.

**Table 1:** Inclusion and exclusion criteria for the chikanda and salep scoping review

Geography	Literature covers a region of interest to the study; Africa, Europe and Asia. Review is limited to geographical regions.
Trade	Articles that describe orchids as food which are either traded locally, nationally or internationally.
Consumption	Subsistence, edible or drinkable use of orchids
Conservation	Articles that describe the use of orchids, conservation status or information which indicates threat of extinction. Information which includes biological risks, evaluates harvest impact, trade impact or has a management plan.

## Semi-Structured Interviews

We used semi-structured interviews to explore expert opinions on the trade in edible orchids across Southern Africa, Europe and the Eastern Mediterranean Region. Experts were identified using the following criteria i) over the age of 18 ii) specialist knowledge of the edible orchid trade (as demonstrated by publications or job role) and iii) residence or study in one of our focus areas. We then found additional experts through snowball sampling (Newing, 2010). We contacted all identified experts (n=16) and five experts agreed to be interviewed (one expert from a scientific authority, and four researchers).

We conducted the interviews throughout May 2022 in English, using the Microsoft Teams platform. We used an interview guide (Annex I) devised from relevant literature reviewed during the initial phase of the project to somewhat guide the conversation, which was reviewed and refined after each interview to reflect any new information gained. With the permission of the interview respondents, the interviews were recorded and later transcribed into Microsoft Word for analysis.

We used the Framework Method to systematically review the interview transcripts and discern themes that emerged from the conversation that would enable us to answer our research question (Ritchie & Spencer, 2002). After familiarising themselves with the interview transcripts, one researcher developed a thematic framework of recurrent subject-matters and applied this framework to each transcript as part of the analysis.

## Trade data

The literature review resulted in a list of scientific names identified in trade both at genus and species level (Annex II). Additionally, a list of trade names was compiled to search marketplaces (Annex III). These lists of taxa were used for both the automated and manual trade search. CITES trade data was queried through the CITES Wildlife Tradeview tool (<https://tradeview.cites.org/>). The time frame searched was between 2015-2021, using the trade terms Roots (ROO) and Powder (POW). The details recorded included the number of specimens and kilograms (kg) reported both by the importers and the exporters.



For the automated search, based on preliminary searches through standard search engines, 7 online marketplaces selling products of relevance to the salep or chikanda trades were selected for detailed analysis. These websites represented 4 global marketplaces and 3 smaller more specialist online retailers. Each website was searched using a combination of web crawling and manual search techniques, with data captured during a 1-month period, spanning April and May 2022.

Key words based on relevant scientific, common and trade names were collated to form a search lexicon, these were used to direct a custom-built web crawler to search websites of interest. Search results returned by the crawler were exported as browsable Excel (.xlsx) files. This enabled human interpretation of the data to be efficiently performed, following the 'FloraGuard' methodology for the analysis of online trade (Lavorgna et al., 2020; Lavorgna & Sajeve, 2020; Whitehead et al., 2021). As several of the websites were global marketplaces containing millions of products, the web crawler was directed to start searching from a specific menu point within each site. In three of the marketplaces, we found that the web crawler required additional coding to be able to search their complex menu structures, and as this software adaptation was beyond the scope of the project, these web sites were searched using manual searches.

A combination of web crawling and manual inspection of web sites enabled the following information (where available) to be extracted from each online product listing:

- Product name
- Product type (e.g. powder/root)
- Product purity (e.g. pure/processed)
- Product price
- Product availability (in stock and production capacity)
- Vendor (shop) name
- Vendor (shop) location
- Orchid origin (country/region)
- Orchid source (wild, artificially propagated)
- Marketing terms
- Shipping policies (e.g. offers of international shipping, dispatch time, courier/postal services)
- References to CITES procedures
- Other relevant trade or shipping policies

In automated searches, all relevant search results were compiled. In manual searches, where available, the first 30 unique vendor-product combinations of interest within the website were captured. While this did not provide an exhaustive search of 3 of the 7 sites, this provided a thorough representation of trade activity within each marketplace. In total, product listings for 5 chikanda and 133 salep products were analysed, representing 3 chikanda and 95 unique salep vendors.

Information contained within online product listings was assessed and categorised, to enable quantitative and qualitative analysis of trade and a comparison of the websites to be performed. The following approaches were taken to estimates of price per kg and numbers of orchid tubers in trade:

### Price per kilogram

As online analysis was performed from the UK, most websites presented the price per item in GBP (£). For this reason, analysis of prices was conducted in GBP, with other currencies (US dollars and Turkish lira), converted to GBP using an online currency convertor. To enable a comparison of prices for products sold by weight to be made, each product's unit price was extrapolated to calculate the equivalent price per kilogram, with the following limitations:

The price of pure powders and roots often decreased when ordered in 'bulk', with the cost per gram of smaller purchases (e.g. 25g-50g) often double that of a purchase of 1kg. As not all vendors offered bulk buys, and as it might be anticipated that a majority of sales would be for smaller volumes, rather than in bulk, the lowest unit cost for each item was selected for extrapolation to produce the price per kg figure. The mean price per kilogram calculations therefore remain an estimate, although we believe they are representative of the values that could be achieved by vendors who sell their products in a range of quantities. The prices of processed products which contained salep as an ingredient, were likely to be influenced by the proportion of salep powder which they contained. As this was rarely detailed in the product descriptions, it was impossible to place a representative price on the salep content itself, but rather on the product as a whole.

### Price per Tuber

Estimating the number of orchid tubers contained within salep products, is extremely challenging and is subject to a large margin of error. This is due to the mass of orchid tubers varying between species and region (Ghorbani et al., 2014). Following Masters et al., (2022), an average salep tuber weight of 0.94g/tuber (1,063 tubers per kilogram) was used to make similar estimates in the current study, although as the species identity was not declared in 49% of online product listings observed, our calculations of the number of tubers within each product and hence the price per tuber, are very approximate. As our survey of online marketplaces provided a snapshot of online trade but did not record the number of products sold by each vendor over time, it was also beyond the scope of this study to estimate the number of orchid tubers that may be sold within online transactions, within a given time period.



# Results



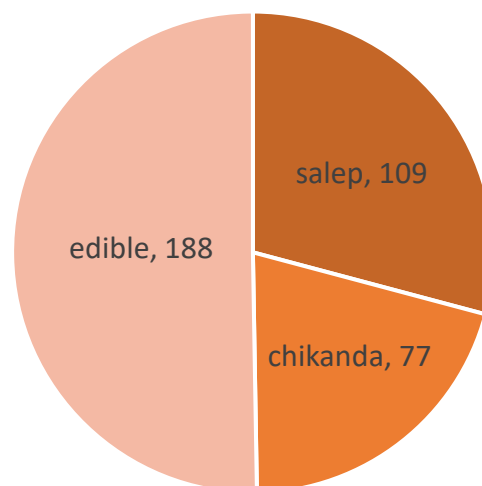
*Dactylorhiza maculata* tubers  
from Kew's Collections



## Results

### Scoping review of edible orchids globally

Food security and nutrition are locally and globally important, emphasising the importance of edible plant research. It's estimated there are at least 7,039 edible plant species and documenting further edible plants will contribute to wider discussion on food security (Ulian et al., 2020). In this study based on the literature reviewed, we found 374 documented edible orchids (Supplementary material 1). These were categorised into salep, chikanda and other edible orchids (Figure 1). We identified 72 genera of edible orchids (Annex IV); the taxa were verified as accepted names using the World Checklist for Selected Plant Families. All the species in our review are listed on CITES Appendix II.



**Figure 1:** Number of orchid species with documented edible use. Many species identified as edible in the literature are used to make chikanda (77) and salep (109), both of which are discussed later. For salep, the most species belonged to the genera of *Ophrys* (29), *Dactylorhiza* (18) and *Orchis* (15). The top genera for chikanda were *Disa* (30), *Satyrium* (28) and *Habenaria* (26). The genera with the highest number of species for other edible orchids were *Pterostylis* (29), *Diuris* (14), *Dendrobium* (11) and *Prasophyllum* (11).

Globally, one of the most important edible orchids belongs to *Vanilla*. There are over 115 species of *Vanilla* found across the tropics and sub-tropics, however the most cultivated species is *Vanilla planifolia* (Teoh, 2016). *V. planifolia* contains vanillin which provides “vanilla” flavouring, a dominant flavour in desserts (Teoh, 2016). In 2020, vanilla beans were the world’s 1,974<sup>th</sup> most traded product with Madagascar (\$539M) and Indonesia (\$66.9M) being the top exporters (OEC, 2022). Vanilla is widely cultivated, and as artificially propagated vanilla fruits are exempt from CITES, we did not focus on this industry for the study.

The leaves and fruits of other orchids are used to add flavour to a variety of foods. Historically, there has been documentation of *Selenipedium chica* being utilised as a flavouring in Panama (Bulletin of Miscellaneous Information, 1892). The leaves of *Jumellea fragrans* and *J. rossii* are used to flavour rum in Réunion (Hinsley et al., 2018). They have a vanilla-like odour and were also historically used to flavour a tea in Réunion, Mauritius and France called “Faham” and “Bourbon tea”. The name “Bourbon tea” refers to Réunion Island, formerly named Bourbon (Bulletin of Miscellaneous Information, 1892; Chicago Botanic Garden, 2022; Hinsley et al., 2018). Faham tea was intended as an alternative to Chinese tea in France as it did not have the then undesirable effect of wakefulness. The leaves were marketed not only for their vanilla-like aroma but also for the lasting fragrance left in the mouth after being drunk (Hinsley et al., 2018). The fruits of another species, *Leptotes bicolor* have been used to flavour ice cream (Teoh, 2016). As well as sweet flavours, orchids add savoury flavour to main dishes. In Malaysia, the leaves of *Dendrobium salaccense* are used to flavour a condiment for rice (Lohar, 2019) and the buds of *Cymbidium hookerianum*, and *C. elegans*, are added to curry (POWO, 2022).

In some cases, parts of the orchid plant are cooked and eaten while others are treated as vegetables. The roots of *Epipactis royleana*, *Dienia cylindrostachya*, and *Herminium clavigerum*, and the pseudobulbs of *Satyrium nepalense* are eaten boiled in Nepal (Lim, 2016). The roots and rhizomes of *Gastrodia cunninghamii* are roasted or steamed in New Zealand and Australia (Crowe, 2004), the tubers of *G. sesamoides* are roasted (Low,

1991) and the large (7-8 mm thick and as long as a man's finger) fibrous tubers of *Dipodium squamatum* offer a substantial meal when cooked (Teoh, 2019). The tubers of *Habenaria socotrana* are eaten either raw or cooked in Yemen, and the tubers of *H. epipactidea* and *H. walleri* are boiled and eaten like potatoes or powdered to make a cake in Tanzania (Palzer, 2002).

Other orchid parts eaten as vegetables are the roots of *Gastrodia falconeri* (Royal Botanic Gardens, 2012), the leaves and roots of *Cypripedium cordigerum* (Pant, 2013) and the leaves, roots and tubers of *Habenaria intermedia* (Rawat et al., 2014). As well as providing food in themselves, cooked orchids are eaten as ingredients in main dishes. The tubers and roots of *Habenaria keayi* are ingredients in a ground meat dish (Lim, 2016) and in India, the entire plant of *Vanda tessellata* is eaten as a snack or food source (Rutherford & Groves, 2017b). In Bhutan, *Cymbidium hookerianum* flowers are an ingredient in the popular dishes Olatshe and Olachota. They add a bitter flavour which is desirable but can be overcome with spices when not desired (Lohar, 2019). Olatshe is made by adding flowers cooked with cheese and spices to noodles or rice, and Olachota is made by cooking flowers with chilli and cheese (meat can be added) or stir-frying them (Lohar, 2019).

Some orchids are not cooked at all and are versatile enough to be eaten either raw or cooked. In Chile, the aerial parts of *Myrosmodes nervosa* are eaten as a salad (Paniagua-Zambrana & Bussman, 2020), as are the leaves of *Cerastostylis latifolia* in Java (Teoh, 2019). Although there is little nutritive content in them, thickened stems and pseudobulbs of *Cymbidium canaliculatum*, *C. madidum*, *Dendrobium canaliculatum*, *D. kingianum*, and *D. speciosum* can be chewed for their starch or rendered into powder, much like sago (Teoh, 2019). In Australia, the pseudobulbs of *D. canaliculatum* are substantially large (80-120 mm by 30-40 mm) and easy to find as they grow in clumps from tree hollows making them a useful species for eating in the bush. (Teoh, 2019). The pseudobulbs of *Dendrobium speciosum* var *hillii* can be eaten raw (Lim, 2016) and in India and Malaya the fruit of *Vanilla griffithii* is sweet and edible, resembling small bananas (Tanaka, 1976). Known as the "food orchid" in the United States, *Dendrobium bigibbum* flowers are eaten as edible decorations (Lohar, 2019).

Orchids are used to prepare a variety of beverages such as tea and herbal or food supplements. Many species in *Dendrobium*, the second largest genus in the orchid family, are utilised as ingredients in food and tea (Zhao et al., 2021). The canes of *D. moniliforme* are dried and prepared as tea (Lohar, 2019) and in China, the flowers of *D. officinale* and *D. chrysotoxum* are traditionally used to prepare tea (Lohar, 2019; Zhao et al., 2021) and a new tea made from the latter has become popular in some Chinese provinces (Teoh, 2016). In the Turks and Caicos Islands, the pseudobulbs of all *Encyclia caicensis* are used to create a cooling drink (IUCN Red List, 2022a). The entire plants of *Dendrobium nobile* and *Cymbidium goeringii* are ingredients in food supplements reported to be sold online (Brinckmann, 2014b).

In Nepal, *Dendrobium longicornu* flowers (Orchids-World, 2012) and in the Maluku Islands of Indonesia *Renanthera moluccana* leaves (Teoh, 2019), are pickled. The tubers of *Habenaria rumphii* are used to make preserves and candy (Tanaka, 1974; Teoh, 2019), and in Malawi, the tubers of *H. walleri* are made into a jelly served with peanuts (Palzer, 2002).

In our review, we captured the part of the plant in use and at least 272 of the orchid species listed the tuber as the most utilised part of orchids for edible use. We are aware of the limitations of collecting data on documented edible orchids only, particularly as the trade appears to be indiscriminate of species. We recorded 26 *Habenaria* species and there are 893 *Habenaria* species recorded on WCSP. This pattern was similar for other tuberous species we documented, we likely have an underestimate of edible orchid species. This is because many of the orchids documented in the literature could not be identified to a species level, this requires further interrogation and field data.

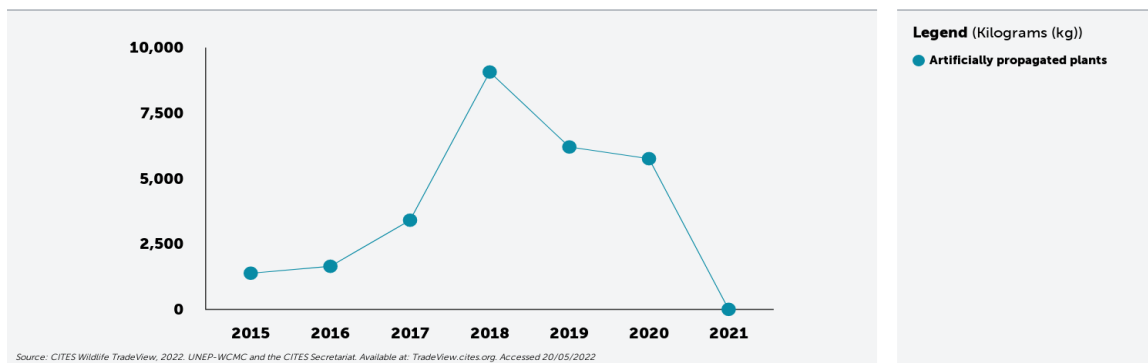
## Global edible orchid trade

Most of the trade documented on the CITES trade database were for non-tuberous species, and therefore an underestimate of the global edible orchid trade. We also note the trade data here could be for medicinal trade and not necessarily edible purposes. Chikanda and salep trade data are presented later in the report.

The other edible orchids searched for in CITES Wildlife Tradeview included *Cymbidium* spp. in which, as reported by exporters, 472 roots were traded from India to Germany and the USA in 2020, as artificially propagated. However, *C. hookerianum* (8<sup>th</sup> top taxa traded) was the only orchid that appeared in the 'Edible Orchid Database' and only 30 of this species roots were traded.

As reported by exporters, 27,465 kg of *Dendrobium* spp. powder, which appear as 'Edible' in the 'Edible Orchid Database' were exported as artificially propagated by New Zealand, China, Malaysia and Switzerland. The top importers were New Zealand, Singapore, China, Republic of Korea and the

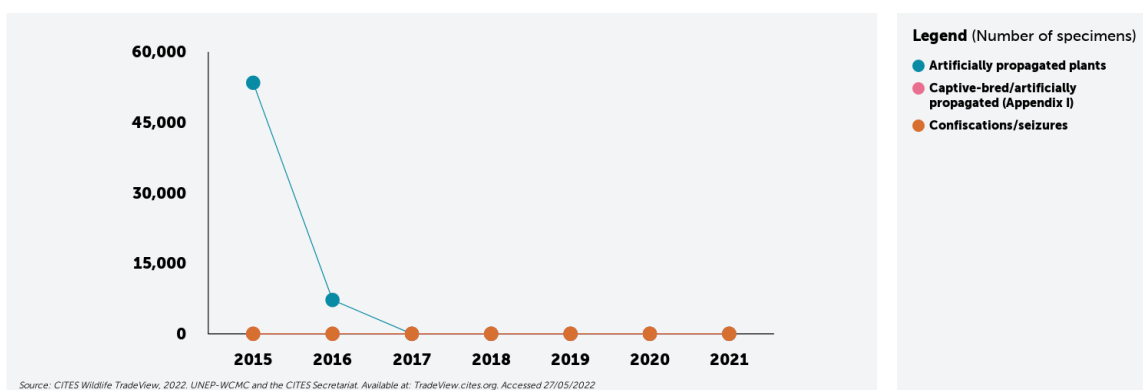
Philippines. The top species traded were 27,348kg of *Dendrobium officinale*, 115 kg of *Dendrobium* spp. and 2kg *Dendrobium fimbriatum*, the latter of which does not appear in the 'Edible Orchid Database'. The exporters and importers of *D. officinale* were identical to *Dendrobium* spp. with the absence of Switzerland as an exporter.



**Figure 2:** Trade in *Dendrobium* spp. as roots and powder, in kg as reported by exporters from 2015-2021 as obtained from CITES Wildlife Tradeview. Accessed 20/05/2022.

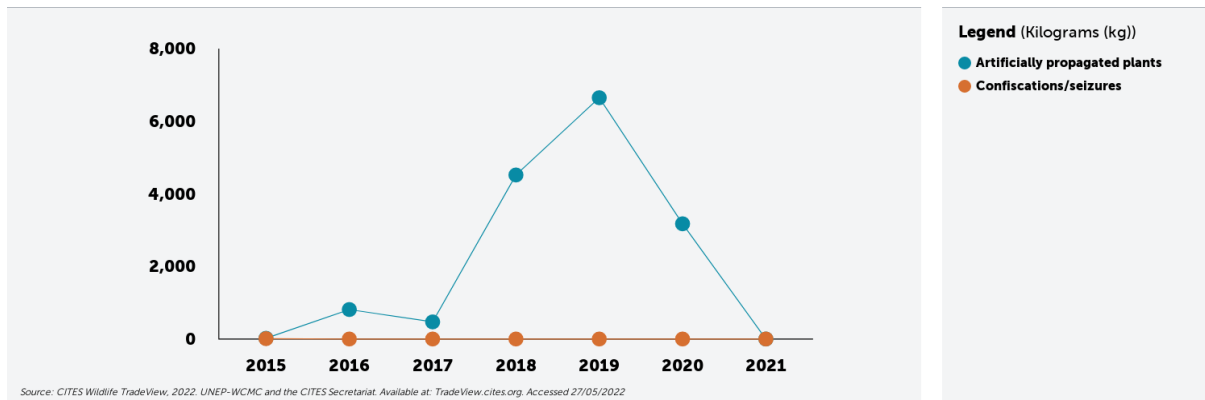
Exporters reported 1377 *Dendrobium* spp. roots of artificially propagated origin, were exported from India to the USA and Germany in 2020. Only the 19<sup>th</sup> top taxa in trade, *D. chrysotoxum*, and the 28<sup>th</sup> top taxa in trade *D. nobile*, appeared in the 'Edible Orchid Database' as 'Edible'. *D. nobile* only had 3 roots traded in 2020, whereas *D. candidum* had 7 roots traded in 2020 and both were exclusively from India to the USA.

As reported by importers, Thailand and China were the top exporters of *Dendrobium* spp. (counted by number of specimens) and the top importers were Brazil, India, Belgium and the USA. 60,608 roots and 35 powders were traded including artificially propagated specimens (Figure 3), including some from Appendix I, made up of *Dendrobium chrysanthum*, *Dendrobium anosmum*, *Dendrobium* spp. and *Dendrobium albosanuineum*, none of which are found in the 'Edible Orchid Database'. There were four confiscations/seizures in 2016.



**Figure 3:** Trade in number of species of *Dendrobium* spp. as roots a powder as reported by importers from 2015-2021 as obtained from CITES Wildlife Tradeview. Accessed 27/05/2022.

China, Netherland, Canada, Malaysia and Switzerland were the top exporters of *Dendrobium* spp. when measured in kilograms. There were 15,647 kg of powder and 10 kg of roots traded, with the top imports New Zealand, Hong Kong Special Administrative Region, Belgium, Switzerland and Australia. The top taxa traded were *Dendrobium officinale*, *Dendrobium* spp., *Dendrobium fimbriatum* and *Dendrobium chrysanthum* all of which were artificially propagated. There were 10 seizures of *Dendrobium* in 2015 (Figure 4).



**Figure 4:** Trade in *Dendrobium* spp. as roots and powder in kg, as reported by importers from 2015-2021 as obtained from CITES Wildlife Tradeview. Accessed 27/05/2022.

There was trade of 14,333 kg of powder of artificially propagated *Dendrobium officinale* as reported by importers. Top exporters were China, Netherlands, Canada, Malaysia and New Zealand, with top importers New Zealand and Hong Kong Special Administrative Region.

As reported by importers, there were no results for *Dendrobium nobile*, *Dendrobium candidum* or, *Cymbidium* spp.

## Chikanda

### Background

Across several African countries, a food substance, often called chikanda (with some local variation), is made from ground terrestrial orchid tubers (Davenport & Ndangalasi, 2003; de Boer et al., 2017; Ghorbani et al., 2014; Rutherford & Groves, 2017a). When mixed with peanuts and heated, it forms a 'cake' or 'meatless sausage' that is eaten as a snack. From expert consultation, as well as scientific literature covering the topic, it is documented that chikanda is consumed across numerous countries – but the demand for orchid tubers to make into chikanda is highest in Zambia. Tanzania, and more recently Malawi and other bordering countries, supply Zambia with raw orchid tubers to satisfy this demand (Rutherford & Groves, 2017a).

Throughout Africa, chikanda was previously eaten and sold locally, with harvesting, cooking and consumption occurring in small areas. However, in more recent years, demand for chikanda has increased as it has become a popular dish to serve at events such as weddings and is now easily found in restaurants and supermarkets (Interviewee one; Davenport & Ndangalasi 2003). As a result of this commercialisation, supply chains for these orchid tubers have become widespread, with cross-border trade common and large-scale production now occurring, alongside continued local trade (Interviewee three). Without long-term data to underpin this, it is difficult to discern when this shift to widespread large-scale trade occurred.

### Distribution

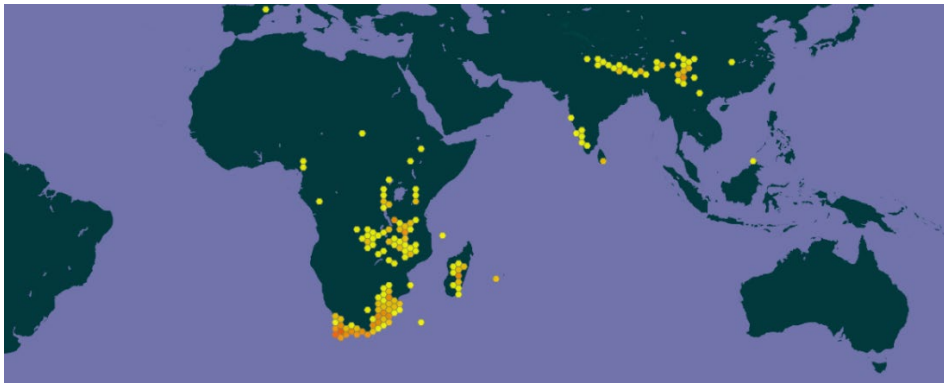
We identified 77 species of orchids used for chikanda with the top genera being *Disa* (30), *Satyrium* (28) and *Habenaria* (26).

The genus *Disa* is native to Angola, Burundi, Cameroon, Central African Republic, Democratic Republic of the Congo, Ethiopia, Gabon, Guinea, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mozambique, Niger, Nigeria, Rwanda, Réunion, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Uganda, Yemen, Zambia, Zaïre, Zimbabwe. and has been introduced to Australia and Tasmania (POWO, 2022). In GBIF, *Disa* have been recorded with 20,548 occurrences (Figure 5).



**Figure 5:** Occurrences of *Disa* species recorded between 1982 – 2022, source (GBIF, 2022)

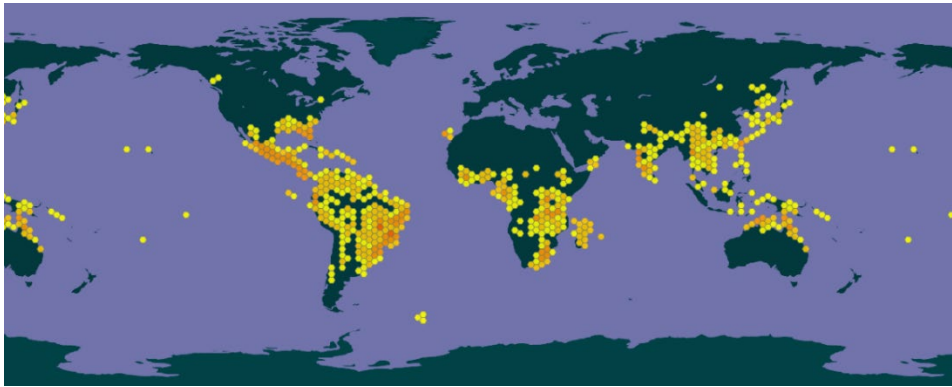
*Satyrium* is found in Angola, Assam, Burundi, Cameroon, Central African Republic, China, Comoros, Democratic Republic of the Congo, Ethiopia, Guinea, India, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Myanmar, Nepal, Nigeria, Pakistan, Rwanda, Réunion, Sierra Leone, South Africa, Sri Lanka, Sudan, Swaziland, Tanzania, Thailand, Uganda, Yemen, Zambia, Zaïre, and Zimbabwe (POWO, 2022). According to GBIF, there are 14,352 occurrence records of *Satyrium* (Figure 6).



**Figure 6:** Occurrences of *Satyrium* species recorded between 1982 – 2022, source (GBIF, 2022)

*Habenaria* has a wide distribution across a tropical and sub-tropical range. It's native to Afghanistan, Angola, Argentina, Australia, Bahamas, Bangladesh, Belize, Benin, Bolivia, Borneo, Botswana, Brazil, Burkina, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Chile, China, Colombia, Comoros, Democratic Republic of the Congo, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, French Guiana, Gabon, Georgia, Ghana, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Mongolia, Ivory Coast, Jamaica, Japan, Jawa, Kenya, Korea, Laos, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mexico, Mozambique, Myanmar, Namibia, Nepal, New Guinea, Nicaragua, Nigeria, Oman, Pakistan, Panamá, Paraguay, Peru, Philippines, Puerto Rico, Rwanda, Réunion, Samoa, Senegal, Sierra Leone, Somalia, Sri Lanka, Sudan, Sulawesi, Sumatera, Suriname, Swaziland, Taiwan Province of China, Tanzania, Thailand, Togo, Trinidad-Tobago, Uganda, Uruguay, USA, Venezuela, Vietnam, Yemen, Zambia, Zaïre, and Zimbabwe (POWO, 2022). According to GBIF, 61,287 occurrences were recorded between 1983 – 2022 (Figure 7).





**Figure 7.** Occurrences of *Habenaria* species recorded between 1983 – 2022, source (GBIF, 2022)

### Harvesting and sourcing

Orchid species used in chikanda are collected exclusively from the wild and the entire plant is removed when harvested (Veldman et al., 2018). This method of harvesting has been shown to cause changes to habitats and possibly even overall biodiversity (Davenport & Ndangalasi, 2003). Most often, tubers are harvested when in flower, as it is easiest to find them at this time. However, in the experience of in-country researchers, the harvest is not taking place in a controlled manner, or at a controlled time to allow for regeneration of species (Interviewee four). Additionally, species are collected indiscriminately (Veldman, 2018; Interviewee three; Interviewee four), and smaller tubers are more often found in markets now. This could be due to different species now being harvested or could be indicative that juvenile orchids are increasingly being harvested where mature individuals are no longer found.

In Zambia, the preferred orchids used to prepare chikanda are from the genera *Disa*, *Habenaria* and *Satyrium* (Challe & Struik, 2008; Davenport & Ndangalasi, 2003; Rutherford & Groves, 2017a). *Disa erubescens*, *D. robusta* and *Satyrium atherstonei* were found in high abundance in Tanzania, but Challe & Struik (2008) identified a strong decline of these species, totalling an 82.7% decline. Less desirable species are now harvested, often being mixed with desirable species when sold (Interviewee three). Species preference could be due to a number of factors such as ease of collection such as some species dropping inflorescences after the flowering and fruiting period therefore, becoming harder to spot, (Veldman et al., 2018), variation in tuber consistency which affects the chikanda produced (less desirable tuber species create a less palatable, 'runny' chikanda) (Interviewee three), and variation in tuber taste (preferred tubers are sweet and less desirable are bitter) (Challe, Struik & Price, 2018). Collectors in Tanzania identify preferred tubers, marketable to Zambia, as sweet with crystalline, elastic flesh while those less desirable and rejected by middlemen, as bitter and lacking elasticity (Challe, Struik & Price, 2018). To determine which species are best to sell, collectors and middlemen tend to classify and name them by the harvest area, texture and internal patterns of tubers rather than using species names (Veldman et al., 2018).

Rutherford & Groves (2017a) stated that Zambia has the highest consumption of chikanda, and due to resulting depletion of their orchid populations, those of other countries are now being exploited. Tubers are being imported into Zambia from Democratic Republic of Congo, Mozambique, Malawi and Angola (Veldman et al., 2014). Zambia sees an import of around 5 million tubers from surrounding countries (Rutherford & Groves, 2017a), with 2.2 - 4.1 million tubers imported from Tanzania alone in 2003 (Davenport & Ndangalasi, 2003).

There is evidence of CITES non-compliance due to orchids being moved across borders without evidence of registration or declaration (Davenport & Ndangalasi 2003). However, prohibiting orchid collection alone has not been enough to prevent continual harvesting (Interviewee four), and can result in negative social outcomes for harvesters or sellers of tubers, who may rely on this trade as an essential income to provide sustenance for their household (Challe et al., 2011). Whilst the management of orchid harvesting needs to be investigated further, interventions must be sensitive, considering social, spiritual, and economic implications of regulation as well as conservation (Davenport & Ndangalasi 2003). For instance, if tuber collection was to be effectively prohibited, alternative sustainable livelihoods would be needed (Challe et al., 2011).

Those who participate in the chikanda trade do so for different reasons: the possibility of a profitable venture, introduction to the trade by someone they know, or simply that orchids grow nearby and are easily accessible (Veldman et al., 2018)). There is a social dimension to the collection and trade of tubers, as wild edible plants can act as a safety net for households, such as those who have lost parents. People may trade because their options are limited, and collection requires only an investment in time, not money and resources. This is particularly pertinent in households that are headed by a child, due to the death of their parent or parents

(Challe et al., 2011). In some areas, there has been evidence that women are harvesting most often as they have less access to land, and therefore have less opportunity to make money from agriculture (Challe et al., 2011). There is also evidence that a lack of money for agricultural inputs (maintenance of equipment, irrigation, fertilizer etc.) is a factor in not cultivating food crops and instead switching to collecting wild edible plants (Challe et al., 2011). In their study of trade between four villages in Malawi, Mahonya et al. (2019) found that edible orchids were used by 64% of all households. These orchids occurred nearby to one of the villages, Kasonga, in which their value chain was managed exclusively by women and girls. In the Southern Highlands of Tanzania, tuber collection was observed to be carried out by men and women, young and old (Davenport & Ndangalasi, 2003).

As chikanda has become increasingly commercialised, it has been noted by both the collectors and the middle-people (those who buy from harvesters to sell to vendors), that orchids are being depleted, and therefore becoming rarer (Veldman et al 2018). Species level identification of orchid tubers is challenging (Veldman et al., 2014, 2017, 2018) and therefore it is difficult to quantify the sale of orchids at markets to evaluate specific offtake levels. It has been suggested that in some areas, there has been an attempt to control the harvest of chikanda tubers by chiefs of tribes (Interviewee three), for example, where in other areas regulation has not been implemented at all (Veldman et al 2018). The establishment of protected areas, such as Kitulo National Park, has not prevented the harvesting of orchids in Tanzania (Davenport & Ndangalasi 2003; Veldman et al., 2018), with researchers suggesting that collection continues within the park's borders (Interviewee four).

Orchid populations are in decline, forcing those who collect to travel further to collect enough to keep up with demand (Interviewee one). Davenport & Ndangalasi (2003) found that the time spent travelling to a harvest site increased from 30 minutes to 5 hours to reach a site over a period of 10 years. The reason for the decline has been attributed to an increase in traders, an increase in cultivated land and an increase in collectors as well as people harvesting a larger number of tubers per harvesting trip (Davenport & Ndangalasi, 2003).

Evidence shows that numbers of edible orchids has decreased, and once species were harvested, they would not grow in the same spot (at least within one year). These areas where edible species had been harvested are often replaced with inedible species instead (Challe & Struik, 2008), a trend which could indicate local extinctions of certain species. Challe et al. (2011) found that collectors were aware of the harvesting pressure on the orchid populations. In Tanzania, for example, gatherers were aware of the rules but would break them regardless because it's an important livelihood venture to collect the tubers from Kitulo National Park (Challe & Struik, 2008), or simply because it is lucrative (Davenport & Ndangalasi, 2003).

People may continue to engage because economic benefit is high enough to outweigh the risk, which appears to be low. Trading of orchids tends to not carry a large risk as they are easily disguised as potatoes when moving the species, and the trade may well be an 'open secret' amongst enforcement officers (Interviewee four). Additionally, people with limited livelihood options may have no choice but to collect despite any risk. Orchid populations, such as that of *Dactyloriza hatagirea* were found to be higher in the protected areas, but this may not be solely attributed to enforcement of rules around harvesting in the park. Population density of this species outside protected areas could also be affected by other pressures, such as trampling and grazing, and not just harvest (Chapagain et al., 2021).

## Cultivation

There have been methods suggested to aid in mitigating threats to wild edible orchids, such as a possibility to replace tubers in the making of chikanda with a starch alternative (Veldman et al., 2018), or techniques to artificially propagate orchids. The Cape Institute of Micropropagation, for example, is in collaboration to try and develop sustainable cultivation of orchids (Veldman et al., 2018). However, there has been limited success so far with propagation techniques – which would need to produce a high yield at a low cost to be a viable alternative for wild collection – something that is yet to be achieved (Interviewee four). DNA barcoding would also help to assist in identifying the species of orchid tubers, which would aid in the mislabelling of those in trade (Ghorbani et al., 2014), but this technique is currently expensive and time consuming and therefore not time nor cost effective enough for use at border controls. 'Orchid Conservation Areas' as suggested by Ghorbani et al (2014), could aid in the mitigation of illegal harvesting of orchids with the added benefit of potential tourism, if enforcement was in place without disenfranchising those who rely on this trade for their livelihoods.

## Chikanda products in trade

The following observations were made for chikanda products using a systematic automated and manual online search for products in trade, using the key word 'chikanda', along with other scientific, common and trade names associated with this trade (Annex II and III).

## Online trade search and observations

Searches of the 7 selected websites for examples of chikanda trade returned only a small number of relevant search results (Table 2).

**Table 2:** Characteristics of online marketplaces sampled for chikanda products, detailing marketplace type, the number of vendors and products observed and the location of products within the website under specific menu headings

Site	Description	No. Products sampled	No. Of vendors	Website menu category	Number of vendor-Chikanda product combinations			
					Pure Powder	Roots	Processed Powder (non-pure)	Chikanda Cake
1	Global online marketplace	1	1	Health and beauty -> Natural and alternative remedies -> Herbal remedies and resins	0	1	0	0
2	Global online marketplace	1	1	N/A	0	1	0	0
7	Traditional Zambian Foods	3	1	N/A	2	0	0	1
<b>Total</b>		<b>5</b>	<b>3</b>		<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>

The search term 'chikanda' returned 3 products of relevance, offered for sale by 1 of the 7 online marketplaces searched (Table 2), while the search term '*Habenaria*' returned two further results from two of the global online marketplaces that were searched. In summary:

- Website 1: One product listing for *Habenaria intermedia* roots, offered by a vendor located in India. The roots were priced at £17.53 per 100g (the equivalent of £175.3 per kg). This product was marketed as having benefits for natural health/blood health.
- Website 2: One product listing for *Habenaria dentata* roots, offered by a vendor from China. The roots were advertised at a price of £18.66 per 100g (the equivalent of £186.6 per kg). This product was marketed as being for use in tea and described as being harvested from the wild.
- Website 7: This website for a business specialising in Zambian food, offered a small range of chikanda products, including pre-cooked chikanda cake (£40 for a medium sized cake), chikanda powder (£10 per 200g, the equivalent of £50 per kg), and African Polony chikanda powder (£10 per 160g, the equivalent of £62.5 per kg). No species names or details of the origin of the ingredients were provided. It was not clear from the website if international shipping was available for these products.

From the chikanda product listings observed, two species-country combinations were recorded (Table 3).

**Table 3:** Species-country-combinations recorded for chikanda products observed within 3 online marketplaces sampled, with country representing the vendor's physical location. Countries which form part of the species natural range are indicated as range States.

Orchid taxa	Country (vendor location)	Species Range State	Total Products
<i>Habenaria intermedia</i>	India	Yes	1
<i>Habenaria dentata</i>	China	Yes	1

A search of the CITES Trade Database from 2015 to 2020 recorded no imports or exports of these species to or from China or India, other than an import of a single specimen of *Habenaria dentata* into China in 2019, for scientific purposes.

## Summary of Online Trade Analysis – chikanda

The small number of search results for chikanda species and products in trade, suggests chikanda is rarely traded within international online marketplaces. Some of the products observed included pre-prepared chikanda cake and powders preserved in plastic, potentially long-life, packaging, although whether these supply chains could be scaled to meet an increase in demand is unclear.

The vendors observed in websites 1 and 2 both offered international shipping of *Habenaria* roots. It was unclear from Website 7, whether international shipping was available for the processed chikanda products that were

listed on this website. None of the product listings referred to CITES procedures or took account of the costs and timeframes involved to obtain CITES permits, to fulfil international orders.

Both vendors advertising *Habenaria* roots were based in range States for those species, although neither product listing provided information about the origin of the roots. The vendor for website 7 was not located in a chikanda producing range State, with CITES permits therefore required for them to import the finished products and raw ingredients that were being sold, although no reference to CITES or the origin of the orchids was provided by the website.

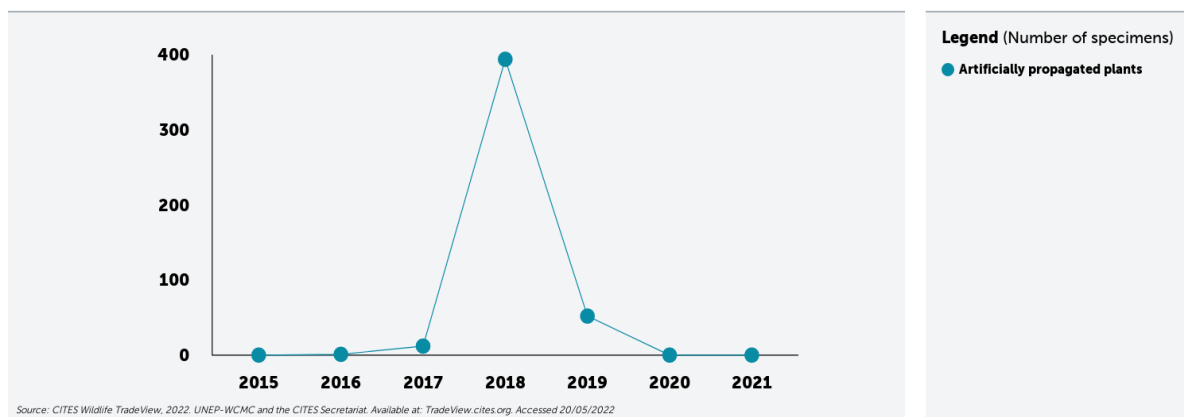
In summary, our results suggest that the online trade in chikanda products and raw ingredients is currently limited, although the trade that does occur lacks transparency and may be conducted absent of CITES controls.

### Literature and database summary of chikanda trade

Tubers exported from Tanzania to Zambia often travel through the town 'Tunduma', however some trade is directed via Sumbawanga and through Tatanda to Zambia (Davenport & Ndangalasi, 2003). In Tunduma, sale of tubers is completed through brokers, who claimed they are able to visually identify the edible orchids (Davenport & Ndangalasi, 2003). There is a possibility to sell directly to Zambians across the border during the low seasons (Davenport & Ndangalasi, 2003). It has been noted that chikanda crosses borders, labelled as different food items (IUCN SSC Orchid Specialist Group Global Trade Programme, *pers comms*).

*Satyrium* spp. was searched in the CITES Wildlife Tradeview database due to it being a top genus evident from the literature review. Reported by exporters, *Satyrium nepalense* of artificially propagated origin, was the only species to appear as traded on CITES Wildlife Tradeview, for 20 roots traded from India to the USA in 2020. However, there were no results reported by importers.

*Habenaria* spp. was searched for in the CITES Tradeview database, whilst there had been exports from Thailand to Japan, the USA, Switzerland, Lao PDR and Singapore of a total of 459 roots of artificially propagated origin (Figure 8), the top taxa in trade did not appear in our literature search. There were no results when searching on the CITES Tradeview database for roots or powder of *Disa* spp. as reported by both exporters and importers.



**Figure 8:** Trade in *Habenaria* spp. as roots and powder, in number of specimens, as reported by exporters from 2015-2021 as obtained from CITES Wildlife Tradeview. Accessed 20/05/2022.

As reported by importers, the top exporters of *Habenaria* spp. were Thailand, with the top importer being India. There was a total of 15 roots of artificially propagated source, traded in 2016 which included taxa *H. rhodocheila* and *H. rostelifera*. Neither of these species were found in our literature review.

This review of chikanda trade demonstrates trade is occurring in Africa but it is not reported on the CITES trade database and is not regulated.

## Salep

### Background

In certain parts of the world, tubers from terrestrial orchids are ground into a powder, referred to as salep (de Boer et al., 2017; Kasperek & Grimm, 1999; Kreziou et al., 2016). Salep is used to make a hot drink, (referred to as salep or salepi) in Greece and Turkey (de Boer et al., 2017; Kreziou et al., 2016), confectionary and ice cream (called maraş dondurma) (Kasperek & Grimm, 1999; Kreziou et al., 2016). An innovative study used



patent analysis to explore the commercial interest of salep (Masters et al., 2020). The study by Masters et al (2020) analysed 244 patent applications over a period of 163 years. It found 89 patents were granted across the world and interestingly uses included contemporary medicine formulations and industrial materials. This research illuminates salep trade as more global and commercially valuable than previously thought as the research focus has been on salep use as a drink and use in ice-cream.

The ground tubers are desirable due to the presence of glucomannose, which acts as a stabilizer (Tekinşen & Güner, 2010), as well as delaying melting (i.e ice-cream) (Rutherford & Groves, 2017b). Salep is produced in Iran, Greece and Turkey from wild orchids (Boer et al 2017). Salep is available to purchase online from these countries, including from Lebanon where commercial; companies source ingredients listing salep or salep powder as ingredients (Rutherford & Groves, 2017b).

In one study, it was noted *Orchis mascula* and *Orchis morio* produce the 'best', and therefore most desirable, salep (Rutherford & Groves, 2017c). Eighty five percent of the orchids found in Turkey are tuberous, mainly from the genera *Orchis*, *Serapias*, *Ophrys*, *Anacamptis*, *Dactylorhiza*, *Cephalanthera*, and *Epipactis* (Sezik, 2002a). Tuberous orchids are collected from the wild, and some species populations have suffered declines and local extinctions – yet the consumption of salep remains high (Kasperek & Grimm, 1999).

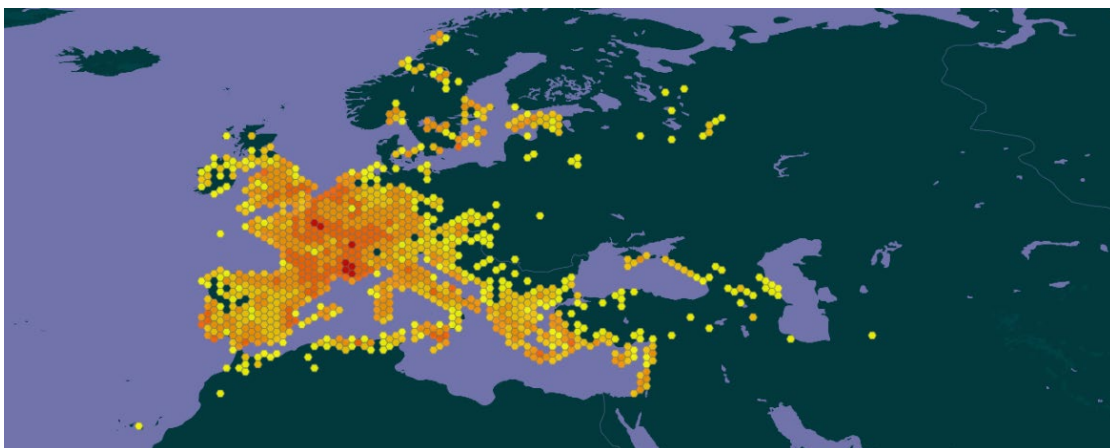
An increase in orchid collection has been documented in Turkey, with estimates ranging from 30-120 million tubers collected annually (Kasperek & Grimm 1999; Sezik, 2002; Kreziou et al., 2016). With resources in Turkey depleting, the trade is increasingly reliant on tubers harvested from abroad (Interviewee two). In Iran, for example, between 5.5 and 6.1 million orchids are harvested annually, and are exported to predominantly Turkey (Ghorbani et al., 2014). The demand for salep ice cream decreased in 1999 with only a few sellers found in Ankara, Turkey (Rutherford & Groves 2017). However, demand has now increased sufficiently enough to support large commercial enterprises. One Turkish ice-cream brand have around 300 outlets worldwide and manufactures its ice-cream using salep equating to about 0.8-1% of the ice cream ingredients (Kasperek & Grimm, 1999). On their Greek website, they state that the ice cream is made with milk from goats which are fed herbs and wild orchids flowers, which is then mixed 'with salep collected from the tubers of these orchids.'

Salep also has medicinal properties and has been claimed to treat a range of conditions such as stomach issues (Kasperek & Grimm, 1999), infertility, tuberculosis (Ari et al., 2005; Caliskan et al., 2020; Kreziou et al., 2016) and was even once used as a form of nutrition for the British Army (Caliskan et al., 2020). Other uses have also been documented, such as the use of salep misri, or Indian salep, which is made from *Eulophia* species and is sold as an aphrodisiacs (Rutherford & Groves, 2017b). In Iran, salep was also used to treat impotence (Ghorbani et al., 2014), however Kasperek & Grimm (1999) argue that salep does not produce properties that can be used to promote "sexual potency", even though it may be sold as such.

## Distribution

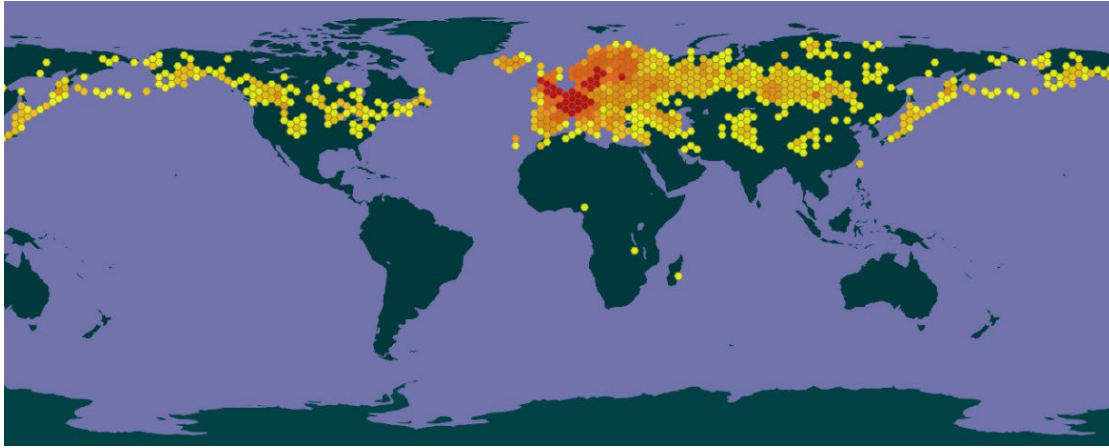
We identified 109 orchid species used for salep. The genera with the most species belonged to *Ophrys* (29), *Dactylorhiza* (18) and *Orchis* (15).

*Ophrys* is native to Albania, Algeria, Austria, Belarus, Belgium, Bulgaria, Cyprus, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Iran, Iraq, Ireland, Italy, Lebanon, Libya, Morocco, Netherlands, Norway, Palestine, Poland, Portugal, Romania, Russia, Spain, Sweden, Switzerland, Syria, Tunisia, Turkey, Turkmenistan, Ukraine (POWO, 2022). In GBIF, 392,031 occurrences were found between 1983 – 2022 (Figure 9).



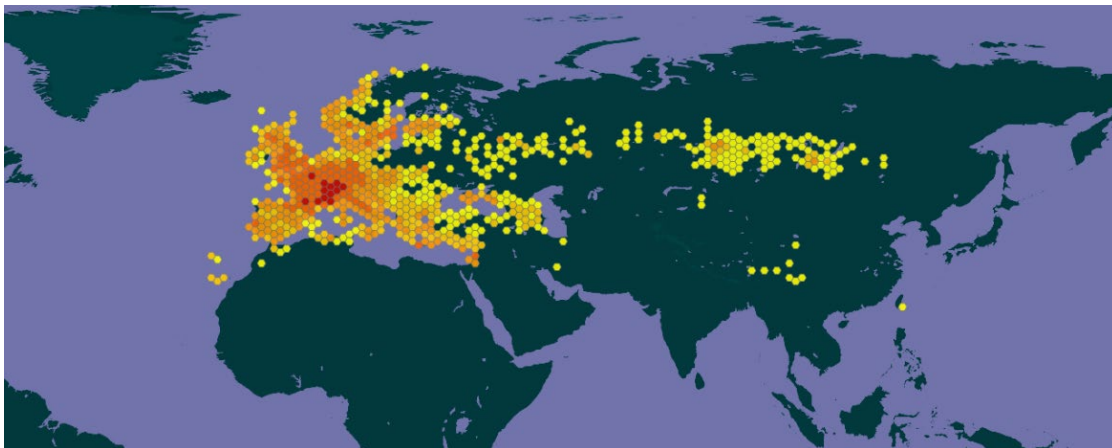
**Figure 9:** Occurrences of *Ophrys* species recorded between 1983 – 2022, source (GBIF, 2022)

*Dactylorhiza* is found in Afghanistan, Austria, Belarus, Belgium, Bulgaria, Canada, China, Cyprus, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Iceland, Iran, Iraq, Ireland, Italy, Japan, , Kazakhstan, Kyrgyzstan, Korea, Lebanon, Madeira, Mongolia, Morocco, Nepal, Netherlands, Norway, Pakistan, Palestine, Poland, Portugal, Romania, Russia, Spain, Sweden, Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, USA, Uzbekistan (POWO, 2022). Between 1982 – 2022 GBIF recorded 806,503 records for this genus (Figure 10).



**Figure 10:** Occurrences of *Dactylorhiza* species recorded between 1982 – 2022, source (GBIF, 2022)

*Orchis* is native to Afghanistan, Albania, Algeria, Austria, Belarus, Belgium, Bulgaria, Cyprus, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Iran, Iraq, Ireland, Italy, Kazakhstan, Lebanon, Libya, Madeira, Mongolia, Morocco, Netherlands, Norway, Palestine, Poland, Portugal, Romania, Russia, Spain, Sweden, Switzerland, Syria, Tunisia, Turkey, Turkmenistan, Ukraine (POWO, 2022). Between 1983 – 2022, GBIF recorded 459,988 occurrences for this genus (Figure 11).



**Figure 11:** Occurrences of *Orchis* species recorded between 1983 – 2022, source (GBIF, 2022)

## Harvesting and sourcing

To create the salep, once harvested, tubers are washed and then boiled in milk or water or are alternatively air or sun dried (Rutherford & Groves, 2017b). Once dried, the tubers can be stored for years and remain consumable (Kasperek & Grimm, 1999). The number of tubers required to produce 1kg of salep is dependent on the genus of the species harvested. For example, in Western Azerbaijan an average of 980 tubers were required from *Dactylorhiza* (palmate shaped) to make 1kg of dried salep, whereas an average 1380 tubers were required from other species (ovoid shaped) to make 1kg of dried salep (Ghorbani et al., 2014).

In Turkey it is estimated that 2000 kg of salep is used annually to produce Maraş ice cream (Kasperek & Grimm, 1999). This study demonstrated the scale of demand using a case study of an owner of one of the four well-established cafes selling this ice-cream in Ankara, Turkey. Here, it is estimated that one café requires 75-100kg of salep annually, to produce Maraş ice-cream. Kasperek & Grimm (1999) also estimated that 3750-7500kg (dry weight) of salep is harvested annually in Turkey, with the official figure of 28000kg annually exported. To

produce one kg of salep, it is estimated that 1000-4000 tubers would be required (Kasperek & Grimm, 1999) which would need 40-50 million orchid tubers to be harvested annually, in Turkey alone (Sezik, 2002b). Ghorbani et al (2014) does state that “there are no reliable estimates of the annual genuine salep harvest in Turkey” however, it is estimated that 30-120 million orchids are harvested in Turkey annually, and in Iran, 5.5-6.1 million orchids are harvested annually (Ghorbani et al., 2014).

Orchids are harvested indiscriminately from wild populations in predominantly Turkey, Iran and Greece. Salep from certain species of orchid are not suitable for use in Maraş ice cream, but due to harvesting practices are often still collected and therefore removed from the ecosystem. The preferred species for salep are *Serapias lingua*, *Orchis mascula*, *Dactylorhiza majalis*, *Ophrys sphegodes*, and *Habenaria repens* (Turkmen et al., 2021). There have been fluctuations in collecting over time due to demand, which is influenced by not only location but trade and cultural exchange (Charitonidou et al., 2019). In Greece, there has been a recent increase in demand for salep, and subsequently, prices have increased to 55-150 euro per kilo (£47-128) (Kreziou et al., 2016). Kreziou et al. (2016) explained that in 2012, a company owner paid 55-85 euro per kilo (£47-72) to collectors for Greek harvested salep, for which they estimated that packaged salep could retail for 143 euro per kilo (£122).

In the 1970s, salep prices began to increase, reaching up to \$20 for 1kg (£16) in the mid-80's. However, the increased use of substitutes, such as Carboxymethyl-cellulose (CMC) or rice powder, forced the price to decline to \$5 per kilo (£4) in 1994 (Kasperek & Grimm, 1999). Substitutes are cheaper than salep, and therefore are used to replace salep more frequently. Major ice cream producers in Turkey now use a mix of substitutes and salep, but with ice cream production moving to become industrially produced in the 1980's, traditional ice cream vendors saw a reduction in profit (Kasperek & Grimm, 1999).

Those who collect tubers from the wild are often people from rural areas who have access to meadows where these tuberous orchids grow. Though it may not be their only source of income, collecting these tubers is a vital source of income for many people (Interviewee two), and so when designing conservation interventions, this must be considered. Some local people who harvest orchids from graveyards in Turkey for salep can differentiate between orchid genera and identify new, and rare, populations (Attila et al., 2017). They categorised species by similar morphological features (Challe & Struik, 2008; Molnár V. et al., 2017), whilst other species are determined by the shape of tubers (Charitonidou et al., 2019). It is more worthwhile collecting orchids when the density of the plant is highest, which has been suggested to allow for the plants to recover (Kasperek & Grimm, 1999). There is evidence of success of sustainable harvest in community managed protected areas, for species such as *D. hatagirea*, when compared to unprotected areas (Chapagain et al., 2021).

## Cultivation

It has also been shown that small groups of individuals among communities have been able to sustainably harvest salep, annually, without a decrease in population (Molnár V. et al., 2017) so there is the potential, with careful management, that sustainable harvest can be achieved. In the Western provinces of Iran, where orchid collection has been practices for a long time, people have reported a decline in orchid populations. This has sparked a change in harvesting practice, where people are attempting to replant the orchids after removing the tubers (however, the success of this practice is not reported). In the Northern provinces, however, local people believe that orchids are a gift to provide them with supplemental (and vital) income (Ghorbani et al. 2014), and so sustainable harvest practices may not be employed here, as there is a belief that the resource will be replenished regardless.

Other methods to aid the conservation of salep orchids include the use of substitutes. Carboxymethyl-cellulose (CMC) and rice powder are commonly used instead of salep (Ghorbani et al 2014; Kasperek & Grimm, 1999). CMC is used in a variety of foods, as it is a modified starch with a consistency like salep and has good thermostability when mixed in water which has a similar consistency to dried salep (Kasperek & Grimm, 1999). Glucomanan, which is found in orchid tubers, can also be found in other plants (Kasperek & Grimm, 1999), although customers still seek ‘authentic salep’, thus demand for wild orchids remains high (Kasperek & Grimm, 1999). One company in Germany does produce a salep product that is made from starch instead of authentic salep (Kasperek & Grimm, 1999), and more research needs to be conducted to understand whether or not this is ‘accepted’ by consumers as a replacement for salep from tubers.

*Orchis mascula* and *O. morio* can be cultivated, as shown by a nursery in Belgium. The nursery grows orchids mainly for the European cosmetic industry, which equates to 100,000-300,000 plants in vitro, annually (one kilogram = 1000 plants in vitro). However, they are trialling a large-scale cultivation of orchids for salep production, with both *O. morio* and *O. mascula* (Rutherford & Groves, 2017b). Interviewee five commented that people would likely accept salep from artificially propagated orchid tubers, if the taste and consistency was identical. Consumers do not appear to be driven by a desire for wild tubers, but instead real tubers, as opposed to artificial substitutes, or ‘fake’ salep (Interviewee five). Salep that is made from orchid tubers is seen as

authentic, whereas chemical alternatives are seen as sub-par in comparison. Thus, research into artificial propagation of natural tubers is an important step in meeting the demand for 'real' salep and conserving wild orchid populations, as substitutes will not curb the demand for 'authentic' salep.

## Salep products in trade

The following observations were made for salep products using a systematic automated and manual online search for products in trade, using the key word 'salep', along with other scientific, common and trade names associated with this trade (Annex II and III).

## Online trade search and observations

Analysis of listings for salep products offered for sale in the online marketplaces sampled, provided the following observations. Six of the 7 websites returned relevant search results for salep products. Table 4 details the key characteristics of these online marketplaces.

Table 4 shows that the online marketplaces sampled fill slightly different niches within the online marketplace. Websites 1 and 2 contained many products based on pure salep powders or roots, with fewer processed products. Pure powders and roots were offered for sale in relatively small quantities (often 50-100g), although quantities of up to 1kg could often also be selected. Website 3 offered a smaller range of products, which were virtually all processed food items. Website 4 was markedly different, as it offered a range of wholesale powdered products, largely made from *Dendrobium* species. These vendors were predominantly based in China, particularly the Shaanxi region, with these listings representing around a dozen industrial facilities involved in the production of herbal extract products. Many of these vendors claimed to be able to fulfil orders exceeding 500kg-1000kg, with a production capacity of up to 10,000kg per month. Websites 5 and 6 represented smaller outlets, which provide traditional Turkish foodstuffs. Based in Turkey, these websites advertised processed products such as salep and coffee/salep beverages, although each website also offered a single product listing for pure salep powder, alongside their other salep products.

Sixty-six (49%) products were pure powders, 26 of which were offered in wholesale quantities. These products were usually derived from *Dendrobium* or *Cymbidium* species, with 9 appearing to be derived from *Dendrobium* flowers, 4 from stems and 2 from leaves, with the origin of many other undeclared. These wholesale products, however, usually included the word 'salep' within their product descriptions, with one product listing claiming the powder was derived from orchid bulbs.

Twenty-two (16.5%) products were offered as whole roots (tubers), which were otherwise advertised in a similar way to pure powders. 40 (30%) of the product listings were for processed products, such as powders for ice creams and beverages. In these listings, the proportion of salep within the ingredients was rarely declared. These products included several brand names, including one well-known global brand. 5 (3.7%) of the product listings were for whole tubers, which were being sold as 'lucky charms'. These so called 'lucky hand roots' are tubers which have a number of natural protrusions giving them a vague, hand like appearance. The vendors of these products were located in the USA, Greece and the UK.



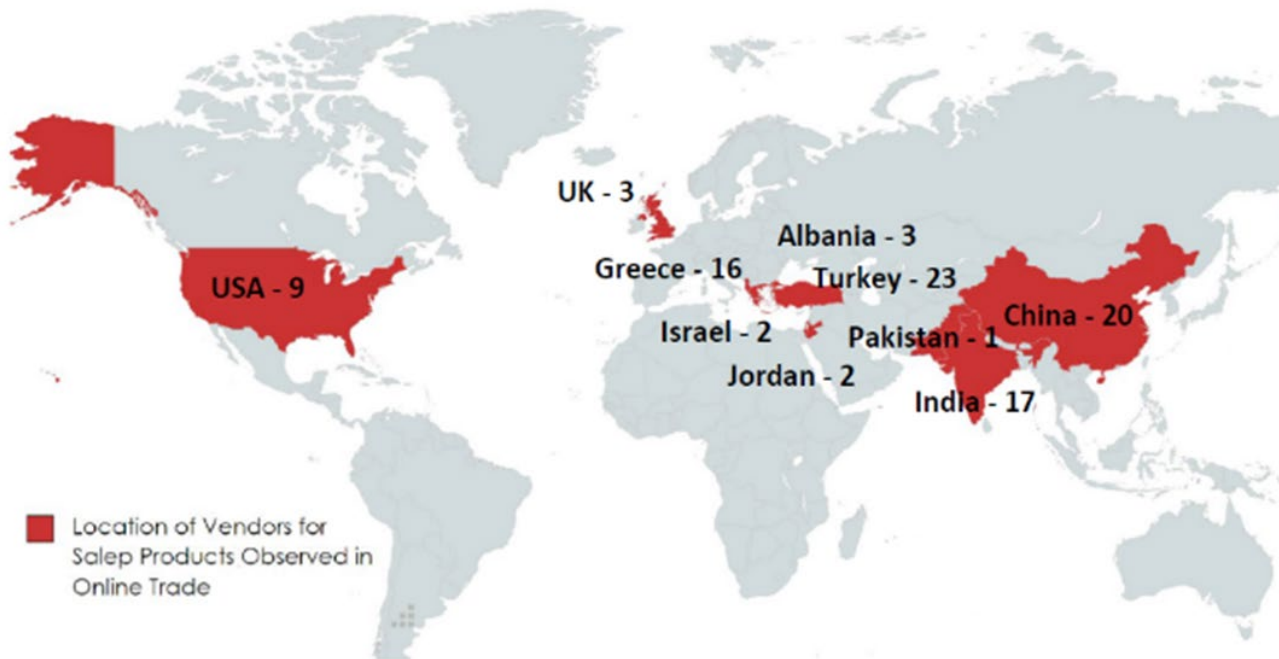
**Table 4:** Characteristics of online marketplaces sampled for salep products, detailing marketplace type, the number of vendors and products observed and the location of products within the website under specific menu headings

Site	Description	No. Products sampled	No. Of vendors	Website menu category	Number of vendor-salep product combinations				Observations
					Pure Powder from tubers	Roots	Processed Powder (non-pure)	Lucky Charms	
1	Global online marketplace	30	26	Home Furniture and DIY -> Food and Drink -> Other food and drink	15	11	3	0	Majority of trade in pure powders or roots, with vendors located in India, Greece, Albania, the UK and USA.
2	Global online marketplace	43	36	Home and Living	20	10	8	5	Majority of trade in pure powders or roots, with more processed products than for website 1. Vendors located in Turkey, Greece, Albania, UK, United States, India and Jordan,
3	Global online marketplace	15	10	Grocery and Gourmet food: > Beverages > Breads/bakery > Herbs/Spices	2	0	13	0	Fewer items than other websites, with a majority of processed products, and few pure powders. Vendors located in Greece, Turkey, USA and Israel.
4	Global online marketplace	32	22	Heath/Medical/Extract/Plant Extract	27	1	5	0	Website specialises in bulk products available for wholesale orders. All vendors located in China, aside from one located in Pakistan.
5	Traditional Turkish products	5	1	Turkish Drink/Turkish Coffee	1	0	4	0	Specialist website for Turkish foodstuffs. Vendor located in Turkey.
6	Traditional Turkish products	8	1	Turkish Drinks/Turkish Salep	1	0	7	0	Specialist website for Turkish foodstuffs. Vendor located in Turkey.
<b>Total</b>		<b>133</b>	<b>95</b>		<b>66</b>	<b>22</b>	<b>40</b>	<b>5</b>	

In the following analysis, these results have been aggregated, to provide an overview of the trends in the online trade in edible orchid products that were observed.

### Species-Country Combinations

Online vendors were based in ten different countries (Figure 12, Table 5). Turkey was represented by the greatest number of vendors (35), followed by China (20), India (17) and Greece (16). In 51% of the product listings, a species or genus name was identified within the product description, while in 49% of product listings, this information was not declared (Figure 13 & 14 and Table 6).



**Figure 12:** Number and location of vendors observed trading salep products online, within 6 online marketplaces sampled ( $n$  = number of different vendors located within each country).  
(Map template adapted from [www.mapchart.net](http://www.mapchart.net))

**Table 5:** Number and location of vendors observed trading salep products online, within 6 online marketplaces sampled.

Country	Number of Vendors	Number of Products
Turkey	23	35
China	20	30
India	17	19
Greece	16	28
United States	9	9
United Kingdom	3	4
Albania	3	3
Israel	2	2
Jordan	2	2
Pakistan	1	1

Of the 133 salep products observed, 68 product listings provided a species or genus name within their product descriptions, with these descriptions encompassing 4 genera and 8 species. Information relating to species identity was not declared in the product descriptions of the other 65 (49%) items (Figs 10 and 11).



**Table 6:** Species–country-combinations recorded for salep products observed within 6 online marketplaces sampled, with country representing the vendor’s physical location. Countries which form part of the species natural range are indicated as range States.

<i>Orchid taxa</i>	Country (vendor location)	Species Range State	Total Products
<i>Orchis mascula</i>	Greece	Yes	20
<i>Orchis mascula</i>	Turkey	Yes	5
<i>Orchis mascula</i>	India	No	5
<i>Orchis mascula</i>	Albania	Yes	3
<i>Orchis mascula</i>	United Kingdom	Yes	2
<i>Orchis mascula</i>	Jordan	No	1
<i>Orchis mascula</i>	Pakistan	No	1
<i>Orchis mascula</i>	United States	No	1
<i>Orchis militaris</i>	Greece	Yes	1
<i>Orchis militaris</i>	Turkey	Yes	1
<i>Orchis militaris</i>	United Kingdom	Yes	1
<i>Orchis latifolia</i> <sup>1</sup>	India	No	2
<i>Orchis latifolia</i>	United States	No	2
<i>Orchis anatolica</i>	United States	No	1
<i>Orchis</i> spp.	Greece	Unclear	1
<i>Orchis</i> spp.	United Kingdom	Unclear	1
<b><i>Dendrobium</i> species</b>			
<i>Dendrobium officinale</i>	China	Yes	4
<i>Dendrobium nobile</i>	China	Yes	4
<i>Dendrobium candidum</i>	China	Yes	3
<i>Dendrobium</i> spp.	China	Unclear	3
<b><i>Cymbidium</i> species</b>			
<i>Cymbidium</i> spp.	China	Unclear	2
<b><i>Dactylorhiza</i> species</b>			
<i>Dactylorhiza hatagirea</i>	India	No	2
<b>Other</b>			
<i>Orchid</i> spp.	India	N/A	2
Not declared	China, Greece, India, Israel, Jordan, Pakistan, Turkey, United States.	N/A	65

Three *Dendrobium* species were named within online product listings: *D. officinale* (4 products), *D. nobile* (4 products) and *D. candidum* (3 products).

In some cases, product names or descriptions were found to mirror or duplicate information provided in relation to products sold by apparently unconnected vendors. This observation, combined with the narrow range of species and lack of other contextual information, leads us to speculate that in at least some cases, species names may be used as something of a standard product description, which may not accurately represent the identity of the species being traded in every case.

In 49% of the product listings, no indication of species identity was provided at all. A further lack of transparency is created by the use of *Orchis latifolia* within product descriptions, which is not a CITES accepted name and is a potential synonym of three other species<sup>1</sup>. Several genera were notable for their absence, with searches for the genera *Anacampis*, *Gymnadenia*, *Himantoglossum*, *Neotinea*, *Ophrys*, *Platanthera*, or *Serapias* only returning results for low volumes of bulbs intended for the horticultural trade.

Based on the information provided within product listings, 18 species-country combinations were identified, along with a further 3 genus-country combinations (Table 6). *Orchis mascula* - Greece was the most observed combination (20 products), followed by *Orchis mascula* from Turkey, India and Albania. *Dendrobium* and

<sup>1</sup> *Orchis latifolia* is cited as a synonym of *Dactylorhiza majalis* subsp. *majalis* and *Dactylorhiza incarnata* subsp. *incarnata* (source: World Checklist of Selected Plant Families <https://wcsp.science.kew.org/>)

*Cymbidium* species were all traded from China, while *Dactylorhiza hatagirea* was traded from India. For 10 of these combinations, the country of origin was also a range State of the species in question, while for 8 it was not. For the 4 genus-country combinations that were noted, a lack of information about the specific species in trade makes this assessment unclear. These observations suggest that to facilitate online trade, some cross-border movement of raw materials and finished products between suppliers and vendors must also occur. Additionally, given the wide geographic range of some species including *Orchis mascula* and *Orchis militaris*, the fact that these orchids are being sold from within a range State does not mean that the tubers necessarily originate from that country, with the cross-border movement of orchid tubers between range States known to occur.

Our analysis of the CITES trade database (UNEP-WCMC, 2022) demonstrates that between 2015 to 2020 for *Orchis*, *Dactylorhiza* and *Cymbidium* species, and from 2018 to 2020 for *Dendrobium* species, there are few entries in the database that might potentially reflect trade resulting from online retail sales, which was considered as trade relating to the shipments of extracts, powders, derivatives, stems and medicines, rather than trade in live plants and cosmetics. For *Orchis* species, including *O. mascula*, a similarly small number of exports of extracts and medicines are recorded for India and the United Kingdom, and a similarly small number of imports recorded for India, Turkey and the USA, all from artificially propagated sources, with many shipments originating from Belgium. There is, however, no trade within the database representing the small volumes and frequent shipments that might be expected to be generated by online trade, and no entries for wild sourced *Orchis* species, which are often advertised online. Shipments of artificially propagated *Orchis morio* derivatives produced in Belgium occur with some frequency in the database, although *O. morio* was not cited within any online product listings observed.

Exports of medicines and derivatives of artificially propagated *Dendrobium officinale*, *Dendrobium nobile* and *Dendrobium* species from China are recorded in the database, which may potentially reflect aspects of online trade, although these do not occur with the frequency that might be expected from such large scale and established industry, and these supply chains warrant closer examination to determine their potential relationship to online trade. From 2018 to 2020, only two imports of *Dendrobium* extracts into China were recorded in the database, although this is not surprising, as it is likely that the products offered for sale online are produced within China.

No exports of *Cymbidium* extracts from China were recorded during this period. *Cymbidium* imports to China displayed one interesting trend, with regular imports of artificially propagated *Cymbidium kanran* extracts from Korea occurring between 2018 and 2020, although *C. kanran* does not appear within the online product descriptions observed, and these shipments may be unconnected to online retail trade. From 2015 to 2020, no imports or exports of *Dactylorhiza hatagirea* to or from India were recorded in the CITES Trade Database.

### Orchid Source and Harvest Site

In 67% of product listings, the vendor did not declare the source of the orchids within their products. Twenty-one (15.7%) product listings referred to wild sourcing, which was usually highlighted for marketing purposes. Two adverts (1.5%) contained references to artificial propagation, one through the supply of photographs of a plant nursery, and one through a reference to '*industry elites who have years of experience in plantation*'. For a further 22 product listings (16.5%) for wholesale products, artificial propagation can be inferred from the volumes offered for sale, with volumes of powder in excess of 500 to 1000Kg offered for sale, and with a production capacity of >10,000Kg/month cited by some vendors.

**Table 7:** References to the origin of orchids within online product listings for sale products, observed in 6 online marketplaces. Where available, this information was usually contained within product titles and product descriptions. observed.

Site	Wild Sourced (claimed)	Artificially Propagated (claimed)	Artificially Propagated (assumed based on volumes)	Not Declared/ Unclear
1	7	0	0	23
2	12	0	0	33
3	2	0	0	13
4	0	2	22	8
5	0	0	0	5
6	0	0	0	8
<b>Total</b>	<b>21</b>	<b>2</b>	<b>22</b>	<b>90</b>

Ten (7.5%) of product listings appeared to provide details of the harvest location. These details were, however, fairly vague, and referred to the Pindos region in Greece, Macedonia and the Bucak/Nigde, Taurus Mountains, Kastamonu, and Kahramanmara regions of Turkey, and Southern Turkey. Four vendors based in Greece suggested the harvest occurred in Greece, four vendors based in Turkey claimed the harvest occurred in Turkey, and two USA vendors claimed their products were sourced from Turkey (1) and Greece (1). Three product listings provided a year of harvest, citing 2018 in one case, and 2021 in two cases. Two other product listings gave the time of harvest as being between April and October. Four product listings provided some basic details of the harvesting method, describing the orchids as hand-picked, with two product listings claiming that not more than 50Kg were harvested per season.

### Cost per Kg and Numbers of Orchids in Trade

For 114 of the 133 products sampled, sufficient information was provided in the online product listing to enable the cost per kg of product to be calculated (Table 8).

**Table 8:** Cost of salep products observed in online trade in 6 online marketplaces. Where smaller units were offered, extrapolated to price per kg where .

Product Type	Number of products	Range (£/kg)	Mean (£/kg)	Notes
Powdered Salep (Pure)	41	£86.9 to £1,382/kg	£456.7/kg	Usually offered for sale in small quantities, typically of between 25g and 950g as a suggested order size.
Whole Roots (Salep)	14	£94.71 to £1,115/kg	£458.38/kg	Two products exceeded £1,000/kg. These were both <i>Dactylorhiza hatagirea</i> , from Indian suppliers.
Wholesale Powders	26	£5.77 to £82.36/kg	Mean Low (bulk orders): £17.3/kg Mean High (smaller orders): £34.7/kg	Price varies dramatically depending on the volume ordered.
Processed Products (containing salep)	28	£1.65 to £329.64/kg	£99.6/kg	The % of salep within products was rarely declared and is likely to vary widely. The most expensive product (equivalent of £329.64/kg) was described as a salep flavoured instant powder drink, sold in small quantities at unit price of £9.23 per 28g.
Whole Roots (Lucky charms)	5	£6.94 to £11.56/tuber	£10.38/tuber	Offered for sale individually or in pairs. As the weight of these large tubers is unknown, it was not possible to calculate a price per Kg for these items.

A wide range of prices were observed for both pure and processed salep products. While most products were offered for sale in small quantities, their price per kg was usually significant, with very similar mean values of just over £450/kg observed for pure powders and roots. Processed powders were considerably lower in value, with a mean value of just less than £100/kg and were also usually sold in far smaller quantities. Wholesale powders varied in price considerably depending on the volume being ordered and could be as high as £82/kg



and as low as £5.77/kg. In either case however, the value of wholesale dendrobium/cymbidium powders) was an order of magnitude lower than the value of salep powders made from ground or whole pure orchid tubers. Lucky hand roots were sold individually or in pairs, at a mean price of £10.38 per tuber.

As outlined in the methodology, using an estimate of an average mass of 0.94g/tuber (1,063 tubers/kg), a price per tuber within pure products can also be calculated (Masters et al., 2022) . Applying these estimates to the prices for tuber-based products above, the mean value of an orchid tuber sold as a pure powder or as roots, is £0.43 per tuber in both cases.

## Marketing

The marketing of online products provides insights into the motivation of consumers. The marketing of the salep products observed fell into 5 broad categories (Table 9).

**Table 9:** Broad categories of marketing claims associated with salep product listings observed within 6 online marketplaces.

Marketing Emphasis	Number of products
Health benefits	48
Traditional food/drink product with health benefits	25
Traditional Food/drink product	39
Quality (top grade etc...)	5
Lucky charm	8
None	8

Claims to the health benefits of salep formed the dominant marketing strategy, with benefits to health highlighted in 73 of the 133 products sampled (54%). These claims related to a wide range of health conditions, from increased energy levels to anti-aging properties to aphrodisiac effects. In total, salep products were claimed by vendors to be used in the treatment of 50 health conditions (see Annex V for a complete list), with many product listings noting that these claims are not FDA approved. In some cases, products were presented as traditional products, in use for centuries or more. Wholesale dendrobium powders were particularly associated with pre-work out supplements.

In many cases, health benefits were listed alongside the product's role as a source of food and nutrition, which was highlighted in 47% of product listings. Adverts focusing on food and nutrition often highlighted the use of powder in traditional Greek and Turkish winter drinks, as being tasty and healthy, and conveyed a sense of luxury (see Annex V for a full list).

Lucky hand charms were described as bringing the owner luck, for help with finances, relationships, gambling and games of chance (Annex V).

## International Shipping

Product listings for 128 of the 133 products sampled (96.2%) included offers of international shipping. While it was not possible to determine the amount of international trade undertaken by vendors, that the offer of international shipping was clearly presented in the majority of product listings, suggests that the vendors were willing to cater for an international consumer base.

For 90 of the 133 products sampled, the timeframe for dispatching a product following an order was <7 days, with 1-3 days commonplace. These dispatch times would not allow for CITES permits to be applied for, with some destinations including the EU and UK, also requiring an import permit to be issued by the importing country.

Shipping to the UK was used as a comparative benchmark, with free shipping offered in 44 adverts, and relatively low shipping costs in the region of £10-£15 offered in many other cases. The only exception was for shipments of wholesale powders, where the shipping costs reached >£70/kg, although this cost rapidly reduced as the volume of the shipments increased. These low shipping costs would therefore be insufficient to cover the cost of CITES permits required for international shipping.

Vendors claimed to make use of the following courier and postal services: air and sea freight, economy international shipping, international economy untracked, standard and expedited international shipping, tracked mail.

Vendors located in non-range State countries would need to import the products that they had available for sale. This may include the 5 vendors of lucky hand charms from the USA, although as the identity of these tubers is unclear, it isn't possible to determine whether they originated in the USA or required prior importation.

### References to CITES

None of the product listings sampled contained references to CITES or advice on the need for CITES permits for international shipments. In many cases, the terms and conditions stated that any customs considerations were the responsibility of the buyer. A variety of wording was used to convey this, although in some cases, the standard terms and conditions of the host website provided this message within their standard text provided for vendors to make use of. No references to CITES were recorded in either bespoke or the more standard template terms and conditions that were linked to the advertised products.

Theoretically, consumers and vendors could communicate through closed channels to discuss arrangements for CITES permits, but the lack of information within the product listings, combined with the short timeframes for dispatch and low costs of delivery noted above, strongly suggests that international trade arranged via these platforms is routinely conducted absent of CITES controls.

If so, this also suggests that when shipped internationally, salep products are mis-declared in customs paperwork, and/or have their salep content omitted from customs declaration forms. As the identify of products would be more difficult to conceal for large shipments of wholesale powder, a request for information from wholesale vendors regarding their processing of international orders may provide useful insights into this branch of the trade.

### References to Conservation

Only two advisements contained information relating to the conservation status of orchid species. In one case, it was stated that the harvest was restricted to 50kg/season, although the rationale for this harvesting strategy was not explained. In the second example, in relation to health benefits, the vendor based in Turkey stated: *'Salep is an expensive plant because it is endemic and some species are dangerous for extinction. But even a small gram of it is very effective.'* No references to the conservation status of orchid species were recorded in the other product listings sampled.

### Summary of Online Trade Analysis – Salep

The survey of online trade performed in this study provides a snapshot of the role that online markets play in the marketing and distribution of salep products. A total of 95 vendors located in 10 countries, advertising 133 different products associated with the key word 'salep', demonstrates that through the internet, salep is readily accessible to a global consumer base in a wide variety of forms, catering for a range of consumers and budgets. The marketing of these products based on a vast array of purported health benefits, alongside salep's role in traditional food sources, suggests that consumers may consider these products to have unique properties, for which there may be few substitutes. The high mean price of £450/kg commanded by pure powders and roots, (equating to an estimated £0.43/tuber), may provide a strong economic incentive to promote these qualities to an international consumer base. The use of orchid tubers as lucky charms (Lucky hand roots) was an unexpected element to trade, which appears to occur at sufficiently low volumes to be of low-conservation concern, although the identity of species used for these charms remains unclear.

Despite salep products being readily available within a variety of well-known online marketplaces with global reach, every aspect of the online trade in salep products remains opaque. Species-country combinations identified in online trade appear poorly represented within the CITES Trade Database, with the nature and frequency of international shipments made with CITES permits bearing little resemblance to the patterns that would be expected from an online industry that appears prepared and ready to supply a global consumer base.

Almost half of product listings provided no information on the species being sold, with species that were referenced only representing a narrow selection of the species commonly cited within the literature as being used within salep products. While a small number of product listings offered information on the location or timing of harvest, this falls far short of the level of detail required to enable these claims to be verified, or harvesters or producers to be identified. Wild sourcing was frequently used as a marketing plus, with only 2 adverts providing suggestions of artificial propagation, although this must be assumed to be the mode of production for wholesale products, given the volumes of shipments on offer.

While virtually all product listings offered international shipping, none referred to CITES procedures. Coupled with low (or free) shipping costs and speedy dispatch times of just a few days, strongly suggests that international trade in these products is routinely conducted without CITES controls. In order to evade CITES, it is likely that these goods are mis-declared on courier and postal packages, with vague terms and conditions



pertaining to customs regulations being the buyer's responsibility common among vendors, who frequently use the websites' standard terms and conditions to convey this to their customers.

The online trade in salep therefore appears a clear example of the use of online marketplaces by vendors and consumers who are either unaware of, or willing to circumvent, CITES controls. Without the uses of CITES permits supported by non-detriment findings for these supply chains, coupled with authentication of products to verify the claims of online vendors, the impact upon wild populations of species used for salep production cannot be accurately assessed, although is potentially significant.

Trade is often without CITES permits from Iran to Turkey and is often labelled as other food items when crossing border (Ghorbani et al., 2017). There has been an increase in the annual export of dried tubers from Turkey, with an estimate of 6500kg during the Ottoman Empire (Kasperek & Grimm, 1999), but in 2021, Turkey produced a yield of 425kg of salep (Turkish Statistical Institute, n.d.). The export of salep from Turkey is prohibited, and no import by CITES Parties should be accepted (Kasperek & Grimm, 1999). As production and trade of orchids are prohibited, production of salep for food purposes is under the supervision the 'Provincial/District Agriculture and Forestry Directorates', and farmers must be registered in the 'Farmer Registration System' in order to produce salep (Ministry of Agriculture and Forestry, 2022). They recommend that CITES Parties should control the import and export of salep, as well as the use of substitutes for salep to be advertised in an attempt to reduce demand for wild orchid salep (Kasperek & Grimm, 1999). Previously, Germany, Netherlands and Northern Cyprus have been listed as major salep importers, with other countries noted as importers are Switzerland, Austria, Saudi Arabia, United Kingdom, Bulgaria, Israel, Lybia, Rumania, Russia, Azerbaijan, United Arab Emirates, former USSR, and Denmark (Kasperek & Grimm, 1999). Salep was exported from Greece, Turkey or Syria to Germany, whereas now, it is imported from China via Hong Kong Special Administrative Region by one supplier (Kasperek & Grimm, 1999).

On the CITES Tradeview database (reported by exporters), there were only four exports of wild sourced *Epipactis* spp., exclusively *Epipactis helleborine* in root form, traded from Belarus to the United States of America. According to importers, the top exporter of *Epipactis* spp. was the United Kingdom, and the top importer was Japan. 200 roots artificially propagated sourced were traded in 2015, and all were *Epipactis palustris*, which does not occur in the 'Edible Orchid Database'. The top exporter of *Eulophia* spp. was Thailand and the top importer was India. 15 roots were trade in 2016, all artificially propagated sourced, and consisted of *Eulophia flava*, *Eulophia herbacea* and *Eulophia macrobulbon*. These taxa were not found in our literature review.

There were no results when searching on the CITES Tradeview database for *Eulophia* spp. as reported by exporters. *Dactylorhiza hatagirea*, *Gymandenia* spp., *Himantoglossum* spp., *Neotinea* spp., *Ophrys* spp., *Orchis anatolica*, *Orchis latifolia* (A synonym of both *Dactylorhiza majalis* subsp. *majalis* and *Dactylorhiza incarnata* subsp. *incarnata*), *Orchis mascula*, *Orchis militaris*, *Orchis* spp., *Platanthera* spp. or *Serapias* spp, was reported by both importers and exporters.



# Conservation impact



Harvested tubers, Zambia



## Conservation impact

Assessment of the conservation impact of trade in salep and chikanda products requires the creation of Non-detriment Findings (NDFs) by CITES Scientific Authorities. NDFs establish the sustainability of trade for species-country or region-country combinations, as well as verifying the legality and sustainability of harvests contributing to individual international shipments containing CITES listed species.

To conduct an NDF, a broad suite of up-to-date information is required, relating to intrinsic (e.g. biological) and extrinsic (e.g. anthropogenic) factors affecting wild populations of the species in question (see Cohen et al., 2020 for a detailed summary). While complete data covering every relevant factor may not always be available, the information must be sufficiently complete and reliable, in order for a risk-based assessment of the impact of harvest upon the species to be made.

While there is no officially proscribed approach to conducting NDFs, the 9-step guidance for making CITES non-detriment findings for perennial plants (Wolf et al., 2016), provides a structured approach to capturing and assessing the key information required for conducting edible orchid NDFs.

We documented a large volume of edible orchids, and only found a few of these identified to a species level in trade. We have taken a broad overview to the data available to make NDFs for edible orchids using the 9-step guidance.

### Step 1: Identification

Taxonomic verification of species names was checked using the World Checklist of Selected Plant Families and CITES orchid checklists. There are plentiful resources relating to species taxonomy, however, many of the orchids in trade were not identified to a species level. There are also numerous names in trade both at marketplaces and online markets which do not have scientific names. We identified various trade names for salep; 'Salepi,' 'Sahlab,' 'Sahleb,' 'Sahlep' and other names as detailed in Annex III. Additionally, one study found the shape of tubers were being used to distinguish between in Iran, with tubers identified as palmate called 'Panjeh-ey' or alternatively round/oval shaped tubers named 'Qolveh-ey' (Ghorbani et al., 2014).

A plethora of chikanda trade names were found in the literature, from root shaped tubers called 'mshilamshila' in Bemba, Zambia and heart shaped tubers called 'mampanda' (Veldman et al., 2018). Names for tubers are also based on their origin, with Veldman et al (2017) stating that "mwinilunga, chozi, luwingu and kasama are all Zambian city names, sumbawanga and iringe refer to Tanzanian cities and angola refers to one of the countries bordering Zambia". However, the terms original 'myala', and fake or low quality (Veldman et al., 2014) 'mbwelenge or msekelele', are the most common terms (Veldman et al., 2018). There are many generic terms for chikanda orchid tubers as found by Davenport and Ndangalasi (2003): "chikanda (Fipa, Nyamwanga), finaka (Malila), finsekeni (Kinga, Nyakyusa, Wanji), kikanda (Safwa), kikande (Ngoni), kinaka (Nyiha), Mansekeni (Kinga), Ngulingusi (Wanji) and Vinaka (Nyiha, Safwa)", as well as kikanu, kikanda or African poloni (Rutherford & Groves, 2017a).

CITES permits require scientific names so other forms of identification are essential for CITES implementation. Orchids that are traded as live plants, stems or roots can sometimes be identified to species level, but most commonly to genus level. It is difficult to identify highly processed products without DNA or other authentication techniques. Those that have had a lower level of processing, such as powders, drinks, foods, may be able to be identified (Rutherford & Groves, 2017b). Some of the literature we reviewed used DNA barcoding or metabarcoding of salep products to identify to a species level (de Boer et al., 2017; Ghorbani et al., 2017).

### Step 2: Review artificially propagated compliance

The edible trade is predominantly wild harvested and this step of the NDF is not applicable. Cultivation trials have been discussed earlier in this report.

### Step 3: Review relevant exclusions and previously made NDFs

There are a few orchid NDFs available, primarily for ornamental or epiphytic orchids (AC26/PC20, 2012) but we found none for edible orchids. There was also a published study on an ornamental orchid which had used the 9-step guidance for perennial plants, this was for an endemic orchid species in Jamaica (Cohen et al., 2020). This study also highlighted that making NDFs is difficult with the lack of resources, available data and the ability to adequately monitor species populations.

#### Step 4: Evaluate conservation concerns

According to the intergovernmental expert panel on biodiversity, the main drivers of biodiversity loss are agriculture, exploitation of plants and animals, climate change, pollution, and invasive species (IPBES, 2019). To-date around 1850 orchid species have been assessed on the IUCN Red List, this is a small number of conservation assessments in comparison to the number of species in the family Orchidaceae (IUCN Red List, 2022b). A summary of the IUCN Red List Orchidaceae conservation status and number of orchid species; Least Concern (628), Endangered (422), Data Deficient (254), Vulnerable (234), Critically Endangered (209), Near Threatened (101), Lower risk (2) and Extinct (5) (IUCN Red List, 2022). Many of the orchid species documented in this study did not have an IUCN Red List assessment, and from the species which had an assessment the largest group of species were placed under IUCN Red List Least Concern (Table 10).

**Table 10:** The number of edible orchid species and their extinction risk on the IUCN Red List

	Red List Category	Number of species
Not Threatened	Not Evaluated	260
	Data Deficient	15
	Least Concern	69
	Near Threatened	10
	Endangered	11
Threatened	Vulnerable	6
	Critically Endangered	3

For the species which had a 'Not Evaluated' status we checked national and regional assessments on the BGCI ThreatSearch tool and found 63 of these species were categorised as Threatened. We interpreted 'threatened' from the following categories used by BGCI ThreatSearch tool: Critically Endangered, Endangered, Vulnerable, Threatened or Rare.

#### Step 5: Evaluate intrinsic biological risk

The most recorded species for chikanda belong to the genera *Disa*, *Satyrium* and *Habenaria*. *Disa* and *Satyrium* species have a small distribution range and wild species with narrower species ranges are at more of an extinction risk (Nic Lughadha et al., 2020). *Habenaria* had a greater range globally across tropical and sub-tropical areas which places it at less risk, but localised extinctions are possible. Similarly, the most frequent genera in *Ophrys*, *Dactylorhiza* and *Orchis* all have wide-spanning ranges. We recommend further analysis at the species and country population level to assess the biological risk more comprehensively.

From the papers we analysed as part of the salep and chikanda review, 15 of the papers focused on orchids from Turkey, followed by 5 papers focusing on orchids from the Southern Highlands of Tanzania, with only two papers on Greece and two papers on Nepal. The source of the orchid harvest as identified by the papers were predominantly wild, with one paper discussing in vitro source. One study focusing on *Ophrys sphegodes* subsp. *mammosa*, an orchid used for salep saw positive results for a tuber propagation method (Caliskan et al., 2019). The study looked at the tuber growth throughout the flower period for the orchid and discovered orchids which were harvested at the early flowering stage were able to develop new tubers (Caliskan et al., 2019). A further two species, *Orchis mascula* and *Anacamptis morio*, are already cultivated in Belgium for the cosmetic industry and trials are being conducted on the feasibility of large-scale cultivation for salep production. As detailed in the chikanda section of this report, there are trials to propagate species used in this trade in Southern Africa.

#### Step 6: Evaluate harvest impacts

Chikanda and salep are comprised of tuberous orchids often found in grassland habitat. It appears as a high biological risk to the orchid species as the harvest of the tubers uproots the whole plant. Based on the harvesting information presented in this report, we found a high threat of harvesting impact. This is due to the harvest practice of the whole plant being uprooted for the tubers, and that the species collection is indiscriminate, it appears to be tuberous orchids available in the habitats accessible to harvesters. The reviewed literature indicated declining populations of orchids used for salep and chikanda.

A review of the main threats listed for the family Orchidaceae on the IUCN Red List listed the following threats for the orchid species which have been assessed:

1. Small-holder farming
2. Unintentional effects (subsistence/small scale) [harvest]

3. Intentional use (species is the target)
4. Mining and quarrying
5. Shifting agriculture
6. Housing and urban areas
7. Increase in fire frequency/intensity
8. Unintentional effects (large scale) [harvest]
9. Droughts
10. Tourism and recreational areas

These assessments of threats support harvesting of orchids are one of the main threats attributing to their decline. In a recent study, automated conservation assessments were adopted to review the 13,910 species of orchids globally distributed, this provided a rapid assessment for a wider selection of orchid species (Zizka et al., 2021). Their results found 4,342 orchid species were evaluated as possibly threatened. In detail they classified 718 species as Critically Endangered, 2,567 species as Endangered and 68 species as Vulnerable. This study has limitations but provides an indication to the conservation status of orchids globally.

### **Step 7: Evaluate trade impacts**

The magnitude of legal trade is low, as most of this trade is unregulated and traded without CITES permits. The prices of some of the salep products available online indicate this is a valuable source of income. It is difficult to quantify the trade volumes, however literature about the salep trade estimated 30 - 120 million orchids are harvested in Turkey annually, and in Iran, 5.5 - 6.1 million orchids are harvested annually (Ghorbani et al., 2014). For chikanda, figures indicate that Zambia imports around 5 million tubers from surrounding countries (Rutherford & Groves, 2017a), with 2.2 - 4.1 million tubers imported from Tanzania alone in 2003 (Davenport & Ndangalasi, 2003).

The online trade search for salep, suggested the quantities and authenticity of the product is difficult to determine. It also recognised substitutes or synthetic products may be sold in place of wild orchids, and so trade calculated from product descriptions can only provide an estimate of trade volumes.

### **Step 8: Evaluate effectiveness of management measures**

No management plans exist in the CITES NDF database for wild harvested chikanda or salep species. We recognise preliminary research and studies have attempted to address this through case studies in Zambia and Tanzania but these projects are also investigating cultivation techniques and the feasibility of propagating these tuberous species.

### **Step 9: Make a Non-Detriment Finding or related advice**

A positive NDF decision is not likely at this time, further information and understanding on harvesting practices are required.

### **Socio-economic dimensions of edible orchid conservation**

It is pertinent to point out that this trade does not occur in a vacuum. Additional threats to these orchid populations are occurring in tandem to harvesting. Land use change, conversion to agriculture or housing has encroached on many orchid habitats. In Turkey, for example, the conversion of ancient olive groves into other land uses is irradicating an important habitat that tuberous orchid species thrive in (Interviewee two; Interviewee five). In Southern Africa, land that would previously be habitat for wild orchid species is being rapidly transformed into avocado plantations to meet the growing demand across the world (Interviewee one). It is unlikely that harvesting alone will lead to species extinctions, as it is likely that some individuals of a species are left behind after harvest (Interviewee three; Interviewee five). However, reducing a species to a few individuals in turn reduces the gene pool from which that species re-populates. This can mean that a species is less diverse, and therefore potentially less able to adapt to diseases or changes in the environment due to climate change.

Additionally, it is vital to consider that the trade outlined in this report is an important part of many people's livelihoods. Often, it is a source of income that enables households to overcome 'economic shocks' such as the loss of a parent, failure of other income streams (such as crops) or to overcome additional costs due to life events (such as weddings) (Interviewee two; Interviewee three). As fewer orchids are available for collection through declining populations, it is likely that prices for the end products will increase due to increased costs in the supply chain (eg. Transportation of orchids from further away, more time finding viable harvest sites etc.) Experts believe that an increase in price, due to less and less tubers being available, will be unlikely to affect demand for salep as end-consumers are more able to absorb the inflation. However, when it comes to the trade in chikanda, an increase in price due to reduced supply could end up in one of two scenarios. Either the demand



will decrease as people buy less, or the harvesters will be compensated less for the tubers they collect (Interviewee three). Harvesters usually have lower economic power and are unable to dictate the prices for the tubers (which is particularly true in Southern Africa), and so as orchid populations decline, it is the already disenfranchised in the supply chain who will suffer further economic loss. Though trials of artificial propagation of these species are underway, the limited success seen so far is an indication that further work needs to be done to find a viable way to protect both orchid populations, cultural traditions, and livelihoods.

## Limitations and further study

### Literature

The edible orchid database has considerable gaps in information due to the lack of information available and the time to access resources. The study was limited by searching literature in the English language only and many other resources are likely available in different languages. The main gaps to the database include ecological information, conservation status and evidence and details of trade routes. In some of the literature there was a deficiency of scientific names, genus or family indexing (e.g. Multiple edible plant field guides were ordered and indexed by common name only). Often species (and plant parts) are identified only as edible (unclear if species are edible and used for food or edible but not used). Date of species use is not present or, if present, didn't indicate if the use was still in practice (unclear if the use is historical, current or both). We likely have geographical bias as the written resources reviewed (those written in English language tended to be from English speaking countries).

The literature review was based on the available papers and grey literature we identified and available in the English language. There is a reasonable but not comprehensive volume of literature to draw summaries and conclusions from. The methodologies of the papers that were used for the literature review were identified as field research, lab-based research or desk-based research. 26 papers included field-based methodologies, 13 labs based and 8 desk based. 10 papers included cross overs between the methodologies, with only one paper being identified as using all three methodologies. Only two papers were exclusively desk based. 10 of the papers conducted interviews with local people and six of the papers undertook lab-based DNA work. For harvesting and trade data further in-field research is required in range states and engagement with stakeholders, particularly as elements of this trade are important for livelihoods.

### NDF data

In future work, it would be useful to collect further data from CITES scientific authorities in countries that experience high volumes of trade in edible orchids. One limitation of this study is the small sample size of experts we were able to interview. This is partially due to time, but also due to non-responses or inability to engage. The limitations of conducting NDFs at a species level would currently be difficult without further population, harvest and regeneration data. It would be useful to have further NDF focus on orchids more broadly as well as for the edible orchid trade, with range States collaborating with perhaps support from the CITES Plants Committee.

For more biological information we recommend further research to verify the current use of historically used edible orchids, this could be done by connecting with ethnobotanists and in-country researchers. It's also important to verify trade and use data to species level (including products on the market) (resources often referred to genera rather than species). Additionally, it would be critical to verify status of cultivation of orchids several resources stated that various cultivation projects were in progress, feasibility of cultivation due to costs. Further research on the uses of orchids would add to this body of knowledge, particular as there is a close link between medicinal plants and edible plants.

Additionally, there was not time to review the legal status of orchids for each of the range states. The literature indicated orchids are nationally protected and banned for export from several of the range States.

### Trade

Our analysis of online trade provided a snapshot of trade across a range of website types, including 4 sites with global reach and branding. Information on the number of transactions completed would enable the volume of trade to be more accurately assessed, although this information would only have been readily available from one of the websites sampled. The inclusion of a survey of vendors and manufacturers within future research might be an alternative way to measure this data, along with gaining other useful insights into their trade in chikanda and salep products.

Improving the transparency of online trade will require collaboration between range States, manufacturers, vendors and online technology companies. Transparency in trade would be improved through raising awareness with consumers, updates to online trading policies which are enforced by measures to remove or flag online product listings which do not adhere to these policies for edible orchid products. The courier and postal companies facilitating shipments of these product should also be consulted, regarding any potential measures to detect salep and chikanda products being shipped internationally via their services.

Any control of online trade will of course have an impact on livelihoods, by introducing frictions and costs which may make some international trade more difficult or economically unfeasible. A survey of online vendors might also provide a clearer understanding of the supply chains involved in online trade, which may help with strategies to support sustainable trade and mitigate some of these impacts where it is possible and appropriate to do so.

The lack of transparency around online trade extends to the identity of the species involved. Forensic research to authenticate products and identify the species in trade through DNA barcoding would enable the composition and proportion of species in trade to be established, building on work previously conducted by Masters et al (2022).

This study has identified a range of species-country combinations of relevance to the online trade in salep and chikanda products. Analysis of the CITES Trade Database supports the theory that online trade may be conducted largely absent of CITES controls. More information about the supply chains observed in the CITES Trade Database would, however, be a useful exercise, to establish to what extent these shipments may or may not relate to online trade activity, and the potential relevance of species recorded in the trade database, but which are not cited within product listing information.

With the threat to wild populations due to unsuitable collection, more research is needed to understand what species are collected, any harvesting patterns and what levels of harvesting would be required to enable this trade to work towards being sustainable.

## Summary

### Edible orchid trade

We found a total of 374 documented edible orchids in the literature. For many, the literature did not provide documentation of use, only edibility. For those with use documentation, it was not always clear if the historical use is still practiced.

Many of those species did not have an IUCN Red List assessment. The category most represented in those that did was Least Concern. Many species without IUCN Red List assessments had national or regional assessments. Of these, 63 were categorized as Threatened (all species categorized as Critically Endangered, Endangered, Threatened, Vulnerable or Rare was interpreted as Threatened). Edible orchids with documented use for the products known and traded as chikanda and salep accounted for just over half of those identified. Chikanda, a food “cake” made with ground terrestrial orchid tubers, is eaten across several African countries, predominately Zambia. The genera most used to make chikanda were *Disa*, *Satyrium* and *Habenaria*. Salep, a powder also made from ground terrestrial orchid tubers, is used in Iran, Greece and predominately Turkey. The genera most utilized when making salep were *Ophrys*, *Dactylorhiza*, and *Orchis*.

Orchids harvested to make chikanda are exclusively taken from the wild and the whole plant is harvested. They are collected indiscriminately, without controls in place to allow time for regeneration. Species level identification is challenging for collectors and harvest is often based on the ability to sell the tubers. Collectors use locality, texture, shape and flavour to determine which harvested tubers the middlemen will buy. Both collectors and middlemen have noted that orchids are becoming rarer, forcing collectors to travel much farther and harvest less-desirable species to keep up with demand.

Protecting areas such as Kitulo National Park in Tanzania and Nyika National Park in Malawi has not prevented the harvesting of orchids within. Prohibition of collecting orchids is not enough to prevent continual harvesting. Collectors often rely on the income from selling tubers and will need alternative sustainable livelihoods. From its local beginnings, chikanda has become a popular dish and is now found in restaurants and supermarkets. This rise in popularity has resulted in an increase in demand and a move to commercialisation. The demand is highest in Zambia. Tanzania and more recently Malawi and other bordering countries are supplying Zambia with orchid tubers to meet the demand. While cross border trade is evident, there is no evidence of CITES registration/declaration. Online trade in chikanda products and raw ingredients is currently

limited, suggesting that online international trade is rare. The trade that does occur however, lacks transparency and may be conducted without CITES control.

A large number of species are harvested to make salep, a powder used to make beverages and as an ingredient in both confectionery and ice cream. The orchids are harvested from wild populations, again with the removal of the entire plant. Species other than those targeted, and not suitable for use as salep, are also removed due to indiscriminate harvesting practices. Increased harvesting in Turkey has caused populations to decline and salep trade there is increasingly reliant on tubers harvested from other countries such as Greece, Albania, and Iran. Iran is now also seeing its populations decline.

There are some efforts underway to harvest sustainably. In Western Iran, some individuals are replanting orchids after harvesting to maintain populations and in Turkey, small groups of individuals have been able to sustainably harvest salep annually within their communities without a decrease in populations. There are other methods which could aid in the conservation of wild orchids, one of which is cultivation. Cultivation of salep species which produce one tuber annually has not been thought to be cost-effective. Another conservation method is the use of substitutes. It is believed that consumers don't specifically desire wild tubers in salep products and would likely accept artificial alternatives which replicate the taste and consistency expected. The modified starch, carboxymethyl-cellulose, is used in a variety of foods. It and rice powder are commonly used as substitutes for salep in Turkey. Glucomannan, a substance occurring in the orchid tuber, acts as the stabilizer and thickener in salep and can be found in plants other than orchids. While there may be potential to finding alternative supplies or even producing it artificially, there is little incentive to do so as it is unlikely to be cost-effective due to the low cost of accessing wild tubers.

Salep has also moved from local use to a commercial industry supporting large-scale enterprises in Turkey where demand is highest. It is now readily accessible in a variety of forms to consumers around the world via well-known online marketplaces as well. Traders frequently used a statement alluding to wild sourcing of orchid ingredients as a marketing tactic and almost half the products advertised provided no information as to species used. Every aspect of online trade in salep products was opaque and, while all the listings offered international shipping, none made any reference to CITES regulations.

The orchids identified as edible with uses other than chikanda and salep were spread over 46 genera with *Pterostylis*, *Diuris*, *Dendrobium*, *Prasopphyllum* and *Vanilla* being the most represented. All parts of the orchid plant were documented as edible, although in most cases only one or two parts per species was documented. The tuber was the part most identified as edible. Documentation of the food use of orchids showed that they are prepared and consumed in a variety of ways. Some parts are eaten boiled, steamed or roasted, often compared to being used like potatoes, some are likened to vegetables, while others are pounded into a powder which aids in storage. Some orchid parts are used to flavour food and beverages, some to prepare preserves and jellies, and some are eaten raw, providing sustenance away from home.

## Implications for orchid exemptions on CITES

This review supports that the trade of orchid tubers is a threat to wild populations and the trade seems to be unregulated. A preliminary list of genera and species in the edible orchid trade will facilitate future discussions on orchid exemptions on CITES. There have been discussions relating to exempting certain orchid taxa from cosmetic products, the species for consideration are: *Bletilla striata*, *Cycnoches cooperi*, *Gastrodia elata*, *Phalaenopsis amabilis* and *Phalaenopsis lobbii*. Only one of these species appeared in our review, *Gastrodia elata* as it has a documented medicinal, edible and cosmetic use. Predominately the use of this species is for medicinal purposes and as the species native range is the Himalayas and across temperate East Asia (POWO), it was not included in one of our in-depth reviews. This species requires an updated IUCN Red List assessment, but in 2004 it was listed as Vulnerable (China plant group). However, we found limited data and evidence that this species is in trade for edible purposes. We found one occurrence for trade of this species as a health food and an online marketplace offering international shipping for this purpose. It's previously been documented that collection of wild seed for cultivation has been an important source of income (BGCI) and the CITES trade database only shows artificially propagated trade of *Gastrodia elata* when queried between 2010 – 2019 with the main exporting countries as Republic of Korea and China and trade predominantly as an extract or powder (CITES Trade view). We found a close link between edible and medicinal orchids, so a review of species used medicinally and for other uses for orchids is recommended to facilitate informed discussions in CITES.

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## Annex I: List of Interview Questions

### Edible orchid project Semi-structured interview guide – Management/Scientific Authority

#### Information about the informant

Name

Role (in management authority or scientific authority)

#### Introductions from the edible orchid project team and a summary of the project.

“The CITES Secretariat is currently commissioning Kew to research the conservation impacts of trade in products of wild-harvested edible orchid species, with a focus on salep and chikanda. The results of this research are expected to be available in time for the documentation deadline of CoP19. This is desktop study and we are collecting data through a literature review and interviews. The outcome of this work is to inform discussions on products containing specimens of Appendix-II orchids.

If asked further details of the output, activities to be carried out by RBG Kew:

- a) Undertake a global scoping review of principal food products in international trade that contain orchid specimen using online data collection, literature analysis and expert interviews.
- b) Analyse geographic patterns and temporal dynamics of the availability, trade routes and pricing of Salep and Chikanda products, using the CITES Trade database, and systematic manual and automated online search for products in trade.
- c) Compile the taxa principally used in Salep and Chikanda products and available information on their biology, conservation, sources of harvest and estimated harvest volumes, using scientific and grey literature reviews, IUCN red listing information and expert and key informant interviews.
- d) Assess the conservation impact of trade in Salep and Chikanda products using the 9-step guidance for making CITES non-detriment findings for perennial plants.
- e) Identify knowledge gaps and priorities for follow-up research, including scope and methodologies of pertinent fieldwork.

#### Confirm PIC verbally and data anonymization

Will it be okay to include in the report we spoke to country x.

Would it be okay to include information you give us today – any information we do include in the final report will be anonymised and our name or job role will not be included.

#### Questions:

- Tell me about your role in the management/scientific authority
- What are the main uses or types of orchid trade in [insert country]? Define if its national or international trade.
- In your opinion, what is the scale of the edible orchid trade in [insert country] Is the trade cross border or localised?
- Can you tell us about which species you know to be involved in the trade? (or local names)
- What can you tell us about the harvesting of edible orchids?
- Can you tell us about the products being traded that contain edible orchids?
- And what about the sale of edible orchids? Where are these products being sold? - markets? - online trade?
- In your opinion, what portion of the trade occurs online? How is this regulated?
- Is this harvest or trade regulated by local or national laws?
- Do you receive applications for CITES permits for edible orchid species? In what sort of volumes? How does this compare to the actual levels of trade seen/reported?
- Can you describe who is involved in the harvest, trade and sale of edible orchids? – who? – where? – how often? – how easy is it to access the end product?
- Enforcement – how is CITES enforced in this trade?

- Can you tell us about the trends in this trade that you have seen/documentated - what was the trade like 10 years ago? How does that compare to today? What do you think it will look like in 10 years time?
- (If applicable) when do you think the trade became international?
- Do you have concerns about the conservation/survival of these orchids? Why/Why not?

Thank you for your time. Do you have any questions for us?

## **Edible orchid project Semi-structured interview guide – In-country researchers**

### **Information about the informant**

Name

Country they work in

How long they have conducted this research

Role in research team

**Introductions from the edible orchid project team** (see above)

### **Questions:**

- Can you tell us a bit about your role researching the edible orchid trade
- What are the main uses or types of orchid trade in [insert country]? Define if its national or international trade.
- In your opinion, what is the scale of the edible orchid trade in [insert country] Is the trade cross border or localised?
- Can you tell us about which species you know to be involved in the trade? (or local names)
- What can you tell us about the harvesting of edible orchids?
- Can you tell us about the products being traded that contain edible orchids?
- Can you tell us about the end products – how often are they consumed? Are they for sustenance? Business?
- And what about the sale of edible orchids? Where are these products being sold? - markets? - online trade?
- (If applicable) when do you think the trade became international?
- In your opinion, what portion of the trade occurs online? How is this regulated?
- Is this harvest or trade regulated by local or national laws?
- What groups of people are involved in the trade?
- How do people become involved in the trade?
- How do the groups interact with each other?
- Legality – is there enforcement of rules regarding harvesting? Or cross border trade?
- Can you tell us about the trends in this trade that you have seen/documentated - what was the trade like 10 years ago? How does that compare to today? What do you think it will look like in 10 years time?
- Can you tell us about the propagation of these species – what results can you share from the propagation project?
- Do you have concerns about the conservation/survival of these orchids? Why/Why not?

Thank you for your time. Do you have any questions for us?

## **Annex II: List of Species and Genera in Trade**

### Webcrawl

*Orchis mascula*- salep  
*Orchis militaris*- salep  
*Dactylorhiza hatagirea*- salep  
*Dendrobium officinale*- edible  
*Dendrobium nobile*- edible  
*Dendrobium candidum*- not in database  
*Orchis anatolica*- salep  
*Orchis* spp.- salep  
*Dendrobium* spp.- edible  
*Cymbidium* spp.- edible

### Chikanda

*Satyrium* spp.  
*Habenaria* spp.  
*Disa* spp.

### Salep

*Eulophia* spp.  
*Epipactis* spp.  
*Gymnadenia* spp.  
*Himantoglossum* spp.  
*Ophrys* spp.  
*Platanthera* spp.  
*Serapias* spp.

### Annex III: Key words for Online Trade Searches

#### Web crawler search lexicon of key words

The following scientific, common and trade names and terms were selected for online searches performed using the web crawler:

1. chikanda
2. orchid tubers
3. orchid flour
4. kinaki
5. kikanda
6. african polony
7. chikanda powder
8. Meatless sausage
9. Chikanda cake
10. chinaka
11. Salep
12. Salepi
13. Sahlab
14. Sahleb
15. Sahlep
16. sakhlav
17. saloop
18. salep tubers
19. salep tuber powder
20. salep powder
21. salep aroma
22. dondurma [ice cream]
23. salepi dondurma
24. maraş
25. maraş dondurma
26. roots of *orchis*
27. orchis tubers

Following Rutherford & Groves 2017b and 2017a, the following terms and genera names were selected for additional manual searches performed within each of the selected websites:

**Relating to Chikanda trade:** Chikanda, *Habenaria*, *Satyrium*, *Brachycorythis*, *Eulophia*, *Roepocharis*.

**Relating to Salep trade:** Salep, salap, *Orchis*, *Anacamptis*, *Neotinea*, *Ophrys*, *Serapias*, *Himantoglossum*, *Dactylorhiza*, *Gymnadenia*, *Platanthera*,



**Annex IV: Summary of Genera (A-Z) and the Number of Species found in the Literature**

Genera	No. of species
<i>Acianthus</i>	2
<i>Anacamptis</i>	13
<i>Anoectochilus</i>	3
<i>Aplectrum</i>	1
<i>Brachycorythis</i>	2
<i>Bulbophyllum</i>	1
<i>Caladenia</i>	10
<i>Calanthe</i>	1
<i>Calypto</i>	1
<i>Ceratostylis</i>	1
<i>Chiloglottis</i>	9
<i>Coelogyne</i>	1
<i>Corybas</i>	3
<i>Cremastra</i>	1
<i>Crepidium</i>	1
<i>Cryptostylis</i>	4
<i>Cymbidium</i>	6
<i>Cynorkis</i>	1
<i>Cypripedium</i>	1
<i>Cyrtorchilum</i>	1
<i>Cyrtostylis</i>	1
<i>Dactylorhiza</i>	18
<i>Dendrobium</i>	11
<i>Denia</i>	1
<i>Dipodium</i>	1
<i>Disa</i>	30
<i>Disperis</i>	1
<i>Diuris</i>	14
<i>Encyclia</i>	1
<i>Epipactis</i>	4
<i>Eriochilus</i>	1
<i>Eulophia</i>	9
<i>Gastrodia</i>	6
<i>Genoplesium</i>	7
<i>Geodorum</i>	1
<i>Glomera</i>	1
<i>Goodyera</i>	2
<i>Gymnadenia</i>	4
<i>Habenaria</i>	26
<i>Herminium</i>	1
<i>Himantoglossum</i>	5
<i>Jumellea</i>	2
<i>Leptotes</i>	1
<i>Limodorum</i>	1
<i>Lyperanthus</i>	1
<i>Malaxis</i>	1

<i>Microtis</i>	1
<i>Myrosmodes</i>	1
<i>Neobolusia</i>	2
<i>Neotinea</i>	3
<i>Neottia</i>	1
<i>Ophrys</i>	28
<i>Orchis</i>	15
<i>Orthoceras</i>	1
<i>Peristylus</i>	1
<i>Platanthera</i>	4
<i>Platycoryne</i>	1
<i>Prasopphyllum</i>	11
<i>Prosthechea</i>	2
<i>Pterostylis</i>	29
<i>Pyrorchis</i>	1
<i>Renanthera</i>	1
<i>Roeperocharis</i>	1
<i>Satyrium</i>	28
<i>Selenipedium</i>	2
<i>Serapias</i>	4
<i>Stanhopea</i>	1
<i>Steveniella</i>	1
<i>Thelymitra</i>	9
<i>Vanda</i>	1
<i>Vanilla</i>	11
<i>Zeuxine</i>	1
<b>Grand Total</b>	<b>374</b>

## Annex V: Marketing Terms used in Online Product Listings

### Health

A natural medicine; analgesic and antipyretic effects; anti-aging effect; can repair the damage of sensitive skin; anti-fatigue; aches and pains; anti-inflammatory; anti-bacterial compounds; antioxidant and immunomodulatory effects/immune support; anti-menopause; aphrodisiac (a virility enhancer; boosts the libido with strong aphrodisiac properties); astringent properties; boost mood/keep you in a good mood; pre-workout supplement to boost athletic performance; boost metabolism; blood sugar support; facilitates blood circulation, stimulating the function of kidneys and the heart; relieves headaches, menstrual pain and menopausal syndrome; facilitates brain function (improves memory; strengthens the mind); preventive of colds and flu (relieves cough, asthma, stomach-ache; upper respiratory tract infection; bronchitis; catarrh and flu); relieves constipation and bloating; Dendrobium nourishes Yin and clears away heat; dry mouth and throat; helps regulate diabetes (sugar-free); diuretic; used to regulate digestive problems through history by many civilizations in the Anatolian region; enhanced energy level; emollient; expectorant; enhance fertility (male infertility; impotence; in Greece it is called sernikovotano, because they believed that if the prospective father ate large tubers salep will be born male child); chases fatigue, both physical and mental; helps in gastric ulcer and duodenum; good for the heart; against heartburn, and gastroesophageal reflux disease; improved breathing; increases fat burning speed; against indigestion and stomach disorders and dysentery; against nausea; soothes nerves, eliminates stress and fatigue; relieves the problems of the prostate gland and hemorrhoids; reduce the heart rate; improve sleep; against sinusitis, testosterone booster; traditional herbal medicine with 1300 year history; woman's health; helps reduce worms in the gut; eating dendrobium soup every day has health benefits for the family; helps in quick recovery of weakened institutions, children and elderly; used in the Unani and Ayurvedic systems of medicines; rich in vitamins but does not contain tein or caffeine (phosphorus and calcium; vitamin-B beneficial for long term memory; calcium and phosphorus invigorates the body after illnesses; rich in starch and minerals); against vomiting; warming.

### Food

Excellent coffee substitute; drink/dessert/ice cream ingredient; enjoy at any time of day; consume in soup, with meat dishes or in bubble wine (immersed in liquor); can also be eaten dried and chewed; food grade; powder for ice cream; tubers contain a nutritious, starchy polysaccharide called glucomannan; for drinks and ice creams; hot and cold drinks – no additives; nutritive health drink unique to middle east/Ottoman empire; traditional Turkish/Greek drink (400 years old; popular in many parts of the Middle East, especially the Levant); sugar-free salep has about 15 calories per serving (1 teaspoon of 15 grams); salep flavoured instant powder drink; winter drink/dessert; usually sold on the streets as a hot beverage during the cold months of the year; a winter heating, emollient and nutritious beverage; unique taste, it leaves a wonderful taste in the mouth; vegan healthy drink.

### Magic charm

Magic charm; lucky charm; Lucky Hand Root; specially shaped roots; individually selected; Helping Hand; used to bring luck and new opportunities in all areas; Lucky hand used in filters and elixirs to attract love; believed that it provides protection from any evil and that it brings luck to anyone who has it on them; they say that if you put that root in your wallet, you will have plenty of money; brings winnings to gambling; lucky hand is also known for its aphrodisiac properties; strengthens relationships; a symbol of fertility and has traditionally been used as a gift to newlyweds to have children soon; Lucky Hand Root is a powerful hoodoo curio; keep it with you for luck with money and luck with gambling, lottery and other games of chance.



Database

Chikanda or Salep	Species name in the references	Accepted name & author WCVF	Synonym	Common name (language)	Distribution (ISO code)	Biology	Year		Assessment Scope	Threatsearch	Threatsearch categorisation	Academic source	Data Source	Grey literature source	
							IUCN Red List	Published							
Salep	<i>Acianthus exsertus</i>	<i>Acianthus exsertus</i> R.Br.	Y	Mosquito Orchid, Gnat Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants		
Edible	<i>Acianthus fornicatus</i>	<i>Acianthus fornicatus</i> R.Br.	Y	Mountain Gnat Orchid; Pile cups (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online		
Salep	<i>Anacamptis boryi</i>	<i>Anacamptis boryi</i> (Rchb.f.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Bory's Anacamptis (English)	GR	<i>Anacamptis morio</i> shows a broad ecological tolerance of habitats including short and poor grassland, unimproved meadows, alpine pastures, forest fringes and open woodland. It prefers alkaline rich soil in full sun light and it can settle on poor ground, clay-free, of lime and low in nitrogen content. The flowering time of the species takes place from April to May-June (Bourmérias and Prat 2005, Harrap and Harrap 2009, Delforge 1995, Kretzschmar et al. 2007, Lang 2004). Source RL: Tuber geophyte.	Vulnerable		2011	Global, Europe & Mediterranean	VU 2011 Global	Threatened	Sandal Erzurumlu et al 2018	IUCN Red List 2021	
Salep	<i>Anacamptis morio</i>	<i>Anacamptis morio</i> (L.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Green Winged Orchid, Fool Orchis, Gandergood, Green-Veined Orchid (English)	AL, DZ, AT, BE, BG, CY, DK, FR, DE, GB, GR, HU, IR, IQ, IE, IL, IT, LB, MT, ME, MA, NL, NO, PL, PT, RO, RU, RS, RS, SK, ES, SE, CH, TN,	<i>Anacamptis morio</i> shows a broad ecological tolerance of habitats including short and poor grassland, unimproved meadows, alpine pastures, forest fringes and open woodland. It prefers alkaline rich soil in full sun light and it can settle on poor ground, clay-free, of lime and low in nitrogen content. The flowering time of the species takes place from April to May-June (Bourmérias and Prat 2005, Harrap and Harrap 2009, Delforge 1995, Kretzschmar et al. 2007, Lang 2004). Source RL: Tuber geophyte.	Near Threatened		2010	Europe	EN 2015 Norway	Threatened	Masters et al 2020; Kreziou 2016 ; Kasperek & Grimm 1999; Tekingen & Güner 2010 ; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2022	
Salep	<i>Anacamptis morio</i> subsp. <i>longicornu</i>	<i>Anacamptis morio</i> subsp. <i>longicornu</i> (Poir.) H.Kretzschmar, Eccarius & H.Dietr.	Y	Unknown	FR, ES, IT, TN, DZ	Like the ssp. <i>morio</i> , it settles in extensive meadows and very bright woods. It disappears with intensification of the use of its biotopes. A certain ecological delimitation to ssp. <i>champagneuxii</i> might lie in the need for wetter areas. Subspecies <i>picta</i> settles on areas that are dryer.; Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	de Boer et al. 2017		
Salep	<i>Anacamptis morio</i> subsp. <i>picta</i>	<i>Anacamptis morio</i> subsp. <i>picta</i> (Loisel.) Jaquet & Scappat.	Y	Orchis peint (French); Green-Winged Orchid, Green-Veined Orchid (English)	FR, IT, PT, ES	Like the ssp. <i>morio</i> , it settles in extensive meadows and very bright woods. It disappears with intensification of the use of its biotopes. A certain ecological delimitation to ssp. <i>champagneuxii</i> might lie in the need for wetter areas. Subspecies <i>picta</i> settles on areas that are dryer.; Tuber geophyte.	Not Evaluated		2009	FR (national)	Least Concern	Not Threatened	Ghorbani et al, 2014; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Threatsearch!	
Salep	<i>Anacamptis morio</i> subsp. <i>syriaca</i>	<i>Anacamptis morio</i> subsp. <i>syriaca</i> (E.G. Camus) H.Kretzschmar, Eccarius & H.Dietr.	Y	Unknown	CY, IL, LB, SY, TR	This subspecies occurs in a variety of habitats ranging from pine woods, maquis, garrigue and phrygana to dry grassland, olive groves and pastures on limestone, where it has been recorded between 20 and 1,400 m asl (Bakir et al. 2014, H. El Zein pers. comm. 2018). The flowering period extends from the beginning of February until the beginning of March, usually delayed one or two weeks at higher altitudes (Kreutz 2002). In Cyprus, it is often associated with asphodel (Kreutz and Scraton 2002). Source RL: Tuber geophyte.	Least Concern		2016	Global & Mediterranean	LC 2016 Global & Mediterranean	Not Threatened	Molnar et al 2017; Lóki et al 2015		
Salep	<i>Anacamptis palustris</i>	<i>Anacamptis palustris</i> (Jacq.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Orchis des Marais (French); Orchidea Palustre (Italian); Çayır salesi (Turkish); Toothed Orchid, Three-Toothed Orchid (English)	AL, DZ, AM, AT, BE, BG, HR, CY, CZ, FR, DE, GR, HU, IR, IT, JO, LB, MD, ME, MA, NO, PS, PL, PT, RO, RU, RS, SK, SI, ES, SE, CH, SY, TN, TR, UA, US, UZ	It is a perennial herbaceous plant (tuberous Geophyte) that inhabits humid pastures, wet meadows and swamps. It prefers calcareous soils and it needs a lot of light. Flowering occurs during spring. Source RL	Least Concern		2013	Global & Mediterranean	LC 2014 Global; CR 2014 SK	Not Threatened	Ghorbani et al, 2014; Ghorbani et al, 2017; Kasperek & Grimm 1999; Tekingen & Güner 2010; Sandal Erzurumlu et al 2018; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2022	
Salep	<i>Anacamptis papilionacea</i>	<i>Anacamptis papilionacea</i> (L.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Butterfly Orchid, Pink Butterfly Orchid (English)	AL, DZ, BG, CY, FR, GR, IR, IT, LY, MA, PT, RO, RU, ES, TN, TR	<i>Anacamptis papilionacea</i> typically grows in short, poor grassland, stony meadows, garrigue, maquis and open woodland. It prefers dry to moist substrates, alkaline soil rich in lime and often calcareous soils. The species grows in full sunlight to mid-shade. The flowering time of the species is from end of March to June (Bourmérias and Prat 2005, Delforge 1995, Kretzschmar et al. 2007). Source RL	Least Concern		2011	Europe	NT 2009 France; LC 2011 Europe	Not Threatened	Kreziou 2016; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2022	
Salep	<i>Anacamptis pyramidalis</i>	<i>Anacamptis pyramidalis</i> (L.) Rich.	Y	Pyramidal Orchid (English)	AL, DZ, AM, AT, BE, BA, BG, HR, CY, CZ, DK, EE, FR, DE, GR, HU, IR, IQ, IE, IT, JO, MT, ME, MA, NL, PT, MD, RO, RS, SK, ES, SE, CH, TN, TR, UA, GB	In late autumn, the daughter's tubers develop small shoots that form a new rosette of leaves from which leaves and a flower spike will rise in the spring. The period of bloom is from full spring to the early summer; the autogamous flowers are visited and pollinated by many different insects. In the southern-most part of the distribution area (e.g. on Cyprus), blossoming plants were observed near sea level at the end of February, whereas very far to the north (e.g. in Ireland) or in alpine biotopes, the plants blossom until August. One month after flowering the maturation of the seeds starts and the percentage of flowers setting seed is normally very high.	Least Concern		2011	Europe	NT 2016 CH; LC 2010 AM; NT 2007 HR; C1 2012 CZ; VU 2009 BG; NT 2010 SE; NT 2007 HU; LC 2009 FR; EN 2003 Wesern Carpathians; VU 1998 EE; CR 2014 JO; VU 2005 LU; LC 2010 Europe	Not Threatened	Ghorbani et al 2014; Kreziou 2016; Ghorbani et al 2017; Ari et al 2005; Masters et al 2020; Kasperek & Grimm 1999; Turkmen et al 2021; Molnar et al 2017.; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2022	
Salep	<i>Anacamptis sancta</i>	<i>Anacamptis sancta</i> (L.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Holy Orchid (English); Fan-lipped Orchid (English); Orchis des Collines (French); Orquídea pobre (Spanish/Castilian)	CY, GR, IL, JO, LB, PS, SY, TR	In the same location, the species flowers a few days after <i>Anacamptis coriophora</i> ssp. <i>fragrans</i> . Flowering time begins in April in the south of the distribution area and as late as June further north. The percentage of flowers setting seed is high, with the seeds being released during the following dry-hot summer period.	Least Concern		2016	Global & Mediterranean	NT 2011 Europe; EN 2014 JO; LC 2017 Global	Not Threatened	Lóki et al 2015; Masters et al 2020; Molnar et al 2017; Kasperek & Grimm 1999	IUCN Red List 2021	
Salep	<i>Anacamptis collina</i>	<i>Anacamptis collina</i> (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon & M.W.Chase	Y	Orchis des Collines (French); Orquídea pobre (Spanish/Castilian)	AL, DZ, AT, BE, BG, CY, FR, DE, GR, HU, IR, IQ, IT, LY, MA, NL, PL, PT, RO, RU, SK, ES, CH, TN, TR, UA	Basic leaves develop during the winter and from these, the flower stalk emerges in the very early spring. The flowers do not have nectar, nevertheless they are pollinated by insects: the fruit maturity starts immediately on fading, then the plant withers away and remains unseen during summer above the surface. It is bound to alkaline soils.	Least Concern		2011	Europe & Mediterranean	LC 2016 Mediterranean; LC 2011 Europe; EX 2012 FR	Not Threatened	Ghorbani et al, 2014; Ghorbani et al, 2017; Kasperek & Grimm 1999; Tekingen & Güner 2010. Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2022	Rutherford & Groves 2017
Salep	<i>Anacamptis coriophora</i>	<i>Anacamptis coriophora</i> (L.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Bug orchid, Fragrant Orchid (English)	AL, DZ, AT, BE, BG, CY, FR, DE, GR, HU, IR, IQ, IT, LY, MA, NL, PL, PT, RO, RU, SK, ES, CH, TN, TR, UA	<i>Anacamptis coriophora</i> typically occurs in grassy places derived from 'molinaies': boggy meadows and moorland, flushed slopes and woodland edges prone to flooding. It prefers slightly acidic to slightly alkaline soil often clayey-calcareous substrates in full sunlight. This species is found from sea level to 2,500 m altitude. The flowering time is from April to July (Bourmérias and Prat 2005, Delforge 1995, Kretzschmar et al. 2007). Source: RL	Least Concern		2011	Europe	VU 2009 FR; EX 2012 NL; Possibly Threatened 2007 HU; DD 2012 FR	Not Threatened	Ghorbani et al 2014; Ghorbani et al, 2017; Kasperek & Grimm 1999; Tekingen & Güner 2010. Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2022; World Checklist of Plants	
Salep	<i>Anacamptis laxiflora</i>	<i>Anacamptis laxiflora</i> (Lam.) R.M.Bateman, Pridgeon	Y	Loose-flowered Orchid (English);	AF, AL, DZ, BE, CY, FR, DE, GR,	It is a perennial herbaceous plant (tuberous geophyte) that inhabits humid pastures and marshes. It prefers humid soils and requires a lot of light.	Least Concern		2010	Europe & Mediterranean	LC 2009 Mediterranean; LC 2010 Europe; VU 2009 FR	Not Threatened	Sandal Erzurumlu et al 2018; Kasperek & Grimm 1999	IUCN Red List 2022; Plants of the World Online	
Salep	<i>Anacamptis laxiflora</i> subsp. <i>dinsmorei</i>	<i>Anacamptis laxiflora</i> subsp. <i>dinsmorei</i> (Schltr.) H.Kretzschmar, Eccarius & H.Dietr.	Y	Unknown	LB, SY, PS, TR	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Sandal Erzurumlu et al 2018	World Checklist of Useful Plants		
Edible	<i>Anoectochilus reinwardtii</i>	<i>Anoectochilus reinwardtii</i> Blume	N	Unknown	ID, MY, TH	Rhizome geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants		
Edible	<i>Anoectochilus alboineatus</i>	<i>Anoectochilus alboineatus</i> C.S.P. Parish & Rchb.f.	Y	Unknown	MM, TH, VN	Rhizome geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants		
Edible	<i>Anoectochilus geniculatus</i>	<i>Anoectochilus geniculatus</i> Ridl.	N	Unknown	MY, ID, TH, MM	Rhizome geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants		
Chikanda	<i>Brachycorythis pleistophylla</i>	<i>Brachycorythis pleistophylla</i> Rchb.f.	N	Ligosi (Male) (Kinga tribe, Makete district, Tanzania), Joyisi (Malawi)	AO, BI, CM, CG, GQ, GA, KE, MG, MW, MZ, NG, RW, SD, TZ, UG, ZM, CD, ZW	Numerous very finely pointed leaves, A spike of purple, mauve or violet flowers.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Hamisy, 2007; Mapunda, 2007	Namoto, M. (2018). Status of chikana orchids on Nyika, Draft Report.	
Chikanda	<i>Brachycorythis pubescens</i>	<i>Brachycorythis pubescens</i> Harv.	Y	Joyisi	AO, BF, BI, CD, CF, CI, CM, ET, GA, GN, GO, KE, ML, MW, MZ, NG, RW, SD, SZ, TG, TZ,	Hemicryptophyte or tuber geophyte.: A slender herb 18-30 in. high with pink, bluish or reddish-purple, or rarely white, flowers.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 ZA; LC 2011 CM	Not Threatened	Peters, C.R., O'Brien, E.M. and Drummond, R.B. (1992). Edible Wild Plants of Sub-saharan Africa. pp. 36-37	Plants of the World Online	Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.
Edible	<i>Bulbophyllum leopardinum</i>	<i>Bulbophyllum leopardinum</i> (Wall.) Lindl. ex Wall.	Y	Leopard Spotted Bulbophyllum (English); Thaur, Parajiva (Nepal)	IN, CN, BT, MM, NP, TH, VN, LA, PK	The leaves of this species are deep green. The flowers are pale green and spotted red, simulating the skin colour of a leopard. The species forms large colonies. The flowers have a very offensive smell and attract carrion flies. The species is said to favour partial shade of ever-green broad-leaved sub-tropical forest 1,500-2,000 m (Raskoti 2009). Elev. 900-3,200 m reported in IUCN assessment.	Least Concern		2013	Global	VU 2013 CN	Threatened	Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.	IUCN Red List 2021; Threatsearch	

Edible	<i>Caladenia caerulea</i>	<i>Caladenia caerulea</i> R.Br.	Y	Blue Fairy Orchid, Blue <i>Caladenia</i>	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Caladenia carnea</i>	<i>Caladenia carnea</i> R.Br.	Y	Pink Fairies, Pink Fringe Orchid, Horned orchid (English)	AU, NC, NZ	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food.	World Checklist of Plants	
Edible	<i>Caladenia filamentosa</i>	<i>Caladenia filamentosa</i> R.Br.	Y	Daddy Longlegs, Spider Orchid, Tailed <i>Caladenia</i> (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Rare 2018 AU (TAS only)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants, Threatsearch		
Edible	<i>Caladenia fuscata</i>	<i>Caladenia fuscata</i> (Rchb.f.) M.A.Clem & D.L.Jones	Y	Dusky Fingers, Musky <i>Caladenia</i> , Musky Finger Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Caladenia gracilis</i>	<i>Caladenia gracilis</i> R.Br.	Y		AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2018 AU (SOA only)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants, Threatsearch		
Edible	<i>Caladenia major</i>	<i>Caladenia major</i> (R.Br.) Rchb.f.	Y	Large Waxlip Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Caladenia quadrifaria</i>	<i>Caladenia quadrifaria</i> (R.S.Rogers) D.L.Jones	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2016 AU (NSW only)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants, Threatsearch		
Edible	<i>Caladenia tentaculata</i>	<i>Caladenia tentaculata</i> Schtdl.	Y	Green Combed Spider Orchid, Fringed Spider Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Calanthe ventrilabrum</i>	<i>Calanthe ventrilabrum</i> Rchb.f.	Y	Unknown Fairy slipper (English); Venus' slipper, Calypso (English), Calypso bulbeux (French)	PG, FJ, ID, FR, PF, SB, VU	Pseudobulb geophyte. Tuber geophyte. Commonly dormant for one to several years, prefers moderate to well-drained soil with little herbaceous competition. Occurs in cool, mature cedar swamps (on ridges, cedar butts and decaying logs) or on gentle slopes of mixed coniferous growth on calcareous bedrock, often associated with <i>Thuja occidentalis</i> occurring in the shaded-duff. Can occur on dry coniferous	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants	
Edible	<i>Calypso bulbosa</i>	<i>Calypso bulbosa</i> (L.) Oakes	Y		CA, US, EE, CN, FI, JP, KR, MN, RU, SE		Near Threatened		2011 Europe	VU 2001 FI; NT 2005 SE; CR 2011 MN; VU 2010 SE; EN 1997 JP, G5(Secure) 2016 US	Threatened	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Plants, IUCN Red List; Threatsearch		
Edible	<i>Ceratostylis latifolia</i>	<i>Ceratostylis latifolia</i> Blume	N	Ki pahit (unk.)	Malesia region	Epiphyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Chiloglottis diphylla</i>	<i>Chiloglottis diphylla</i> R.Br.	Y	Common Ant Orchid (English)	AU, NZ	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Chiloglottis formicifera</i>	<i>Chiloglottis formicifera</i> Fitzg.	Y	Ant Orchid (English)	AU, NZ	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Chiloglottis palachila</i>	<i>Chiloglottis palachila</i> D.L.Jones & M.A.Clem	N	Clubbed Ant Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	R(are) 1997 Global	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Chiloglottis platyptera</i>	<i>Chiloglottis platyptera</i> D.L.Jones	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2016 AU (NSW only)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Chiloglottis pluricallata</i>	<i>Chiloglottis pluricallata</i> D.L.Jones	Y	Brown Bird Orchid	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Chiloglottis sphymoides</i>	<i>Chiloglottis sphymoides</i> D.L.Jones	N	Ornate Ant Orchid	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2017 AU (QLD only)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Chiloglottis trapeziformis</i>	<i>Chiloglottis trapeziformis</i> Fitzg.	Y	Broad-lip Bird Orchid; Broad-leaved Bird Orchid (English)	AU, NZ	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2018 AU (SOA & TAS only)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch; Plants of the World Online		
Edible	<i>Chiloglottis trilabra</i>	<i>Chiloglottis trilabra</i> Fitzg.	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2014 AU	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Coelogyne ovalis</i>	<i>Coelogyne ovalis</i> Lindl.	Y	Oval Coelogyne	CN, IN, BD, NP, LA, MM, TH, VE	Pseudobulb epiphyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2013 CN; EN 2015 IN	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Corybas fimbriatus</i>	<i>Corybas fimbriatus</i> (R.Br.) Rchb.f.	Y	Fringed Helmut Orchid	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2014 AU	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Corybas hispidus</i>	<i>Corybas hispidus</i> D.L.Jones	Y	Bristly Helmut Orchid	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2014 AU	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Corybas montanus</i>	<i>Corybas montanus</i> D.L.Jones	Y	Mt Maroon Helmut Orchid	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2017 Global	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Crepidium ridleyi</i>	<i>Crepidium ridleyi</i> (J.J.Sm.) Szlach.	Y	Unknown	ID	Pseudobulb geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants	
Edible	<i>Cryptostylis erecta</i>	<i>Cryptostylis erecta</i> R.Br.	N	Tartan Tongue Orchid, Turbin Orchid, Bonnet Orchid	AU	Hemicryptophyte.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2014 AU (VIC only); TH 2016 AU	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food.	World Checklist of Plants; Threatsearch		
Edible	<i>Cryptostylis hunteriana</i>	<i>Cryptostylis hunteriana</i> Nicholls	N	Leafless Tongue Orchid	AU	Hemicryptophyte.	Not Evaluated	1997, 2016	1997-global; 2016-AU(NSW only)	VU 1997 Global; VU 2009 AU; TH 2016 AU (VIC only)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Cryptostylis leptochila</i>	<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	Y	Small Tongue Orchid, Red Tongue Orchid	AU	Hemicryptophyte.	Not Evaluated	2018	unknown	Endangered	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Cryptostylis subulata</i>	<i>Cryptostylis subulata</i> (Labill.) Rchb.f.	Y	Large Tongue Orchid, Cowslip Orchid	AU, NZ	Hemicryptophyte.	Not Evaluated	2018	unknown	Vulnerable	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch		
Edible	<i>Cymbidium canaliculatum</i>	<i>Cymbidium canaliculatum</i> R.Br.	Y	Native arrowroot (Australian); Tiger Orchid, Channeled Cymbidium, Inland Tree Orchid (English); Tiger boat-tipped orchid (English)	AU	Lacks tubers but has thickened stems.; Pseudobulb epiphyte.; Forms unmistakable clumps of plants emerging from tree hollows. Leaves (2-6), thick, 300-500 by 30-40 mm. rigid. Pseudobulbs large, 80-120 by 30-40 mm.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Wild Food Plants of Australia, Tim Low; Dictionary of Economic Plants, Uphof. J. C. Th.; Wild Food in Australia, Cribb. A. B. and J. W.; Low, T. (1991). Wild Food Plants of Australia. Angus & Robertson, Sydney. pp. 108.; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer	World Checklist of Plants	<a href="http://tropical.theferns.info/viewtropical.php?id=Cymbidium+canaliculatum">http://tropical.theferns.info/viewtropical.php?id=Cymbidium+canaliculatum</a>
Edible	<i>Cymbidium elegans</i>	<i>Cymbidium elegans</i> Lindl.	Y	Thuur (Nepal)	IN, CN, BT, MM, NP	Pseudobulb epiphyte or lithophyte.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2017 CN	Threatened	Medicinal and non-medicinal plants, TK Lim; Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.	Threatsearch		
Edible	<i>Cymbidium goeringii</i>	<i>Cymbidium goeringii</i> (Rchb.f.) Rchb.f.	Y	Chun lan (Chinese)	CN, BT, IN, MM, NP, KR, JP, PK	Pseudobulb geophyte; ...species occurs on rocky slopes, forest margins, and open places in forests at altitudes of 300 to 3000 m.; Pseudobulb lithophyte or epiphyte.; An epiphyte on trees in damp, shady forests or on steep banks or rocks, often where thick moss cover occurs. Cymbidium hookerianum is a perennial, epiphytic or lithophytic herb. It has somewhat bilaterally-flattened, ovoid pseudobulbs, 3-6 cm long and 1.5-3.5	Not Evaluated	Not Evaluated	Not Evaluated	NT 2012 TW; VU 2017 CN; LC 2012 KR; Rare 2015 IN; CR 1997 JP	Threatened		World Checklist of Useful Plants; World Checklist of Plants; Threatsearch	Brinkman, J.A. (2014). Quick scan of Orchidaceae species in European commerce as components of cosmetic, food and medicinal products.	
Edible	<i>Cymbidium hookerianum</i>	<i>Cymbidium hookerianum</i> Rchb.f.	Y	Unknown	BT, CN, IN, NP, MM, TH, VN		Not Evaluated	Not Evaluated	Not Evaluated	EN 2017 CN; VU 2015 IN	Threatened	Sharangi and Datta. Value Addition of Horticultural Crops: Recent Trends and Future Directions; Medicinal and non-medicinal plants, TK Lim; Lohar, A.	World Checklist of Useful Plants; Threatsearch; Plants of the World Online; Threatsearch	orchid-world.com/evergreen/edible.pdf Edible Orchids essay, author unknown	



Edible	Cymbidium madidum	Cymbidium madidum Lindl.	Y	Buttercup orchid (English)	AU	Pseudobulb epiphyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	
Edible	Cymbidium suave	Cymbidium suave R.Br.	Y	Grassy boat-lipped orchid (English); Snake flower (English)	AU	Pseudobulb epiphyte or lithophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Plants	
Edible	Cynorkis flexuosa	Cynorkis flexuosa Lindl.	Y	Unknown	KM, MG	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2014 FR	Not Threatened	Tanaka, T. (1979) Tanaka's Cyclopedic of Edible Plants of the World. Keigaku Publishing Co., Tokyo. pp. 237.	World Checklist of Useful Plants; Threatsearch	
Edible	Cypripedium cordigerum	Cypripedium cordigerum D.Don	N	Heart-shaped lip Cypripedium (English), Bai Chun Shao Lan (Chinese), Dyma, Shakalkal (Urdu)	BT, IN, PK, NP, CN	Cypripedium cordigerum occurs in a variety of habitats from openings outskirts of forests, open Abies forest in open glades and in Caragana (pea shrub), Juniperus scrub on south-facing slopes, bogs, woodland glades, ravines, streams, lake edges, oak and rhododendron forests. The maximum species were found in the northern aspect often under the shade of Viburnum cotinifolium. Main associate species were Viburnum cotinifolium, Viburnum foetens, Podophyllum hexandrum, Fragaria daltoniana, Anemone rivularis, Galium asperuloides, Rosa macrophylla, Quercus floribunda, Quercus semecarpifolia, Aruncus dioecus, Senecio altus, Pimpinella denticulata, Ranunculus hirtellus and Lyonia ovalifolia.; Cypripedium cordigerum prefers wet substrates in shady woods and flowers from June until August. (Cribb 1997, Dutrie, 1906, eforas 2008, Froesch and Cribb 2012, Jalal et al. 2009).	Vulnerable		2014	Global	VU 2015 Global; Rare 2015 IN; EN 2017 CN	Threatened	Pant, B., 2013. Medicinal orchids and their uses: tissue culture a potential alternative for conservation. African Journal of plant science, 7(10), pp.448-467.)	IUCN Red List 2021; Threatsearch colplanta.org; Threatsearch; Plants of the World Online
Edible	Cyrtorchilum revolutum	Cyrtorchilum revolutum (Lindl.) Dalstrom	Y	Unknown	CO, VE	Pseudobulb epiphyte.; Alt. 3,000-3,700 m. in the Andes.	Not Evaluated		2018	CO	Vulnerable	Threatened		
Salep	Dactylorhiza elata	Dactylorhiza elata (Poir.) Soó	Y	Orchis Elevé (French), Slately Dactylorhiza (English)	DZ, BE, FR, IT, MA, NL, PT, ES, TN	Dactylorhiza elata is a perennial herbaceous geophyte that is found in humid and wet grasslands of tall grasses and rushes with very wet calcareous soils or soils flushed by calcareous waters. It also grows at the sides of streams and springs and is a light demanding plant. Its flowering takes place in spring and in early summer. This species does not reproduce until its third year, it lives up to ten years and therefore the generation length is estimated at seven to eight years (J.-M. Tison pers. comm. 2015). Source RL	Near Threatened			Global & Mediterranean	LC 2010 Europe; VU 2009 FR; NT 2017 Global; VU 2002 ES; CR 2013 IT	Threatened		
Salep	Dactylorhiza euina	Dactylorhiza euina (Nevski) Czerep.	Y	Laz salebi (unk.)	AM, AZ, GE, RU, TR	Tuber geophyte.	Threatened		2014	Global	NT 2014 Global	Not Threatened	Kurt 2020 Singh et al. (2021); Salep is used as an aphrodisiac or a nutritive and restorative tonic, and are also eaten raw as a farinaceous food; Pant, B., 2013. Medicinal orchids and their uses: tissue culture a potential alternative for conservation. African Journal of plant science, 7(10), pp.448-467.; Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.	IUCN Red List 2021
Salep	Dactylorhiza hatagirea	Dactylorhiza hatagirea (D.Don) Soó	Y	Salampunja (Ayurvedic), Buzidan, Salab Misri (Unani), Salampanja (Hindi name), Himalayan Marsh Orchid (English), Salampanja (trade name); Paanchaule, Hatajafi (Nepal)	CN, MN, RU(7), NP, PK, Tibet of China,	Plant is terrestrial glabrous herb attends height of 20-25 cm. Tubers slightly flattened, palmately divided into 3-5, finger like lobes. Flower stalk upto 90 cm Long, erect, hollow, leafy throughout or the lower portion bear few sheathing scales. Leaves are 4-6, cauline, leaf blade oblong to linear lanceolate, 8.0-15.0cm x 1.5-3.0 cm in size, base sheathing, apex obtuse or acuminate.	Not Evaluated	Not Evaluated	Not Evaluated		DD 2013 CN; VU 2015 IN	Threatened	<a href="https://vikaspedia.in/agriculture/crop-production/package-of-practices/medicinal-and-aromatic-plants/dactylorhiza-hatagirea">https://vikaspedia.in/agriculture/crop-production/package-of-practices/medicinal-and-aromatic-plants/dactylorhiza-hatagirea</a>	
Salep	Dactylorhiza iberica	Dactylorhiza iberica (M.Bieb. ex Willd.) Soó	Y	Iberia Dactylorhiza (Georgia)	CY, GR, IR, UA, LB, SY, GE, AM, AZ, RU, PS, TR, AF, AL, RU, AT, EE, LV, LT, BY, BE, BG, SK, CZ, DK, FI, FR, DE, GB, GR, HU, IR, IQ, IE, IT, KZ, KG, LB, SY, MN, NL, NO, PK, PL, RO, ES, SE, CH, TJ, TR, TM, UA, UZ, CN, RS	Found in full sun to mid shade in marshy meadows, slopes and stream banks at elevations of 600 to 2600 meters as a cold to cool growing terrestrial with2 narrow, ribbon-like, elongate, slightly digitate root tubers giving rise to an erect, 8 to 24" [20 to 60 cm] long stem carrying 3 to 7 cauline, well spaced, obloquely erect to spreading, unspottedlinear-lanceolate, slightly keeled leaves that blooms in the late spring and summer on an erect, terminal, dense to laxly several flowered inflorescence.	Vulnerable		2011	Europe	VU 2010 Europe; EN 2006 CY	Threatened	Kasperek & Grimm 1999; Ari et al, 2005	IOSPE PHOTOS (orchidspecies.com)
Salep	Dactylorhiza incarnata	Dactylorhiza incarnata (L.) Soó	Y	Early Marsh Orchid, Flesh Colored Dactylorhiza (English)	AF, RU, IR, IQ, KZ, KG, LB, SY, PK, TJ, AZ, AM, GE, TR, TM, UZ, CN	Tuber geophyte. In marshes, fens and bogs. Tubers deeply 3-5 fid, more or less elongated at apex. Dactylorhiza incarnata grows in fens and meadows with high level of underground water, from lowlands to foothills and is also found in inland coastal marshes, marshy hollows, and stream banks. It prefers alkaline to neutral soils and full light. The flowering takes place from May to June. (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Lang 2004, Pignatti 1982, Rossi 2002, Vakhrameeva et al. 2008).	Least Concern		2011	Europe	LC Europe 2010, CR Luxembourg 2005, NT Norway 2006, EN Croatia 2007, VU France 2009, NT Hungary 2007, EN Bulgaria 2009, EN Bulgaria 2011, NT Switzerland 2016, VU Spain 2010, LC Ireland 2016, CR Germany 1996, EN Germany 1999, LC United Kingdom 2014, TH Germany 2005	Threatened	de Boer et al, 2017; Ghorbani et al, 2014; Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Ghorbani et al, 2017; Ghorbani et al 2014; Lim, T.K. (2016). Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Plants of the World Online <a href="https://www.plantsoftheworld.org/plant/Dactylorhiza-incarnata">Dactylorhiza incarnata - Early Marsh-orchid (first-nature.com)</a>
Salep	Dactylorhiza incarnata subsp. cilicica	Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Y	Ottoman Dactylorhiza, Persian Marsh-Orchid (English)	AL, AT, BE, BG, BY, CH, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, KG, KZ, NO, PL, PT, RO, RS, RU, SE, TU, UA	Tuber geophyte. Dactylorhiza incarnata grows in fens and meadows with high level of underground water, from lowlands to foothills and is also found in inland coastal marshes, marshy hollows, and stream banks. It prefers alkaline to neutral soils and full light. The flowering takes place from May to June. (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Lang 2004, Pignatti 1982, Rossi 2002, Vakhrameeva et al. 2008).	Least Concern		2011	Europe	Not Evaluated	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Salep	Dactylorhiza maculata	Dactylorhiza maculata (L.) Soó	Y	Heath spotted orchid, Adder's grass, Hen's kames, Male orchis (English)	AL, DZ, RU, AT, EE, LV, LT, BY, BE, BG, CZ, SK, DK, FI, FR, FO, DE, GB, GR, HU, IS, IE, IT, MN, MA, NL, NO, PL, PT, RO, ES, SE, CH, TR, UA, CN, BA, HR, RS, ME, MK,	D. maculata is a terrestrial orchid with lance-shaped, mid-greenleaves which may have brown or purple spots. The flowers, in spikes 5-10cm long, from mid-spring to late summer, may be white, pink, pale purple or purplish red, with darker spots and streaks; Tuber geophyte.; Ecology: shrubland, grassland, inland wetlands. Elev. 2,300 m.	Least Concern		2010	Europe	LC Europe 2010, EN 2005 LU, LC 2009 FR, EX 2007 HU, NT 2008 Unknown, NT 2016 CH, TH 1999 AT, VU 2007 LT, NT 2008 EE, EX 2007 HU, NT 1999 DE, LC 2014 UK	Not Threatened	Rutherford & Groves 2017; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants, IUCN Regional Red List <a href="https://www.rhs.org.uk/plants/5291/dactylorhiza-maculata/details">https://www.rhs.org.uk/plants/5291/dactylorhiza-maculata/details</a> ; Brinkman, J.A. (2014). Quick scan of Orchidaceae species in European commerce as components of cosmetic, food and medicinal products.; CITES - Annotations for Appendix II orchids: Report of the intersessional working group [Decision 17.318], PC24 Doc. 28. Facciola 1998
Salep	Dactylorhiza maculata subsp. fuchsii	Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Y	Listed on RL as Dactylorhiza fuchsii Common Spotted Orchid (English), Orchis de Fuchs (French), Fuchs Dactylorhiza (German)	RU, BY, CZ, SK, FI, FR, DE, GB, HU, IS, IE, IT, MN, NL, NO, PL, RO, ES, SE, CH, UA, CN, RS, HR, SI, ME, BA, MK	Listed on RL as Dactylorhiza fuchsii. Dactylorhiza fuchsii is typically found in open woodlands, forest margins, marshes, grasslands, meadows, and seepages. It grows in alkaline, dry to marshy soils in semi-shade to full light. The flowering takes place from May to July. The species has a very wide range of pollinators (Delforge 1995, Bournérias and Prat 2005).	Least Concern (Listed on RL as Dactylorhiza fuchsii)		2011	Europe	LC 2016 CH; VU 2012 NL	Not Threatened	de Boer et al, 2017 Kreziou et al, 2016; de Boer et al, 2017; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	
Salep	Dactylorhiza maculata subsp. saccifera	Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Y	Sack-carrying Dactylorhiza; Wedge-lipped orchid	AL, BG, GR, IT, RO, ES, TR, RS, HR, SI, ME, BA, MK	Leaves without spots, the lower obovate to elliptical. At least the lower bracts usually distinctly (up to 2 times) longer than the flowers. Outer perianth-segments up to 10 mm. Labellum deeply 3-lobed, the middle lobe about as long and as wide as the lateral lobes. Spur 7-13 mm, saccate- or conical-cylindrical. Habitat - damp meadows and woods.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		
Salep	Dactylorhiza majalis	Dactylorhiza majalis (Rhb.) P.F.Hunt & Summerh.	Y	Broad-leaved marsh orchid, The fistula-shaped Dactylorhiza (English)	AL, RU, AT, EE, LV, LT, BY, BE, BG, CZ, SK, DK, GR, FI, FR, FO, DE, GB, HU, IE, IT, KZ, NL, NO, PL, RO, ES, SE, CH, TR, UA, RS, BA, HR,	Dactylorhiza majalis is found in damp grassland, unimproved marshland, fens and wet meadows. It grows on damp to swampy, slightly alkaline to slightly acid soils in full sun light. The flowering time is from May to June (Delforge 1995, Bournérias and Prat 2005).	Least Concern		2011	Europe	NT 2014 SK; LC 2010 Europe; VU 2005 LU; NT 2005 SW; EN 2007 HR; NT 2009 FR; NT 2007 HU; LC 2016 CH; EN 2007 LT; EN 2011 DE; NT 2009 FR	Not Threatened	de Boer et al, 2017; Turkmen et al 2021	<a href="https://www.rhs.org.uk/plants/5291/dactylorhiza-majalis/broad-leaved-marsh-orchid/RHS">Dactylorhiza majalis/broad-leaved-marsh-orchid/RHS Gardening</a>
Salep	Dactylorhiza majalis subsp. cordigera	Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Y	Heart Shaped Lip Dactylorhiza; Heart Shaped orchid (English)	AL, BG, GR, RO, UA, ME, RS	Tuber geophyte.; Mountain grassland. Tubers deeply 2-4 fid, somewhat elongated at apex.	Least Concern		2011	Global & Europe	Not Evaluated	Not Threatened		
Salep	Dactylorhiza majalis subsp. kalopissii	Dactylorhiza majalis subsp. kalopissii (E.Nelson) H.A.Pedersen, P.J.Cribb & Rolf Kühn	Y	Kalopissii' Dactylorhiza (English)	AL, BG, GR	Tuber geophyte.	Endangered		2011	Global, Europe & Mediterranean	Not Evaluated	Threatened		
Salep	Dactylorhiza majalis subsp. lapponica	Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.	Y	Unknown	AL, BG, GR, BY, RU, CZ, SK, FI, FR, DE, IT, NO, PL, RO, ES, SE, CH, UA, RS, HR, SI, ME, BA, MK. Extinct	Habitat - fens and marshes. Leaves: 2-3, the lower patent, the upper erect. Labellum 5-7 mm, 3-lobed; lateral lobes longer than the middle lobe. Tubers deeply 2-4 fid, filiform-elongated at apex.	Least Concern		2011	Europe	Not Evaluated	Not Threatened		

Salep	Dactylophiza majalis subsp. pindica	Dactylophiza majalis subsp. pindica (B. Willing & E. Willing) H.A. Pedersen, P.J. Cribb & Rolf Kühn	Y	Unknown	BG, GR, RO	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	IUCN Red List 2022		
Salep	Dactylophiza romana	Dactylophiza romana (Sebast.) Soó	Y	Roman Orchid, The Roman Dactylophiza (English)	AL, DZ, BG, CY, GR, IR, IQ, IT, RU, LB, SY, MA, PT, RO, IT, ES, TR, TM, BA, HR, RS, ME, MK, SI,	<i>Dactylophiza romana</i> grows to a maximum of 50cm but most plants are between 15 and 35cm tall. The plant has 3-9 narrow, pointed leaves which are unspotted. The inflorescence is lax when the flowers are fully open, and the flowers themselves vary in colour from yellow to magenta. The two colour forms are frequently found growing together and there are also intermediates.	Least Concern	2011	Europe	LC Europe 2011, TH 2003 IL, VU 2009 BG	Threatened	Kasperek & Grimm 1999; de Boer et al. 2017; Ghorbani et al. 2017; Sandal Erzurumlu et al. 2018.; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	<a href="https://www.first-nature.com/flowers/dactylophiza-romana.php">https://www.first-nature.com/flowers/dactylophiza-romana.php</a>		
Salep	Dactylophiza romana subsp. georgica	Dactylophiza romana subsp. georgica (Klinge) Soó ex Renz & Taubenheim	Y	Georgian Orchid (English)	IR, IQ, RU, TR, TM	Tuber geophyte.	Least Concern	2011	Europe	Not Evaluated	Not Threatened	Ghorbani et al. 2014; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants		
Salep	Dactylophiza sambucina	Dactylophiza sambucina (L.) Soó	Y	Elder-flowered Orchid	AL, AT, EE, LV, LT, BY, BG, FR, CZ, SK, DK, FI, DE, GR, HU, IT, NO, PL, RO, ES, SE, CH, UA, RS, ME,	<i>Dactylophiza sambucina</i> (L.) Soó is a polycarpic perennial geophyte with a palmate root tuber slightly or moderately divided into several lobes (Fig. 1A). Between 3 and 6 adventitious roots that can be up to 6 cm long develop at the base of an innovation bud (Fig. 1A). The stem is 10–20 (30) cm high, sturdy, and hollow. It bears 2 scale leaves and 3–7 green leaves, depending on age and nutrient status, with the lower ones oblong-lanceolate 5–10 × 1–2.5 cm, and the upper ones lanceolate; the leaves are homogeneously green and do not develop brownish lilac spots	Least Concern	2011	Global & Europe	LC 2011 Global; NT 2007 HU; NT 2010 FI; EN 2012 CZ; NT 2016 CH; VU 2015 NO; 3rl 1999 AT; EX 2008 EE; CR 1999 DE; LC 2009 FR	Not Threatened	Kreziou et al. 2016; de Boer et al. 2017; Charitonidou et al. 2019; Jersáková et al. 2015; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2021		
Edible	Dendrobium bigibbum	Dendrobium bigibbum Lindl.	Y	Cooktown orchid (English)	ID, PG, AU	Pseudobulb lithophyte or epiphyte This species is found in the Trans Fly savanna and grassland, Southeast Papuan rain forest, Cape York Peninsula tropical savanna, Arnhem Land tropical savanna and Queensland tropical rain forest ecoregions (Olson et al. 2001). It is a small epiphytic orchid has long-lived scented flowers and two pollinators have been identified <i>Hylaeus ruficeps</i> and <i>H. theodorei</i> solitary bee species. In Australia it is often found growing in exposed conditions on Melaleuca (tea tree) species. The roots grow in the layers of papery bark and may gain protection from it (Cribb 1986). It is found in lowland wet forest habitat, coastal swamp forest and coastal forest and particularly in Melaleuca woodland in Australia and also in shrubland and savanna (Adams 2015, De Vogel et al. 2018). It also been found in mangrove vegetation (Millar 1999, Jones 2006).	Not Evaluated	2017	Global	Vulnerable	Threatened	Medicinal and non-medicinal plants, TK Lim; Orchid preparations, Singh, Kishore, Kumar, Singh	World Checklist of Useful Plants, Threatsearch!	orchid-world.com/evergreen/edible.pdf Edible Orchids essay, author unknown	
Edible	Dendrobium canaliculatum	Dendrobium canaliculatum R.Br.	Y	Tea Tree Orchid	PG, AU		Least Concern	2019	Global	LC 2018 Global	Not Threatened	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	IUCN Red List 2021		
Edible	Dendrobium chrysotoxum	Dendrobium chrysotoxum Lindl.	Y	Fried egg orchid (English)	BD, CN, KH, LA, MM, TH, VN	Pseudobulb epiphyte.	Not Evaluated	2017	China	Vulnerable	Threatened	Medicinal and non-medicinal plants, TK Lim; Teoh, E.S. (2016), Medicinal orchids of Asia	World Checklist of Useful Plants, Threatsearch!, Plants of the World Online World Checklist of Useful Plants; Plants of the World Online	Edible Orchids essay, author unknown; Lohar, A (2019) Edible Orchids for Human Consumption in Agriculture & Food: e-newsletter Vol. 1(6), pp.27-31.	
Edible	Dendrobium kingianum	Dendrobium kingianum Bidwill ex Lindl.	Y	Pink rock orchid	AU	Pseudobulb epiphyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		orchid-world.com/evergreen/edible.pdf Edible Orchids essay, author unknown		
Edible	Dendrobium longicornu	Dendrobium longicornu Lindl.	Y	Kause (Nepal)	CH, IN, BD, NP, MM, VN	Pseudobulb epiphyte.	Not Evaluated	2017	China	Endangered	Threatened	Medicinal and non-medicinal plants, TK Lim; Orchid preparations, Singh, Kishore, Kumar, Singh; Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.	World Checklist of Useful Plants, Threatsearch!	Edible Orchids essay, author unknown Edible Orchids essay, author unknown; Lohar, A (2019) Edible Orchids for Human Consumption in Agriculture & Food: e-newsletter Vol. 1(6), pp.27-31.	
Edible	Dendrobium moniliforme	Dendrobium moniliforme (L.) Sw.	Y	Unknown	CN, TW, BD, IN, JP, KR, MM, VN	Pseudobulb epiphyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2017 TW; EN 2012 KR	Threatened		World Checklist of Useful Plants, Threatsearch!	Orchidaceae species in European commerce as components of cosmetic, food and medicinal products.	
Edible	Dendrobium nobile	Dendrobium nobile Lindl.	Y	Shi hu (Chinese); sokkok (Korean)	BD, CN, IN, LA, MM, NP, TH, US(HI), VN	Pseudobulb epiphyte or lithophyte; In China-is epiphytic on tree trunks in mountain forests and lithophytic on rocks in mountain valleys at altitudes of 500 to 1700 m.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2017 CN; Rare 2015 IN; DD 2017 TW	Threatened	None found	World Checklist of Plants; Threatsearch		
Edible	Dendrobium officinale	Dendrobium officinale Kimura & Migo	Y	Unknown	CN, JP, TW, CN, LK, CC, LA, MM, TH, VN, Malaysia (region, incl. specifically Borneo, Java, Lesser Sunda Islands, Sumatra), MY	In China, <i>D. officinale</i> is propagated by tissue culture and cultivated in massive commercial artificial shelters. The planting acreage in 2016 was >7,000 ha with the greatest areas occurring in Yunnan, Zhejiang, and Guangdong provinces. Pseudobulb epiphyte	Critically Endangered	2004	Global	CR 2014 Global	Threatened	Chen, W. et al. (2021). Isolation, structural properties, bioactivities of polysaccharides from <i>Dendrobium officinale</i> Kimura & Migo Zhao, M. et al. (2021). Phytochemical profiles of edible flowers of medicinal plants of <i>Dendrobium officinale</i> and <i>Dendrobium devonianum</i>	World Checklist of Plants; IUCN Red List 2021; Threatsearch		
Edible	Dendrobium salaccense	Dendrobium salaccense (Blume) Lindl.	Y	Cooking orchid (English)	MY	Pseudobulb epiphyte or lithophyte.	Not Evaluated	Not Evaluated	Not Evaluated	EX 1994 SG; EN 2012 LK; VU 2017 CN; EN 2015 IN	Threatened		World Checklist of Plants; Threatsearch!	Edible Orchids essay, author unknown; Lohar, A (2019) Edible Orchids for Human Consumption in Agriculture & Food: e-newsletter Vol. 1(6), pp.27-31 Facciola 1990	
Edible	Dendrobium speciosum	Dendrobium speciosum Sm.	Y	King orchid (Australian); Rock orchid (English)	AU	Pseudobulb lithophyte or epiphyte.; Lacks tubers but has thickened stems.	Not Evaluated	Not Evaluated	Not Evaluated	TH 2016 AU (VIC only)	Threatened	Low, T. (1991). Wild Food Plants of Australia. Angus & Robertson, Sydney. pp. 108.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Useful Plants; World Checklist of Plants; Threatsearch!	orchid-world.com/evergreen/edible.pdf Edible Orchids essay, author unknown	
Edible	Dendrobium speciosum var. hillii Mast.	Dendrobium speciosum var. hillii Mast.	Y	Rock Lily, King Orchid	AU	Pseudobulb lithophyte or epiphyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch!		
Edible	Denia cylindrostachya	Denia cylindrostachya Lindl.	Y	Cylindric Raceme Malaxis (English)	CN, IN, MM, NP, PK	Pseudobulb geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2013 CN	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch!		
Edible	Dipodium squamatum	Dipodium squamatum (G.Forst.) R.Br.	Y	Blotched hyacinth orchid, Hyacinth Orchid (English)	AU, NC, VU	Holomycotrophic rhizome geophyte.; Expanded, fibrous roots (tubers) are 7-8 mm thick and longer than a man's fingers. Tuber geophyte. In grassland, sometimes with scattered shrubs, or <i>Brachystegia</i> woodland; 1450–2800 m. Tubers almost globose to elongate-ovoid, 1.5–3 cm. long, 1–2 cm. in diameter, shortly tomentose or nearly glabrous. Roots very slender, flexuous, pubescent or glabrous. A terrestrial herb 2–6.5 dm. high, glabrous except for the roots.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Plants	Cherikoff
Chikanda	Disa aconitoides subsp. concinna	Disa aconitoides subsp. concinna (N.E.Br.) H.P.Linder	Y	Chinaka	BI, CD, ET, KE, MW, MZ, RW, SD, TZ, UG, ZM, ZW		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated			Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.	
Chikanda	Disa aequaloba	Disa aequaloba Summerh.	N	Chikanda Mbozi (unk)	AO, TZ, ZM, CD	Habitat: Wet grassland or swamp; 1850–2100 m.; Tuber geophyte.	Endangered	2015	Global	EN 2015 Global	Threatened	Nyamora, 2005; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants		
Chikanda	Disa baurii	Disa baurii Bolus	Y	Baur's Disa, Nitetemela (Nitetemera) (Matango tribe, Mbinga district, Tanzania)	BI, ZA, MW, MZ, RW, SZ, TZ, ZM, CD, ZW	A terrestrial herb 1.5–6 dm. high, glabrous except for the roots. Roots slender, flexuous, pubescent. Inflorescence up to 12 cm. long, 3–5.5 cm. in diameter, rather loosely 1–11-flowered. Upland grassland, sometimes with scattered shrubs; 1500–2700 m. Tuber geophyte. Tuber geophyte.; Terrestrial herb perennating by testicular tubers, rarely with separate sterile shoots. Fertile stems 25–50 cm tall, cauline leaves mostly sheathing and 4–6 cm long, 2 leaves with free semi-erect narrowly lanceolate to linear blades up to 12 cm long. Sterile shoots c. 2-leaved; leaves erect, up to 13 cm long, linear-lanceolate, acute. Inflorescence lax to sub-dense, 6–13 cm long, 8–18-flowered. Floral bracts as tall as the flowers, narrowly ovate, acuminate, the apices often reflexed. Flowers borne horizontally, pink, sometimes reddish or purplish, or with purple spots. Dorsal sepal galeate; galea erect, 8–12 mm long, 6–10 mm wide and 4–6 mm deep, ovate, acute to obtuse. Lateral sepals, 8–13 mm long, elliptic, rotund, acute. Spur horizontal at the base, at length gradually decurved, slender, 8–13–15 mm long, cylindrical from a conical base. Petals 6–9 mm long, narrowly oblong, obliquely acute, erect. Lip 6–8 mm long, narrowly lanceolate to narrowly elliptic, acute. Rostellum lateral lobes parallel, c. 3 mm tall. Anther 3–4 mm long. Stigma shortly stipitate. Ovary c. 1.5 cm long.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 ZA	Not Threatened	Hamsiy, 2007, Foden, W. & Potter, L. 2005. <i>Disa baurii</i> Bolus. National Assessment: Red List of South African Plants version 2020.1. Accessed on 2022/03/15.; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Useful Plants, Threatsearch!		
Chikanda	Disa caffra	Disa caffra Bolus	Y	Sumbawanga (Zambian, named after its origin in Subawanga, TZ)	AO, ZA, MG, MW, TZ, ZM, CD		Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 ZA	Not Threatened	Veldman et al (2018)	Plants of the World Online		

Chikanda	<i>Disa celata</i>	<i>Disa celata</i> Summerh.	N	Chinaka (Malawi)	AO, MW, TZ, ZM	Tuber geophyte. Terrestrial herb with separate sterile and fertile shoots. Sterile shoots to 7 cm long; leaves at least 1, conduplicate, 10–20 × 0.5–1 cm, linear-elliptic, acute to subacuminate. Fertile shoots 30–50 cm tall; cauline leaves imbricate, 5–7 × 8–12 mm, acute, closely sheathing with the apices free; basal leaves smaller, obtuse, hyaline or red. Inflorescence dense, 6–8 cm long. Floral bracts c. 2 cm long and 5–10 mm wide, narrowly ovate, subacuminate, overtopping and partially obscuring the flowers. Flowers orange to yellow. Spur pendent from the middle of the galea, slender cylindrical, 5–6.5 mm long. Lateral sepals 7–8 mm long, oblong, subobtusely or shortly apiculate. Dorsal sepal 5.5–7 mm long, obovate, obtuse; galea erect, 3–5.5 mm deep. Petals 2-lobed; anterior lobe, 3.5–5 mm in diameter, rotund, spreading; posterior lobe 4.5–6 mm long, linear, acute, included in the galea. Lip pendent, 5–6.5 mm long, linear. Rostellum c. 1.5 mm tall. Anther erect, c. 3 mm long. Stigma subsessile. Ovary c. 1 cm long.	Data Deficient	2018	Global	DD 2017 Global	Not Evaluated	Veldman et al (2018)	IUCN Red List 2021; Plants of the World Online	Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	
Chikanda	<i>Disa dichroa</i>	<i>Disa dichroa</i> Summerh.	Y	Unknown	ZM, CD, TZ	Terrestrial herb perennating by testicular tubers. Plants erect, slender, 35–60 cm tall. Flowers pale purple to mauve.	Data Deficient	2018	Global	DD 2017 Global	Not Evaluated	IUCN Red List 2021			
Chikanda	<i>Disa engleriana</i>	<i>Disa engleriana</i> Kraenzl.	Y	Chinaka cha sekelemo (Malawi) Liseku (Kinga tribe, Makete district, Tanzania); Makaha ga mlutu (Kinga and Bena tribes, Tanzania); Masekele, Masekani, (Kinga tribe, Tanzania); Liseki, Masekani, Masekendi, Mbozi (unk)	AO, MW, TZ, ZM, CD	Tuber geophyte. Sterile shoots with two linear leaves, flushed with purple and heavily blotched at the base. Sometimes occurring as scattered plants, sometimes forming colonies in which only a few plants flower in any one year. Flowering Feb–April.; Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Kasulo, V., Mwabumba, L. and Cry, M., 2009. A review of edible orchids in Malawi. <i>Journal of Horticulture and Forestry</i> , 1(7), pp.133-139.	World Checklist of Plants	Edible Orchids essay, author unknown; Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	
Chikanda	<i>Disa erubescens</i>	<i>Disa erubescens</i> Rendle	N	Unknown	AO, BI, CM, KE, MW, MZ, NG, RW, SD, TZ, UG, ZM, CD, ZW	A terrestrial herb 3–9 dm. high, glabrous except for the roots. Tubers ellipsoid, ovoid or almost globose, 1.5–3 cm. long, 8–15 mm. in diameter, — hairy.; Tuber geophyte.	Least Concern	2013	Global	LC 2013 Global	Not Threatened	IUCN Red List 2021; World Checklist of Plants	Lim, T.K. (2016) <i>Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs</i> . Switzerland: Springer.		
Chikanda	<i>Disa fragrans</i>	<i>Disa fragrans</i> Schltr.	Y	Unknown	CD, ET, KE, MW, MZ, RW, SD, TZ, UG, ZA, ZW	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2001 MW	Not Evaluated	World Checklist of Plants			
Chikanda	<i>Disa fragrans</i> subsp. <i>fragrans</i>	<i>Disa fragrans</i> Schltr. subsp. <i>fragrans</i>	Y	Unknown	ZA, LS, MW, MZ, TZ, ZW	A terrestrial herb 1–5 dm. high, glabrous except for the roots. Tubers narrowly ellipsoid, 2.5 cm. long, scarcely 1 cm. in diameter, densely tomentose.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2001 Unknown	Not Evaluated	Davenport & Ndangalasi, 2001; Nyomora, 2005; Hamisy, 2007			
Chikanda	<i>Disa hircicomis</i>	<i>Disa hircicomis</i> Rchb.f.	Y	Chikana (Malawi)	ZA, CD, AO, BI, CM, ET, KE, MW, MZ, NE, NG, RW, SD, TZ, UG, ZM,	A slender to rather stout terrestrial herb, 1-21/2 ft. high. In damp grassy places and marshes. Flowers purple with darker markings. A dense cylindrical flower spike 2-7 in. long; Tuber geophyte	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global; LC 2005 ZA	Not Threatened	World Checklist of Useful Plants	Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.		
Chikanda	<i>Disa katangensis</i>	<i>Disa katangensis</i> De Wild	Y	Unknown	AO, ZM, CD	Terrestrial herb with separate fertile and sterile shoots. Flowers red, pink or scarlet, the galea with darker spots.	Data Deficient	2018	Global	DD 2017 Global	Not Evaluated	IUCN Red List 2021			
Chikanda	<i>Disa miniata</i>	<i>Disa miniata</i> Summerh.	N	Unknown	CD, ZW	Terrestrial herb with separate sterile and fertile shoots.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Veldman et al. (2017); Veldman et al. (2018)			
Chikanda	<i>Disa nykensis</i>	<i>Disa nykensis</i> H.P.Linder	N	Unknown	MW, TZ, ZM	Terrestrial herb perennating by testicular tubers. Plants 20–45 cm tall.	Data Deficient	2018	Global	DD 2001 MW; VU 2001 ZM; DD 2017 Global	Not Threatened	IUCN Red List 2021			
Chikanda	<i>Disa ochrostachya</i>	<i>Disa ochrostachya</i> Rchb.f.	Y	Golden candle orchid (English), Chinaka (Malawi)	AO, BI, CM, CG, KE, MW, RW, SD, TZ, UG, ZM, CD, ZW	Slender terrestrial herb, up to 1 m tall. Leaves on a separate shoot, 2-3, erect, elliptic, up to 20 × 4 cm, folded along the length. Leaves along the fertile shoot, up to 9 × 3 cm, sheathing. Inflorescence cylindrical, 15-30 cm long, dense, 50-200-flowered, bracts 1.5-2.5 cm long, pointed. Flowers c. 1 cm in diameter, bright yellow, often spotted orange. Dorsal sepal obovate, 6-9 mm long with a pendent spur, up to 12 mm long arising from the middle. Lateral sepals spreading, 6-9 mm long. Petals 2-lobed. Lip pendent, linear, 5-9 mm long.; Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global	Not Threatened	Hamisy, 2007; Mapunda, 2007, Veldman et al. (2017); Lim, T.K. (2016) <i>Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs</i> . Switzerland: Springer.	Flora of Zambia online ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=209410">https://www.zambiaflora.com/speciesdata/species.php?species_id=209410</a> ), World Checklist of Useful Plants, Threatsearch; World Checklist of Plants	Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	
Chikanda	<i>Disa perplexa</i>	<i>Disa perplexa</i> H.P.Linder	N	Chinaka	KE, MW, NG, TZ, ZA, ZM, ZW	Tuber geophyte. Terrestrial herb perennating by tubers.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.		
Chikanda	<i>Disa robusta</i>	<i>Disa robusta</i> N.E.Br.	Y	Ligosi, Manseke, Liseki (Kinga tribe, Makete district, Tanzania); Liseku, Manene, Masekenyakizunga, Makundu, Vikubwa, Vyekundu (Kinga tribe, Tanzania); Liseku, Makundu (Wanji tribe, Tanzania); Chinaka (Malawi); Chikande Kijike, Likose, Lisek, Makaha Ga Mluta, Masekele, Masakeri (unk.); Fungulwe, Mshilamshila, Myala, Ntorikonshi & Sumbawanga - after its origin of Sumbawanga, TZ (Zambian)	BI, MW, RW, TZ, ZM, CD	Terrestrial herb with separate fertile and sterile shoots. Sterile shoots up to 15 cm tall, with 2–3 narrowly elliptic, erect, conduplicate leaves, up to 20 cm long. Fertile shoots 40–70 cm tall; basal leaves 1–3, small, completely sheathing; the remainder more or less narrowly ovate, 4–8 cm long. Inflorescence 10–30 cm long, densely, up to c. 150-flowered. Bracts lanceolate, 1.5–2.5 cm long, reflexed at the apex, dry. Flowers orange-red with darker mottling, c. 1 cm in diameter. Dorsal sepal hooded, obovate, 9–10 mm long and 3–4 mm wide, obtuse, facing more or less downwards. Spur pendent, club-shaped, 7.5–10 mm long. Lateral sepals narrowly ovate, 8–10 mm long, spreading or reflexed. Petals 2-lobed; posterior lobe erect, 7–8.5 mm long; anterior lobe originating about halfway up the posterior lobe, equalling the posterior lobe in length, the front margin crenulate or undulate, curved in front of the anther. Lip more or less pendent, strap-shaped, 7–10 mm long. Tuber geophyte. Sterile shoots with red-blotched basal sheaths and lanceolate, conduplicate leaves. Montane grassland species, 1,500-2,000 m, flowering Nov-Jan., Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Challe and Struik, The impact on orchid species abundance of gathering their edible tubers by HIV/AIDS orphans: a case of three villages in the Southern Highlands of Tanzania, Veldman et al (2018), Veldman et al. (2017), Davenport & Ndangalasi, 2001; Hamisy, 2007; Mapunda, 2007; Challe, 2009; Kasulo et al. 2009, Veldman et al (2018); Kasulo, C., Mwabumba, L. & Cry, M. (2009) A review of edible orchids of Malawi; Challe, Struik & Price (2018); Lim, T.K. (2016) <i>Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs</i> . Switzerland: Springer.	Flora of Zambia online ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=209410">https://www.zambiaflora.com/speciesdata/species.php?species_id=209410</a> ); World Checklist of Plants	Edible Orchids essay, author unknown; Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Chikanda	<i>Disa roeperocharoides</i>	<i>Disa roeperocharoides</i> Kraenzl.	N	Unknown	CD, ZM	Terrestrial herb with separate fertile and sterile shoots.	Data Deficient	2018	Global	VU 2001 ZM; DD 2017 Global	Not Threatened	need data	IUCN Red List 2021		
Chikanda	<i>Disa satyriopsis</i>	<i>Disa satyriopsis</i> Kraenzl.	Y	Chinaka (Malawi); Sumbawanga - after its origin of Sumbawanga, TZ (Zambian)	BI, MW, TZ, ZM	Terrestrial herb with separate sterile and fertile shoots. Sterile shoots up to 15 cm tall, with 2–3 narrowly elliptic, erect, conduplicate leaves, up to 20 cm long. Fertile shoots 40–70 cm tall; basal leaves 1–3, small, completely sheathing; the remainder more or less narrowly ovate, 4–8 cm long. Inflorescence 10–30 cm long, densely, up to c. 150-flowered. Bracts lanceolate, 1.5–2.5 cm long, reflexed at the apex, dry. Flowers orange-red with darker mottling, c. 1 cm in diameter. Dorsal sepal hooded, obovate, 9–10 mm long and 3–4 mm wide, obtuse, facing more or less downwards. Spur pendent, club-shaped, 7.5–10 mm long. Lateral sepals narrowly ovate, 8–10 mm long, spreading or reflexed. Petals 2-lobed; posterior lobe erect, 7–8.5 mm long; anterior lobe originating about halfway up the posterior lobe, equalling the posterior lobe in length, the front margin crenulate or undulate, curved in front of the anther. Lip more or less pendent, strap-shaped, 7–10 mm long. Tuber lithophyte. errestrial herb, rarely epilithic or epiphytic; perennating by tubers. Plants flexuose, 10–40 cm tall, base of stem often with a sheath of old leaf fibres.	Data Deficient	2018	Global	DD 2018 Global	Not Evaluated	Veldman et al (2018), Veldman et al. (2017)	IUCN Red List 2021	Flora of Zambia online ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=209430">https://www.zambiaflora.com/speciesdata/species.php?species_id=209430</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	
Chikanda	<i>Disa saxicola</i>	<i>Disa saxicola</i> Schltr.	Y	Chinaka	TZ, MW, MZ, ZA, ZM, ZW	Terrestrial herb with separate fertile and sterile shoots. Sterile shoot with up to 5 leaves, linear-lanceolate, 7–12 cm long, erect. Fertile shoot robust, 15–30 cm tall with leaves along the stem ovate-lanceolate, 4.5–5.5 cm long, sheathing with the apical third free; basal leaves reduced to sheaths 2–3 cm long. Inflorescence dense, 7–15-flowered; 6–10 cm long; bracts ovate, c. 3 cm long, overtopping the flowers. Flowers magenta, dorsal sepal paler with darker spots. Dorsal sepal spatulate, 10–13 mm in diameter, round, shallowly helmet-shaped; margin incurved. Spur pendent from just below the middle of the dorsal sepal, reaching to the base, 4–6 mm long, club-shaped. Lateral sepals oblong, 9–13 mm long, spreading sideways and upwards. Petals 2-lobed; anterior lobe 6–7 mm long, the margins incurved and sometimes serrate; posterior lobe more or less ovate, 7–8 mm long, occasionally serrate, erect inside the hood. Lip pendent, linear, 10–11 mm long.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 ZA	Not Threatened		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.		
Chikanda	<i>Disa ukingensis</i>	<i>Disa ukingensis</i> Schltr.	N	Chinaka (Malawi)	MW, TZ, ZM	Terrestrial herb with separate fertile and sterile shoots. Sterile shoot with up to 5 leaves, linear-lanceolate, 7–12 cm long, erect. Fertile shoot robust, 15–30 cm tall with leaves along the stem ovate-lanceolate, 4.5–5.5 cm long, sheathing with the apical third free; basal leaves reduced to sheaths 2–3 cm long. Inflorescence dense, 7–15-flowered; 6–10 cm long; bracts ovate, c. 3 cm long, overtopping the flowers. Flowers magenta, dorsal sepal paler with darker spots. Dorsal sepal spatulate, 10–13 mm in diameter, round, shallowly helmet-shaped; margin incurved. Spur pendent from just below the middle of the dorsal sepal, reaching to the base, 4–6 mm long, club-shaped. Lateral sepals oblong, 9–13 mm long, spreading sideways and upwards. Petals 2-lobed; anterior lobe 6–7 mm long, the margins incurved and sometimes serrate; posterior lobe more or less ovate, 7–8 mm long, occasionally serrate, erect inside the hood. Lip pendent, linear, 10–11 mm long.	Data Deficient	2018	Global	VU 2001 ZM; DD 2017 Global	Not Threatened	Lim, T.K. (2016) <i>Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs</i> . Switzerland: Springer.	IUCN Red List 2021	Flora of Zambia online ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=209450">https://www.zambiaflora.com/speciesdata/species.php?species_id=209450</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	

Chikanda	<i>Disa verdickii</i>	<i>Disa verdickii</i> De Wild.	N	Unknown	AO, ZM, CD	Terrestrial herb growing from a tuber with separate fertile and sterile shoots; sterile shoot up to 5 cm tall, leaves conduplicate, to 11 x 1.5 cm, linear to elliptic, acute; inflorescence 8-20 cm, 8-25 flowered, ovary and pedicel c. 2 cm long, bracts ovate-lanceolate, subacuminate, reaching to middle or overtopping flowers; flowers rosy-mauve to magenta-pink; dorsal sepal erect, 20-25 mm tall, spatulate, spur pendent, 6-7 mm long, clavate; lateral sepals suboblique, 20-25 mm long, oblong, obtuse to subacute; petals 2-lobed, anterior lobe 13-15 x 6-8 mm, oblong, spreading with the margins incurved, flanking the anther; posterior lobe 20-22 x 2-3 mm, narrowly oblanceolate to linear, lobes partially overlapping; lip 20-23 mm long, linear, pendent; anther erect, 6-9 mm tall; stigma flat, sessile.	Data Deficient	2020	Global	DD 2001 ZM; DD 2017 Global	Not Evaluated	need data	IUCN Red List 2021	Flora of Zambia online ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=209460">https://www.zambiaflora.com/speciesdata/species.php?species_id=209460</a> )
Chikanda	<i>Disa walleri</i>	<i>Disa walleri</i> Rechb.f.	Y	ichinyeka mulundu (Serenje District, Zambia); Chikanda Mbeya, Masekelekele Njombe (unk)	BI, MW, TZ, ZM, CD, ZW	Terrestrial herb growing from testicular tubers with separate fertile and sterile shoots; sterile shoot up to 14 cm tall, leaves 1-4, erect, conduplicate, to 15 x 30 cm, elliptic to oblanceolate, acute; fertile shoot 60-100 cm tall, cauline leaves mostly sheathing with small free blades; inflorescence 15-25 cm, 15-30 flowered, ovary and pedicel 1.5-2.5 cm long, bracts 2.5-4.5 cm long, lanceolate, acute to acuminate, overtopping flowers; flowers borne horizontally, mauve to purple, galea spotted; dorsal sepal galeate, galea rounded, erect 12-18 mm long, 8-15 mm wide, 12-16 mm deep; spur borne horizontally from broad conical base, 12-17 mm long, decurved; lateral sepals suboblique, 13-20 mm long, oblong, subacute to rounded; petals 15-18 mm long, narrowly lanceolate, acute, erect; lip 11-15 mm long, linear, rounded or truncate; anther 5-6 mm long; stigma subsessile	Least Concern	2013	Global	LC 2013 Global	Not Threatened	Bingham et al. 2003; Nyomora, 2005; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2021	Flora of Zimbabwe online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117430">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117430</a> )
Chikanda	<i>Disa welwitschii</i> subsp. <i>occultans</i>	<i>Disa welwitschii</i> subsp. <i>occultans</i> (Schltr.) H.P.Linder	Y	Chikanda Makete (unk.)	CM, CF, CG, GA, GN, CI, KE, LR, MW, NG, SL, TZ, UG, ZM, CD	Wet grasslands and swamps, alt. 1,500-1,700 m. Terrestrial herb 3.5-5.5 dm. high, glabrous except for the roots. Vegetative multiplication via tubers. Tubers ovoid, ellipsoid or almost globose, 1-3 cm. long, 1-2 cm. in diameter, shortly tomentose. Roots slender, flexuous, pubescent. Sterile stems up to 5 cm. long, covered by 2-3 overlapping red-spotted or blotched sheaths, 1 (rarely 2)-leaved at the apex; leaves narrowly lanceolate or oblanceolate, acute, 10-13 cm. long, 6-16 mm. broad. Flowering stems slender or stout, covered by ± adpressed sheathing leaves; leaves 12-15, the lowest 2-3 sheath-like, red-spotted or blotched, the remainder lanceolate, acute, the largest 5-8 cm. long, 1-2 cm. broad. Inflorescence 5-12 cm. long, 2.5-3 cm. in diameter, densely many-flowered. Bracts lanceolate, acuminate, 1.5-2.5 cm. long, the lower ones exceeding the flowers. Flowers suberect or somewhat spreading, cream-coloured with purple markings or tinting; pedicel with ovary straight or slightly curved, 1-1.4 cm. long. Dorsal sepal erect, obovate, obtuse, convex, spurred below or at the middle, 5-6 mm. long, 3-4 mm. broad, the spur pendent, 3.5-4.5 mm. long; laterals spreading upwards, elliptical, rounded, 6-7 mm. long, 4-4.5 mm. broad. Petals erect, shortly 2-lobed at the apex, altogether 4.5-6 mm. long; lower (front) lobe obliquely elliptical or obovate, rounded, 4.5-6 mm. long, just over 3 mm. broad; upper (back) lobe much smaller, shortly triangular, acute, not overtopping the front lobe, 1-1.5 mm. long, 1 mm. broad. Lip pendent, linear, 4.5-6 mm. long, 1 mm. broad. Anther erect, shortly Tuber geophyte. Grasslands and swamps. An erect terrestrial herb, 1-3 ft. high, with separate sterile and fertile shoots. Sterile shoots to 15 cm tall, with 2-4 suberect conduplicate leaves, 10-30 x 1-4 cm, linear-elliptic, acute or apiculate; basal sheath, often blotched or red-stripped. Fertile shoots 20-100 cm tall; linear leaves imbricate to subimbricate, the basal 2 reduced to short sheaths blotched with red; the remainder 3-10 cm long, lanceolate, subacuminate, mostly sheathing. Inflorescence dense, 3-14 cm long, 20-100-flowered. Floral bracts inconspicuous, as long as the ovaries, taller than ovaries at base of inflorescence, narrowly ovate, acuminate. Flowers bright red to carmine, or pink. Dorsal sepal subrhomboid; galea 4.5-11 mm long, narrowly oblong to lanceolate, subacute. Lateral sepals suboblique, 5-12 x 3-6(8) mm, oblong-ovate, obtuse to rounded. Spur pendent from below the middle of the galea, reaching to below the base of the sepal, slender, 3.5-9 mm long, cylindrical to rarely subclavate. Petals 2-lobed; anterior lobe 3-7(8.5) x 2.5-6 mm, ovate, spreading, the upper margin incurved; posterior lobe equalling anterior lobe in length, or exceeding it by one third, truncate or ovate lanceolate. Lip 4-12 mm long, linear. Anther 3-5 mm long. Stigma equally 3-lobed. Ovary 10-20 mm long.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Nyomora, 2005; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	
Chikanda	<i>Disa welwitschii</i>	<i>Disa welwitschii</i> Rechb.f.	Y	Chinaka (Malawi); Mshiamshilia & Myala (Zambian)	AO, BI, CM, CF, CG, GA, GN, CI, KE, LR, MW, MW (Nyaki Nat. Pk.), MZ, NG, ZA, SL, SD, TZ, UG, ZM, CD, ZW	Terrestrial herb with separate sterile and fertile shoots. Sterile shoots to 15 cm tall, with 2-4 suberect conduplicate leaves, 10-30 x 1-4 cm, linear-elliptic, acute or apiculate; basal sheath, often blotched or red-stripped. Fertile shoots 20-100 cm tall; linear leaves imbricate to subimbricate, the basal 2 reduced to short sheaths blotched with red; the remainder 3-10 cm long, lanceolate, subacuminate, mostly sheathing. Inflorescence dense, 3-14 cm long, 20-100-flowered. Floral bracts inconspicuous, as long as the ovaries, taller than ovaries at base of inflorescence, narrowly ovate, acuminate. Flowers bright red to carmine, or pink. Dorsal sepal subrhomboid; galea 4.5-11 mm long, narrowly oblong to lanceolate, subacute. Lateral sepals suboblique, 5-12 x 3-6(8) mm, oblong-ovate, obtuse to rounded. Spur pendent from below the middle of the galea, reaching to below the base of the sepal, slender, 3.5-9 mm long, cylindrical to rarely subclavate. Petals 2-lobed; anterior lobe 3-7(8.5) x 2.5-6 mm, ovate, spreading, the upper margin incurved; posterior lobe equalling anterior lobe in length, or exceeding it by one third, truncate or ovate lanceolate. Lip 4-12 mm long, linear. Anther 3-5 mm long. Stigma equally 3-lobed. Ovary 10-20 mm long.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Veldman et al (2018)	Plants of the World Online	Namoto, M. (2018). Status of chikana orchids on Nyika, Draft Report.
Chikanda	<i>Disa zombica</i>	<i>Disa zombica</i> N.E.Br.	Y	Suheng' enyule (Kinga tribe, Makete district, Tanzania); Chinaka (Malawi)	BI, MW, MZ, TZ, ZM, CD, ZW	Terrestrial herb with separate sterile and fertile shoots. Sterile shoot with leaves 2-3, conduplicate, erect. Fertile shoot up to 60 cm tall. Inflorescence 9-16 cm long, usually dense, 10-25-flowered. Floral bracts much overtopping the flowers. Flowers with grey-green lateral sepals and magenta to purple petals and dorsal sepal. Dorsal sepal 14-21 mm long, spatulate; claw 7-11 mm long, erect, canalliculate, as long as the blade; blade ovate, obtuse, facing down. Spur 4-7 mm, pendent from a small hump near the base of the blade, not reaching the base of the dorsal sepal. Petals 2-lobed; anterior lobe 4-7 mm long, shorter than the claw of the dorsal sepal; posterior lobes oblanceolate. Lip pendent, linear. Tuber geophyte. Sterile shoots with linear elliptical leaves which are red-spotted at the base. Sepals are magenta-purple at their base, shading to green or all green. Within colonies, the amount of green varies considerably, as does the size of bracts. Montane grassland species, 1,300-2,350 m, flowering Jan-April.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Kasulo, V., Mwabumba, L. and Cry, M., 2009. A review of edible orchids in Malawi. Journal of Horticulture and Forestry, 1(7), pp. 133-139. Hamisy, 2007. Development of conservation strategies for the wild edible orchid in Tanzania. Progress report. Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Useful Plants	Flora of Zimbabwe online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117470">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117470</a> ); Edible Orchids essay, author unknown; Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Chikanda	<i>Disa erubescens</i> subsp. <i>carsoirii</i> (N.E.Br.) H.P.Linder	<i>Disa erubescens</i> subsp. <i>carsoirii</i> (N.E.Br.) H.P.Linder	Y	Chinaka	AO, BI, CD, MW, MZ, TZ, ZM	Tuber geophyte. A terrestrial herb 1.5-6 dm. high, glabrous except for the roots. Tubers ovoid or ellipsoid, sometimes shortly bilobed at the apex, 1.5-3 cm. long, 1-2 cm. in diameter, sparsely hairy. Roots slender, flexuous, pubescent. Wet grassland or swamps and between rocks on mountain tops; 1000-2800 m.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.	
Chikanda	<i>Disa ornithantha</i>	<i>Disa ornithantha</i> Schltr.	N	Chinaka cha sekelemo	AO, CD, MW, MZ, TZ, ZM, ZW	Tuber geophyte. Terrestrial herb with separate sterile and fertile shoots.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.	
Chikanda	<i>Disperis anthoceros</i>	<i>Disperis anthoceros</i> Rechb.f.	Y	Unknown	BI, CD, CM, ET, KE, MG, MW, NG, RW, SD, TZ, UG, ZA, ZM, ZW	Tuber geophyte. Terrestrial herb 6-30 cm tall; tubers 1-1.5 x 1 cm, ovoid or globose, woolly.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global	Not Threatened		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.
Edible	<i>Diuris abbreviata</i>	<i>Diuris abbreviata</i> F.Meull. Ex Benth.	Y	Lemon Doubletail (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Diuris alba</i>	<i>Diuris alba</i> R.Br.	Y	White Donkey Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Diuris chrysantha</i>	<i>Diuris chrysantha</i> D.L.Jones & M.A.Clem	N	Yellow Donkey Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Diuris cuneata</i>	<i>Diuris cuneata</i> Fitzg.	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	TH 2016 AU (VIC)	Threatened		World Checklist of Plants; Threatsearch!
Edible	<i>Diuris lanceolata</i>	<i>Diuris lanceolata</i> Lindl.	Y	Golden moths, Snake Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	EN 2018 Global	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Diuris maculata</i>	<i>Diuris maculata</i> Sm.	Y	Spotted doubletail (English); Leopard orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Bulpitt, C.J., 2005. The uses and misuses of orchids in medicine. Ojm, 98(9), pp.625-631. Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online
Edible	<i>Diuris pedunculata</i>	<i>Diuris pedunculata</i> R.Br.	Y	Golden Moth orchid, Small Snake Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	E 1997 Global; EN 2016 AU	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch!
Edible	<i>Diuris platichila</i>	<i>Diuris platichila</i> Fitzg.	Y	Western Donkey Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Diuris punctata</i>	<i>Diuris punctata</i> Sm.	Y	Purple Diuris; Purple Donkey Orchid, Donkey orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	EN 2018 AU (SOA)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Useful Plants; World Checklist of Plants; Threatsearch!
Edible	<i>Diuris semilunata</i>	<i>Diuris semilunata</i> Messmer in H.M.R.Rupp	N	Donkey Orchid, Late Leopard Orchid, Spotted Doubletail Orchid (English)	AU	Tuber geophyte. Grows on well-drained, moist soils among grass and shrubs in sclerophyll forest, south from Nerriga, southern Tablelands and in Victoria, terrestrial, perennial geophytic herb. Roots are filamentose with small, naked, ovoid or cylindrical, often paired, tubers. Leaves are 15-25 cm long and 3-4 mm wide, linear, basal, grass-like, alternate or whorled (conduplicate); with 2 leaves in a tuft. Flowers are hermaphroditic, orange, heavily blotched and suffused with brown and purple. Fruit is a non-fleshy, dehiscent capsule containing winged seeds.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	DD 2014 AU (VIC)	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch!

Edible	<i>Diuris striata</i>	<i>Diuris striata</i> Rupp	Y	Unknown	AU	Tuber geophyte. Tuber geophyte. Grows on well-drained, moist soils in semi-shaded sites on slopes of the foothills in open sclerophyll forest and heath in south AU, Tasmania, Victoria, New South Wales and Queensland, Terrestrial, perennial geophytic herb. Roots are filamentose with small, naked, ovoid or cylindrical, often paired, tubers. Leaves are 15-25 cm long and 3-4 mm wide, linear, basal, grass-like, alternate or whorled (conduplicate; with 1-3 leaves in a tuft). Flowers are bright yellow with prominent dark markings on the labellum and dorsal sepal. Capsule is dehiscent, thin-walled and glabrous erect containing winged seeds.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants		
Edible	<i>Diuris sulphurea</i>	<i>Diuris sulphurea</i> R.Br.	Y	Hornet Orchid, Tiger Orchid, Yellow Tiger Orchid (English)	AU		Not Evaluated	Not Evaluated	Not Evaluated	Rare 2018 (SOA)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch!		
Edible	<i>Diuris tricolor</i>	<i>Diuris tricolor</i> Fitzg.	Y	Tricolor Donkey Orchid	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Threatened 2016 AU (VIC) ; VU 2016 (NSW)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch!		
Edible	<i>Diuris venosa</i>	<i>Diuris venosa</i> Rupp	N	Wild Shallot, Life Plant (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2016 Global	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Threatsearch!		
Edible	<i>Encyclia caicensis</i>	<i>Encyclia caicensis</i> Saulea & R.M.Adams	N	Wild Shallot, Life Plant (English)	TC	Restricted to coastal habitats, predominantly on sandy substrates.	Endangered		2012 Global	EN 2012 Global	Threatened		IUCN Red List 2021		
Salep	<i>Epipactis condensata</i>	<i>Epipactis condensata</i> Boiss. ex D.P. Young	Y	Unknown	CY, LB, SY, GE, RU, AZ, AM, TR	Rhizome geophyte.	Critically Endangered		2011 Europe	CR 2011 Europe; CR 2006 CY	Threatened	Ari et al, 2005	World Checklist of Plants		
						<i>Epipactis helleborine</i> is a clonal taxon, growing in broadleaved, mixed and coniferous (also secondary) forests, on forest edges and also in anthropogenic habitats, such as rural and urban roadsides, railway embankments, post-mining sites, tracks, quarries, poplar plantations, parks, sandy beaches, lawns (Akhalkatsi, Arabuli & Lorenz, 2014; Hollingsworth & Dickson, 1997; Wittig & Wittig, 2007) and, furthermore, also in cities (Milović & Mitić, 2012; Rewicz et al., 2017a; Stešević & Jovanović, 2008). This species is rather indifferent in terms of habitat and behaves as a pioneer (Delforge, 2006). It grows on moderately wet, acidic to neutral humus soils and sometimes on substrates rich in calcium carbonate (Robatsch, 1983). <i>Epipactis helleborine</i> grows in deciduous woodland, edges and clearings in open or dense woodland. It prefers moist, calcareous and deep substrates. This species grows in mid-shade to shade and flowers from June to September. (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Lang 2004, Pignatti 1982, Rossi 2002, Vakhrameeva et al. 2008)									
Salep	<i>Epipactis helleborine</i>	<i>Epipactis helleborine</i> (L.) Crantz	Y	Broad-leaved Helleborine (English)	AF, AL, DZ, MN, RU, AT, EE, LV, LT, BY, BE, BG, CN, FR, CY, CZ, SK, DK, GR, FI, DE, GB, GR, HU, IR, IQ, IE, IT, KZ, LB, SY, MA, NP, NL, GE, AZ, AM, NO, PK, PS, PL, PT, RO, ES, SE, CH, TJ, TR, UA, UZ, ME		Least Concern		2011 Europe	LC 2011 Europe; LC 2005 LU; EX 2006 CY; LC 2009 FR; LC 2007 HU; LC 206 CH; NT 2017 TW; +1 1999 AT; LC 2008 EE; LC 1999 DE; LC 2016 UK	Not Threatened	Sandal Erzurumlu et al 2018			
Salep	<i>Epipactis purpurata</i>	<i>Epipactis purpurata</i> Sm.	Y	Violet Helleborine	AT, BE, BG, CZ, SK, DK, FR, DE, GB, GR, HU, IR, IT, PL, RO, ES, CH, AZ, AM, GE, UA, RS, HR, SI, ME, BA, MK	<i>Epipactis purpurata</i> is found in the shadier and barest parts of beech and hornbeam woods, sometimes in conifer forests. It is occasionally found in hedgerows that are woodland relicts and in wild gardens. <i>Epipactis purpurata</i> prefers deep, heavy, moist, acidic to neutral substrates, often clayey and calcareous bedrock. This species grows mostly in shady places and it flowers from the beginning of July to September. (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Lang 2004, Rossi 2002).	Least Concern		2011 Global & Europe	LC 2011 Global; NT 2014 SK; VU 2005 LU; LC 2009 FR; NT 2007 HU; VU 2012 CZ; EN 2011 BG; LC 2016 CH; 3r! 1999 AT; LC 2014 UK; EN 2011 DE	Not Threatened	Sandal Erzurumlu et al 2018 Orchid preparations, Singh, Kishore, Kumar, Singh; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.			
Edible	<i>Epipactis royleana</i>	<i>Epipactis royleana</i> Lindl.	Y	Chhasakrungai (unk.) Smooth-Leaf Parson's Bands, Large Parson's Bands (English); Leafless parson's bands, pink autumn orchid (English)	AF, CN, IN, NP, BT, KG, PK, TJ, UZ	Hemicyptophyte or rhizome geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2013 CN	Not Threatened		World Checklist of Plants; Threatsearch!		
Edible	<i>Eriochilus cucullatus</i>	<i>Eriochilus cucullatus</i> (Labill.) Rchb.f.	Y	Pink nodding orchid, Shepherd's crook orchid (English), (Yeenga (Aboriginal-Gladstone) and Uline (Aboriginal-Rockhampton) of Queensland, AU)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Plants		
Edible	<i>Eulophia cernua</i>	<i>Eulophia cernua</i> (Willd.) M.W.Chase, Kumar & Schuit.	Y		CC, IN, AU, PG, KH, CN, PW, FJ, JP, LA, ID, MV, GU, MY, MM, NP, NU, NC, PG, PH, WS, SB, TW, TH, TO, VU, VN	Pseudobulb geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU LK 2012; LC 2017 TW, EN 2018 JP	Threatened	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Plants		
Salep	<i>Eulophia dabia</i>	<i>Eulophia dabia</i> (D.Don) Hochr.	Y	Hatti paila (Nepal)	AF, BG, CN, IN, MM, NP, PK, TJ, TM, UZ	Pseudobulb geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2017 CN	Threatened	Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.; Tanaka, T. (1976). Tanaka's Cyclopeda of Edible Plants of the World. Keigaku Publishing C., Tokyo. pp. 296.	World Checklist of Plants	Rutherford & Groves 2017	
Salep	<i>Eulophia epidendrea</i>	<i>Eulophia epidendrea</i> (J.Koenig ex Retz.) C.E.C.Fisch.	Y	Unknown	BD, IN, LK, PK	Pseudobulb epiphyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2012 LK	Not Threatened	Tanaka's Cyclopeda of Edible Plants of the World. Keigaku Publishing C., Tokyo. pp. 297.		Rutherford & Groves 2017	
						Tuber geophyte.: Seasonally wet grassland, vleis and submontane grassland, also in wooded grassland. Terrestrial herb 22–65 cm tall. Leaves 1–3; petiole 12–18 cm long; lamina 26–40 cm long, 3–15 mm wide, linear, acute, plicate. Scape erect, with several brown, tubular sheaths; inflorescence short and dense, 2–8 cm long, c. 2 cm wide, several- to many-flowered. Flowers resupinate, white, dull yellow or maroon, the lip always red, violet or purple. Pedicel and ovary 5–20 mm long; bracts 3–8 cm long at base of the inflorescence, shorter towards the inflorescence apex, linear to linear-lanceolate, acuminate, brown, scarious. Dorsal sepal 10–11 × 3.5–4 mm, oblong to obovate, acute or obtuse and mucronate; lateral sepals 9–10 × 4–4.5 mm, obliquely oblong, acute or obtuse and mucronate. Petals 8.5–11 × 3.5–4.5 mm, oblong to obovate. Lip 3-lobed, 7–12 mm long, 12–14 mm wide across the side lobes; mid-lobe 6–8.5 mm long, oblong, obovate or subquadrate, obtuse or retuse; the disk with 3–7 tuberculate or lacerately-keeled veins; side lobes 5–6 mm long, oblong, obtuse, asymmetrical, with the mid-vein usually forming a ridge at the base; veins and ridges of disk and side lobes sometimes very sparsely pilose. Column 1.5–2(3.5) mm long; anther ovate, operculate.									
Edible	<i>Eulophia eustachya</i>	<i>Eulophia eustachya</i> (Rchb.f.) Geerincx	Y	Mbozi (unk.)	CD, ET, KE, MZ, RW, TZ, UG, ZW		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	
Salep	<i>Eulophia herbacea</i>	<i>Eulophia herbacea</i> Lindl.	Y	Unknown	BD, CN, IN, LA, MM, NP, TH, PK	Pseudobulb geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2017 CN	Threatened	Tanaka, T. (1976). Tanaka's Cyclopeda of Edible Plants of the World. Keigaku Publishing C., Tokyo. pp. 296.		Rutherford & Groves 2017	
Edible	<i>Eulophia hereroensis</i>	<i>Eulophia hereroensis</i> Schitr.	Y	Unknown	AO, BW, ZA, MZ, NA, ZW	Terrestrial herb. Pseudobulbs subterranean or partly aerial, forming a chain.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2001 NA; VU 2001 ZW; LC 2005 ZA	Threatened	Peters, C.R., O'Brien, E.M. and Drummond, R.B. (1992). Edible Wild Plants of Sub-saharan Africa. pp. 36-37	World Checklist of Useful Plants; Threatsearch		
Edible	<i>Eulophia hians</i> var. <i>nutans</i>	<i>Eulophia hians</i> var. <i>nutans</i> (Sond.) S.Thomas	Y	Unknown	ET, KE, TZ, MW, MZ, ZM, ZW, AO, BW, ZA, SZ, LS	Pseudobulb geophyte.: Grasslands, varying from short dry grasslands on sandy soils at lower altitudes to montane grassland on rocky outcrops, dambo grassland, and high rainfall woodland on sandy soil, also on bare ground on "chrome hills", alt. 1,500-2,500 m. Leaves fully developed at anthesis. Upper sheaths on scape more than half the length of the internodes. Inflorescence up to 93 cm long, flowering time much later than other vars. Flowers with sepals green to olivaceous often flushed with purplish-brown or brown, petals white to dull yellow-green, lip similar with a white or pale yellow papillate callus. Spur 2–4 mm long, incurved, not swollen. Column foot 1–2 mm.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Peters, C.R., O'Brien, E.M. and Drummond, R.B. (1992). Edible Wild Plants of Sub-saharan Africa. pp. 36-37	Plants of the World Online		
Salep	<i>Eulophia nuda</i>	<i>Eulophia nuda</i> Lindl.	Y	Amkand (Nepal); Grass orchid (English)	IN, BD, ID, MY, KH, KI, CN, IN, FJ, LA, US, MM, NP, PG, PH, SB, LK, TH, TO, VN, PK	Pseudobulb geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.; Tanaka, T. (1976). Tanaka's Cyclopeda of Edible Plants of the World. Keigaku Publishing C., Tokyo. pp. 296.	World Checklist of Plants; Plants of the World Online	Rutherford & Groves 2017	





Chikanda	Habenaria clavata (Lindl.), H. clavata	Habenaria clavata (Lindl.) Rchb. f.	Y	Chinaka (Malawi); Copper Plant (English)	BI, CM, ZA, ET, LS, MW, NG, SZ, TZ, ZM, CD, ZM	Terrestrial herb 20-80 cm tall with leaves along the stem. Leaves 8-13, lowermost sheath-like, middle ones suberect or spreading, ovate-lanceolate, 7-13 cm long, upper ones grading into bracts. Inflorescence 4-27 cm long, several to many flowered with bracts c. 3 cm long. Flowers pale green to yellowish-green, white in the centre. Dorsal sepal erect, 11-19 mm long; lateral sepals deflexed, 12-19 mm long, rolled lengthwise. Petals 2-lobed to the base; upper lobe filiform, 9-15 mm long, adnate to the dorsal sepal; upper lobe curving up and horn-like, 25-40 mm long. Lip 3-lobed with narrowly linear lobes; mid lobe 17-26 mm long, side lobes shorter, up to 21 mm long. Spur 3.5 cm long, parallel to ovary and pedicel, much swollen in the apical third. Stigmatic arms 8-13 mm long pointing forward. Tuber geophyte. Brachystegia woodland or montane grassland species, 1,100-2,285 m, flowering Feb-April.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global	Not Threatened	Kasulo, C., Mwabumba, L. & Cry, M. (2009) A review of edible orchids of Malawi Veldman et al. (2017); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs, Switzerland: Springer. Part. B., 2013. Medicinal orchids and their uses: tissue culture a potential alternative for conservation. African Journal of plant science, 7(10), pp.448-467	World Checklist of Useful Plants, Threatsearch!	Flora of Zimbabwe online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=116680">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=116680</a> ); Edible Orchids essay, author unknown; Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Salep	Habenaria commelinifolia	Habenaria commelinifolia (Roxb.) Wall. ex Lindl.	Y	Unknown	IN, CH, MM, NP, TH, VN, PK	with 7 to many flowers close together, with narrow pointed bracts shorter.; Tuber geophyte.	Not Evaluated		2013 China	Not threatened 2013 CN	Not Threatened		colplanta.org	
Chikanda	Habenaria cornuta	Habenaria cornuta Lindl.	Y	Chikanda (unk.)	CM, ZA, CG, ET, GN, CI, KE, MW, NG, SZ, TZ, UG, ZM, CD, ZW	Terrestrial herb up to 80 cm tall; stem leafy, sometimes arranged in two rows, largest leaves c. 2-10 x 0.7-4.5 cm; inflorescence laxly to densely several to many-flowered; flowers green or yellow-green, the lip occasionally white, side lobes of lip usually with 1-6 short teeth; spur up to 28 mm long and swollen in at tip.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global	Not Threatened	Nyomora, 2005; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs, Switzerland: Springer.		Flora of Zimbabwe online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=116690">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=116690</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Chikanda	Habenaria diselloides	Habenaria diselloides Schltr.	Y	Chinaka	MW, TZ	Tuber geophyte. Terrestrial herb 14-30 cm tall. Tubers 11-15 x 11-13 mm, globose or ellipsoid.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.
Chikanda	Habenaria epipactidea	Habenaria epipactidea Rchb.f.	Y	Chinaka, Green marsh orchid (English)	AO, BW, ET, KE, NA, RW, ZA, TW, UG, ZW AO, BI, BW, CD, CI, CM, ER, ET, GH, GN, KE, MW, MZ, NG, RW, SD, SL, TZ, UG, ZA, ZM, ZW	A terrestrial orchid 30.55 cm tall, the stout erect stem arising from underground tubers variously shaped to 6 cm long and 3 cm across, often depressed rounded with the shoot arising on one side, a dark woolly covering but grey-white and fleshy inside. LEAVES: 8.15 leaves overlap closely and cover the stem, the lowest sheath-like, largest 5.12 cm x 2.5 cm wide, smaller leaves at the top of the stem, similar to bracts, pale green. FLOWERS: Sweetly scented on a cylindrical spike 6.16 cm long x 2.5 cm across, with 7 to many flowers close together, with narrow pointed bracts shorter than the flowers; flowers curved outwards, upper sepals pale green, petals and lip cream, lemon yellow or white, sepals with darker green veins, ovary plus the slender stalk about 2 cm, the dorsal sepal like a hood, the white petals ovate-circular, a 3-lobed lip with a mid lobe longer, about 1 cm, and reduced, entire side lobes, the spur 1.7.3 cm. Two very short processes at the base. FRUIT: Elliptic capsules with slits to release tiny seeds.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2001 ZW; VU 2001 NA; LC 2005 ZA	Not Threatened		World Checklist of Useful Plants, Threatsearch!	Ruffo, C., Birnie, E. and Tengnas, B. 2002. Edible wild plants of Tanzania in ed. Palzer, C. Tree nursery manual for Entrea pp. 348-351, 576-579.
Chikanda	Habenaria filicornis	Habenaria filicornis Lindl.	Y	Chinaka, Green marsh orchid (English)	CG, ER, ET, KE, ZA, MW, SD, TZ, UG, ZM, CD, ZW	Tuber geophyte. A terrestrial herb 1.5-5 dm. high. Tubers globose or ellipsoid, 1-2 cm. long, 5-12 mm. in diameter, ± woolly.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global; LC 2005 ZA	Not Threatened	Nyomora, 2005; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs, Switzerland: Springer.		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.
Chikanda	Habenaria humilior	Habenaria humilior Rchb.f.	Y	Chikanda (unk.)	CG, ER, ET, KE, ZA, MW, SD, TZ, UG, ZM, CD, ZW	from underground tubers variously shaped to 6 cm long and 3 cm across, tubers globose to ellipsoid, 1-2 cm. long, 1 cm. in diameter. Stem erect, with leaves at intervals. Leaves 10-12, 2-3 lowest sheath-like, black-spotted, 5 above these lanceolate or oblong-lanceolate, acute, to 20 cm. long and 4 cm. broad, the upper ones much smaller, similar to the bracts. Inflorescence 10-17 cm.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 ZA	Not Threatened			Flora of Zimbabwe online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=116830">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=116830</a> )
Chikanda	Habenaria insolita	Habenaria insolita Summerh.	Y	Chinaka	MW, TZ	Tuber geophyte. A terrestrial herb 2-9 dm. high, glabrous except for the petals and roots. Tubers globose to ellipsoid, 1-2.5 cm. long, 8-14 mm. in diameter, together with the roots sparsely pilose. In grassland or among rocks, often in damp places; 1400-2700 m.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.
Edible	Habenaria intermedia	Habenaria intermedia D.Don	Y	Ridzhi (Nepal); Intermediate Habenaria (English)	IN, PK, MM, NP, CN	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2013 CN	Not Threatened	Assessment of Nutritional and Antioxidant Potential of Selected Vitality Strengthening Himalayan Medicinal Plants, Rawat et al. 2015, International journal of food properties; Kumar, Singh; Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs, Switzerland: Springer.	World Checklist of Plants: Plants of the World Online	
Edible	Habenaria keayi	Habenaria keayi Summerh.	Y	Unknown	BJ, CM, ET, NG, OM, TG, YE	Tuber geophyte: A terrestrial herb 3-18 in. high. A basal heart-shaped leaf (young plants 2 leaves). Flowers hairy, green, in a rather long loose raceme. Tuber geophyte. A terrestrial herb 2-9 dm. high, glabrous except for the petals and roots. Tubers globose to ellipsoid, 1-2.5 cm. long, 8-14 mm. in diameter, together with the roots sparsely pilose. In grassland or among rocks, often in damp places; 1400-2700 m.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs, Switzerland: Springer.	World Checklist of Plants: Plants of the World Online	
Chikanda	Habenaria kyimbilae	Habenaria kyimbilae Schltr.	Y	Chinaka	CD, MW, TZ	Tuber geophyte. A terrestrial herb 2-9 dm. high, glabrous except for the petals and roots. Tubers globose to ellipsoid, 1-2.5 cm. long, 8-14 mm. in diameter, together with the roots sparsely pilose. In grassland or among rocks, often in damp places; 1400-2700 m.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.
Chikanda	Habenaria macrostele	Habenaria macrostele Summerh.	Y	Chinaka (Malawi)	BI, MW, MZ, RW, TZ, CD, ZW	covering but grey-white and fleshy inside. LEAVES: 815 leaves overlap	Near Threatened		2019 Global	NT 2017 Global	Not Threatened	Veldman et al. (2017) Tanaka, T. (1976). Tanaka's Cyclopedia of Edible Plants of the World. Keigaku Publishing Co., Tokyo, pp. 351.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food.	World Checklist of Useful Plants	Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Edible	Habenaria multipartita	Habenaria multipartita Blume ex Kraenzl. Habenaria pectinata D.Don	Y	Oowi oowi (Java); Uwi-uwi (Java)	ID	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Rare 1997 Global	Threatened		World Checklist of Useful Plants	
Salep	Habenaria pectinata	Habenaria pectinata D.Don	Y	Seto musli (Nepal)	CH, IN, MM, NP, PK	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2017 CN	Threatened		World Checklist of Plants	Rutherford & Groves 2017
Chikanda	Habenaria praestans	Habenaria praestans Rendle	Y	Chinaka (Malawi); Chikanda Mbeya (unk.)	BI, ET, KE, MW, RW, TZ, UG, ZM, CD, ZW	FLOWERS: Sweetly scented on a cylindrical spike 616 cm long x 25 cm across.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Salep	Habenaria repens	Habenaria repens Nutt.	Y	Unknown	US, AR, BZ, BO, BR, CO, CR, CU, DO, EC, SV, GF, GE, GT, GY, HT, HN, JM, MX, NI, PA, PY, PE, PR, SR, TT, UY, VE	Rhizome geophyte.; Elevation range: 2100-2900 m., herb.	Not Evaluated	Not Evaluated	Not Evaluated	EN 2016 Not Global	Threatened	Turkmen et al 2021 Tanaka, T. (1976). Tanaka's Cyclopedia of Edible Plants of the World. Keigaku Publishing Co., Tokyo, pp. 351.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food.	World Checklist of Plants: Plants of the World Online	
Edible	Habenaria rumphii	Habenaria rumphii (Bronqn.) Lindl.	Y	Unknown	PG, ID, KH, LA, MY, PH, AU, TH, VN, AO, CD, CF, CI, ER, ET, GA, KE, MW, SD, TZ, UG, YE, ZA, ZM, ZW	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	NT 2017 AU	Not Threatened		World Checklist of Useful Plants: colplanta.org	
Chikanda	Habenaria schimperiana	Habenaria schimperiana Hochst. ex A.Rich.	Y	Chinaka		Tuber geophyte. Robust terrestrial herb to 1 m high. Tubers 1-4 x 1-2 cm, ellipsoid or ovoid.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 ZA	Not Threatened			Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.

Edible	Habenaria socotrana	Habenaria socotrana Balf.f.	Y	Unknown	SO, YE	This species is an erect herb which grows in moist places, in leaf mould under shade of bushes and trees and in rocky places (e.g., rock crevices, steep rocky slopes, holes in rocks, escarpments) on granite or limestone.; The species has been found in low shrubland on steep rocky slopes with Rhus, Euryops, Withania, Coccilus balfourii; in deciduous woodland, on granite, with Croton socotranus, Buxus, Crotonopsis and emergent Commiphora spp. and Sterculia africana; in shrubland on limestone escarpment with Buxus, Cordia sp., Carphalea sp., and emergent Dracaena and Boswellia elongata (Yemen) and with Buxus hildebrandtii, Pistacia falcata, Dracaena schizantha, Euphorbia balsamifera and Olea africana (Somalia).	Least Concern	2013 Global	LC 2013 Global	Not Threatened	IUCN Red List 2021			
Edible	Habenaria supplicans	Habenaria supplicans Summerh.	N	Unknown	AO, MW, ZW, CD	plus the slender stalk about 2 cm, the dorsal sepal like a hood, the white petals, slender terrestrial herb 30–55 cm tall; tuber c. 20 × 15 mm, ellipsoid, villous. This species is a terrestrial herb which grows in Brachystegia woodland. It has been found on the edge of falls among long grass and rock, and at edge of chipya woodland (areas of wooded grassland dominated by fire-resistant woody species in which there is complete absence of the woody miombo genera Brachystegia, Julbernardia, Isoberlinia and Uapaca).	Least Concern	2013 Global	LC 2013 Global	Not Threatened	IUCN Red List 2021			
Edible	Habenaria trichoglossa	Habenaria trichoglossa Renz	N	Unknown	PG	ovate-circular, a 3-lobed lip with a mid lobe longer, about 1 cm, and A terrestrial orchid with stout erect stems 40.80 cm, arising from fleshy, tuberous roots. LEAVES: 7.10 erect leaves, long oval, pointed, the largest 6.14 cm, upper leaves similar to the bracts, all close to the stem. FLOWERS: Green sepals, other parts white in a head 8.28 cm, fragrant at night, the upper petal lobe 15.30 mm, two or three times as long and wide as the rest, a 3-lobed lip with narrow lateral spreading lobes longer than the middle lobe, the swollen spur very long, 13.17 cm, in bud the green dorsal sepal makes a convex pointed hood over the petals, about 1.5 cm long and 1 cm wide. FRUIT: Oblong or spindle-shaped capsules opening by slits to free tiny seed. Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	World Checklist of Useful Plants		
Chikanda	Habenaria walleri	Habenaria walleri Rchb.f.	Y	Kikande (Bena, Ngoni, and Wanji tribes, Tanzania), Kikande, Chikande (Kinga tribe, Tanzania), Birika (Fipa tribe, Tanzania), Charima (Malengo tribe, Tanzania)	BI, CM, GA, KE, MW, NG, SD, UG, ZM		Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Global	Not Threatened	Peters, C.R., O'Brien, E.M. and Drummond, R.B. (1992). Edible Wild Plants of Sub-saharan Africa. pp. 36-37	World Checklist of Useful Plants, Threatsearch; colplanta.org	Ruffo, C., Birnie, E. and Tengnas, B. 2002. Edible wild plants of Tanzania in ed. Palzer, C. Tree nursery manual for Entrea pp. 348-351, 576-579.
Chikanda	Habenaria xanthochlora	Habenaria xanthochlora Schtr.	N	Mamkumungu, Manseke, Mansekemakunba, Mviringo (Kinga tribe), Likose, Liseke (Kinga, Bena, Wanji tribes), Ndulamo (Kinga tribe, Makete district, Tanzania)	MW, TZ, ZM	the base. FRUIT: Elliptic capsules with slits to release tiny seeds.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Hamsey, 2007; Challe, 2009; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Flora of Malawi Online <a href="https://www.malawiflora.com/speciesdata/species.php?species_id=209210">https://www.malawiflora.com/speciesdata/species.php?species_id=209210</a>
Chikanda	Habenaria zambesina	Habenaria zambesina Rchb.f.	Y	Unknown	AO, BF, BI, BJ, CD, CF, CI, CM, ET, GA, GH, GN, GW, KE, ML, MW, MZ, NG, SL, SN, TG, TZ, UG, ZM, ZW	Tuber geophyte. Robust terrestrial herb up to c. 1 m tall; roots several, fleshy, up to 12 × 1 cm, cylindrical, sometimes branched.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2001 ZW; LC 2011 Global; VU 2017 Unknown	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.	
Edible	Herminium clavigerum	Herminium clavigerum (Lindl.) X.H.Jin	Y	Club Carrying Platanthera (English)	CN, IN, NP	Hemicyptophyte or tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Salep	Himantoglossum calcaratum subsp. rumelicum	Himantoglossum calcaratum subsp. rumelicum (H.Baumann & R.Lorenz) Niketic & Djordjevic	Y	Unknown	AL, BG, CZ, SK, GR, HU, UA, RO, TR, RS, HR, SI, ME, BA, MK	Tuber geophyte. Himantoglossum caprinum grows in short, poor grassland, woodland edges, forest-steppes, and open woodland such as oak groves. It prefers dry and calcareous soils. This species grows in full sunlight to mid-shade and flowers from June to August (DeForge 1995, Mereša and Hodálová 2011, Vakhrameeva et al. 2008). It grows in the following Habitats Directive listed habitats (Commission of the European Communities 2009):	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Löki et al 2015; Molnar et al 2017	World Checklist of Plants	
Salep	Himantoglossum caprinum	Himantoglossum caprinum (M.Bieb.) Spreng.	Y	Goat-Like Himantoglossum (English)	GR, IR, IQ, UA, RU, PS, TR	40A0 Subcontinental peri-Pannonic scrub 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) 6240 Sub-Pannonic steppic grasslands 6250 Pannonic loess steppic grasslands 91H0 Pannonian woods with Quercus pubescens	Near Threatened	2011 Europe	NT 2011 Europe; CR 2014 SK; EN 2007 HU; EX 2012 CZ; VU 2011 BG	Threatened	Löki et al 2015; Molnar et al 2017; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.			
Salep	Himantoglossum comperianum	Himantoglossum comperianum (Steven) P.Delforge	Y	Komper's Orchid (English)	GR, IR, IQ, UA, LB, SY, RU, TR	Himantoglossum comperianum is typically found in short, poor grassland, olive groves, woodland edges and open woodland often with pine. It prefers dry and calcareous soils and grows in mid-shade; the flowering time of the species takes place from May to July. (DeForge 1995, Vakhrameeva et al. 2008).	Endangered	2011 Europe	EN 2011 Europe	Threatened	Ghorbani et al, 2014; Ghorbani et al, 2017; Molnar et al 2017; Löki et al 2015; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.			

Salep	Himantoglossum hircinum	Himantoglossum hircinum (L.) Spreng.	Y	Lizard orchid (English) Barlie (French), The Giant Orchid (English), Compañón (Spanish; Castilian), Salepeira Grande (Portuguese); Orkida Kbir (unl.)	AL, AT, BE, CZ, SK, FR, DE, GB, HU, IT, MA, NL, ES, CH, TN	Tuber geophyte.. Grassland, scrub and open woods; usually calcicole. Stem 20-90 cm, stout, glabrous, with indistinct purplish blotches. Lower leaves 4-6, 5-15 x 3-5 cm, elliptic-oblong obtuse, the upper smaller, acute, amplexicaul. Spike 10-30(-50 cm, cylindrical, rather lax. Flowers large, with a strong odour. Perianth-segments 7-10 mm, subequal, pale green, with purplish spots and streaks, the outer ovate, obtuse, the inner linear. Labellum 30-50 mm, whitish, with purple spots and papillose towards base, darker green and smooth distally; lateral lobes linear, acute, curled, often purplish; middle lobe c. 2 mm wide, lorate, somewhat undulate; spur obtuse, slightly curved downwards.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2011 Europe; EN 2005 LU; LC 2009 FR; NT 2016 CH; VU 2012 NL; VU 2010 ES; VU 2002 ES; LC 2014 UK; LC 2011 DE	Not Threatened	Turkmen et al 2021	World Checklist of Plants; Plants of the World Online	
Salep	Himantoglossum robertianum	Himantoglossum robertianum (Loisel.) P.Delforge	Y	Typical habitats of Himantoglossum robertianum include short, poor grassland, garrigue, scrub, and open woodland. It prefers dry to moist, alkaline and calcareous substrates and grows in full sunlight to mid-shade; the flowering time is from January to April (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Pignatti 1982, Rossi 2002). RL	AL, CY, FR, GR, IT, MT, PT, ES, CH		Least Concern	2011 Europe		LC 2015 Mediterranean; LC 2011 Europe; LC 2009 FR; NT 2016 CH	Not Threatened	Molnar et al 2017; Lóki et al 2015; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bubs. Switzerland: Springer. Genera Orchidacearum Volume 6: Epidendroideae, Part 3, edited by Alec M. Pridgeon, Phillip J. Cribb, Mark Hinsley et al. (2018), A review of the trade in orchids and its implications for conservation.	IUCN Red List 2022	
Edible	Jumellea fragrans	Jumellea fragrans (Thouars.) Schltr.	Y	Faham, Fahon, Fahum	RE, MU	Epiphytic chamaephyte. Epiphyte on trees in the forests of Reunion and Mauritius. A perennial, it produces a few narrow green leaves and, during February and March, fragrant white flowers.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2010 Global	Not Evaluated		Kew Eco Bot 2020	Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew, 1892) Vol.1892 No. 67/68, pp. 181-183.
Edible	Jumellea rossii	Jumellea rossii Senghas	N	Faham	MU, RE	Epiphytic chamaephyte.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2010 Global	Not Evaluated	Nyomora 2005	World Checklist of Plants; Threatsearch	Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew, 1892) Vol.1892 No. 67/68, pp. 181-183.
Edible	Leptotes bicolor	Leptotes bicolor Lindl.	Y	Unknown	BR, PY AL, DZ, AT, BE, BG, CZ, SK, FR, DE, GR, HU, IR, IQ, IT, UA, LB, SY, MA, RU, PS, PT, RO, ES, CH, AZ, AM, GE, TN, TR, RS, HR, SI, ME, BA, MK	Rhizome epiphyte. Found in dense ombrophylous forest, flowers in spring, insect and wind pollinated.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2012 BR	Not Threatened	Teoh, E.S. (2016). Medicinal orchids of Asia	World Checklist of Plants Threatsearch! CNCFlora. Leptotes bicolor in Red List of Brazilian flora version 2012.2 National Center for the Conservation of Flora. Available at <a href="http://cncflora.brj.gov.br/p-ortal/pt-br/profile/Leptotes%20bicolor">http://cncflora.brj.gov.br/p-ortal/pt-br/profile/Leptotes bicolor</a>	
Salep	Limodorum abortivum	Limodorum abortivum (L.) Sw.	Y	Limodorum (English)		Limodorum abortivum is found in short grassland, banks, scrub, fringes and thermophilous woodland. It prefers cool and calcareous substrates (rarely siliceous). This species grows mostly in mid-shade and flowers from April to July. (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Pignatti 1982, Rossi 2002, Vakhrameeva et al. 2008).	Least Concern	2011 Europe		NT 2014 SK; LC 2011 Europe; RE 2005 LU; CR 2014 JO; EN 2003 Carpathian Mountains; LC 2007 FR; NT 2007 HU; VU 2009 BG; CR 2012 CZ; LC 2010 AM; NT 2016 CH; 2r 1999 AT; CR 1999 DE	Not Threatened	Ari et al. 2005		
Edible	Lyperanthus suaveolens	Lyperanthus suaveolens R.Br.	Y	Brown beak (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	World Checklist of Plants	
Edible	Microtis unifolia	Microtis unifolia (G.Forst.) Rchb.f.	Y	Onion orchid, Maikaika; Common onion orchid (English)	NZ, CN, JP, ID, TL, MY, AU, PH, SB, TW	An orchid with one tubular onion-like leaf. The flower stem can be 10-100 cm tall, and bears 20-80 green flowers on the one stem. Common throughout NZ in open tussock country and on grassy banks.; Tuber geophyte. Plant with fleshy, fasciculate roots. Leaves forming a basal rosette, fleshy, spatulate with the apex acute, base petiolate, blades 1-3 x 2-2 cm, whitish petiolate of 2-3.5 cm long x 3-5 mm wide. Inflorescence lateral and andromonoecious with short and accrescent peduncle, 8-12 cm long, covered by imbricating, hyaline, small bracts. Floral bracts similar in length to the flowers but wider, covering them completely. Flowers non-resupinate with male flowers developing first at the apical part of the inflorescence and later hermaphrodite ones towards the base. Lateral sepals connate in their lower one-third, broadly linear and wider towards the apex, obtuse, 5.6 x 1.8 mm. Petals narrowly linear, slightly narrower at the middle, 4.4 x 0.4 mm. Lip broadly ovate, concave, greenish on the upper half and white-hyaline in the rest, 6 x 4.3 mm, its apex densely covered by moniliform hairs and with a triangular apical lobe 1.2 mm long; disc of the lip provided with dendritic veining and peresence of obscure basil calli on the dorsal side of the apex. Column light green, hyaline at edges, 3.4 x 1.6 mm, stigma rectangular, 1.5 x 1.3 mm, almost half as long as the length of the column; rostellum shortly notched, brown. Pollinia four. Ovary 8.3 x 3.4 mm. Sea level to 500 m.	Not Evaluated	Not Evaluated	Not Evaluated	LC 2012 NZ; LC 2013 CN; LC 2017 TW	Not Threatened	Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer. Crowe A. A field guide to the native edible plants of New Zealand. pp. 91.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Switzerland: Springer.	World Checklist of Useful Plants	
Edible	Myrosmodes nervosa	Myrosmodes nervosa (Kraenzl.) Novoa, C.A.Vargas & Cisternas	Y	Wakapsike, Kolopsike, Pukupsike, Kolokoko, Lokokoko, Psikapsike (Chilean)	CL, PE	This herbaceous terrestrial species of the orchid family grows on peatlands (Trujillo et al. 2016), associated with herbaceous cushion plants of Juncaceae, mainly Oxycloea andina (Novoa et al. 2015); Tuber geophyte. Upland grassland; 1850-2600 m. Plant 15-45 cm. high. Neobolusia stolzii is a tuberous terrestrial orchid to 65 cm high found in montane grassland, usually at the margins of wet or peaty areas (la Croix and Cribb 1995).	Least Concern	2019 Global		LC 2018 Global	Not Threatened		Paniagua-Zambrana, N.Y. and Bussmann, R.W. (eds.), (2020) Ethnobotany of the Andes. Cham: Springer Nature Switzerland. Pp. 1271-1273.	
Chikanda	Neobolusia stolzii	Neobolusia stolzii Schltr.	Y	Chinaka	MW, ZW, ZM, TZ		Vulnerable	2020 Global		VU 2020 Global	Threatened		Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.	
Edible	Neobolusia tysonii	Neobolusia tysonii (Bulus) Schltr.	Y	Unknown	LS, ZA, SZ	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	DD 2002 EE; LC 2005 ZA	Not Threatened	Peters, C.R., O'Brien, E.M. and Drummond, R.B. (1992). Edible Wild Plants of Sub-saharan Africa. pp. 36-37		
Salep	Neotinea maculata	Neotinea maculata (Desf.) Stearn	Y	Densas (Portuguese)	DZ, CY, FR, GB, GR, IE, IT, LB, SY, LY, MA, PS, PT, ES, TN, TR, RS, HR, SI, ME, BA, MK, AL, AT, BG, FR, CY, CZ, SK, GR, DE, HU, IR, IQ, IT, UA, LB, SY, AZ, AM, GE, PS, PL, RO, CH, RU, TR, RS, HR, SI, ME, AL, AT, BY, BE, BG, RU, CZ, SK, DK, FR, DE, GB, GR, HU, IT, UA, PL, PT, RO, ES, SE, CH, AZ, AM, GE, RS, HR, SI, ME,	Neotinea maculata is typically found in short, poor grassland, garrigue, scrub and often conifer woodland. It prefers dry to moist, slightly acidic to slightly alkaline, often calcareous and limestone soils. This species grows in full sunlight to shade and flowers from March to June (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Kretzschmar et al. 2007, Lang 2004, Pignatti 1982, Rossi 2002).	Least Concern	2011 Europe		LC 2011 Europe; CR 2014 JO; LC 2009 HR; EX 1989 MT; NT 2016 IE; LC 2009 FR	Not Threatened	Kasperek & Grimm 1999; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bubs. Switzerland: Springer.		
Salep	Neotinea tridentata	Neotinea tridentata (Scop.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Orchis a trois dents (French); Three-Toothed Orchid (English)		Neotinea tridentata is typically found in short, poor grassland, open garrigue, unimproved meadows, maquis, shrubland, woodland edges and open woodland. It prefers dry to moist, alkaline to weakly acid substrates and grows in full sunlight to mid-shade. Flowering time is from March to June-July (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Kretzschmar et al. 2007, Pignatti 1982, Rossi 2002).	Least Concern	2011 Europe		LC 2014 Global & Mediterranean; LC 2011 Europe; CR 2014 JO; DD 2006 CY; NT 2009 FR; NT 2014 SK	Not Threatened	Kasperek & Grimm 1999; Tekinsen & Güner 2010; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bubs. Switzerland: Springer.	Rutherford & Groves 2017	
Salep	Neotinea ustulata	Neotinea ustulata (L.) R.M.Bateman, Pridgeon & M.W.Chase	Y	Burnt Orchid, Limodorum, Orchis Brúlé (English); Burnt-Tip Orchid (English)		Neotinea ustulata is found in short grassland, garrigue, marshland, dry shrubland, alluvial meadows, woodland edges and open woodland. It prefers dry to moist, alkaline to acidic and often calcareous soils and grows in full sunlight. Flowering time is from April to August (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Kretzschmar et al. 2007, Lang 2004, Pignatti 1982, Rossi 2002, Vakhrameeva et al. 2008).	Least Concern	2011 Europe		LC 2011 Europe; RE 2005 LU; LC 2009 FR; EX 2012 NL; EN 2007 LT; EN 2014 UK; NT 2007 HU	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bubs. Switzerland: Springer.	Rutherford & Groves 2017	
Salep	Neottia nidus-avis	Neottia nidus-avis (L.) Rich.	Y	Bird's-nest Orchid (English); Nid d'oiseau (French); Nido d'Uccello (Italian)	AL, DZ, RU, AT, BY, BE, BG, CZ, SK, DK, FI, FR, DE, GB, GR, HU, IR, IE, IT, UA, MA, NL, NO, PL, PT, RO, ES, SE, CH, AZ, AM, GE, TN, TR, RS, HR, SI, ME, MK	The Bird's Nest Orchid is a terrestrial leafless species that lacks green chlorophyll and has a relationship with a fungus which enables it to obtain nutrition (Gardes 2002). Neottia lives in symbiosis with the fungus Rhizoctonia. The fungus/orchid combination is effectively a perennial saprophyte feeding on decomposing leaf litter, or possibly the mycorrhiza may be shared with nearby tree species. The plants do not appear every year. It grows in woodlands, often on basic soil, under shade in deep leaf litter in beech, hazel and pine forests. The species prefers chalk and limestone soils and also grows in clays and sands that have a chalky or limestone component. It grows in shade, even tolerates heavy shade and flowers from May to July (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Lang 2004, Pignatti 1982, Rossi 2002, Vakhrameeva et al. 2008).	Least Concern	2014 Global		Not Evaluated	Not Evaluated		IUCN Red List 2021	

Salep	<i>Ophrys apifera</i>	<i>Ophrys apifera</i> Huds. <i>Ophrys argolica</i> subsp. <i>dimacis</i> (Heimeier & Perschke) H.A.Pedersen & P.J.Cribb	Y	Bee Bearing Ophrys (English)	AL, DZ, AT, BE, BG, CY, CZ, SK, DK, FR, DE, GB, GR, HU, IR, IQ, IE, IT, UA, LB, SY, LY, MA, NL, RU, PS, PT, RO, ES, CH, AZ, AM, GE, TN, TR, RS, HR, SI, ME, BA, MK	The tubers are rounded. (POWO) Typical habitats of <i>Ophrys apifera</i> include edges of woods, open deciduous and pine forests, verges, garrigue, grassland, reed swamps and stabilised coastal dunes. The species is commonly found as a pioneer plant in abandoned quarries, railway embankments and roadside verges. <i>Ophrys apifera</i> grows in dry to wet calcareous and on alkaline dry to swampy soils in full sunlight to light shade. The flowering time of the species is relatively late, from April to July and the peak time is from April-June (Pederson and Faurholdt 2007, Delforge 1995).	Least Concern	2011	Europe	Not Evaluated	Not Evaluated	Turkmen et al 2021
Salep	<i>Ophrys argolica</i> subsp. <i>dimacis</i>		Y	Unknown	TU	Tuber geophyte. Typical habitats where <i>Ophrys bertolonii</i> can be found are roadside verges, garrigue, grassland, olive groves and open places in forest and maquis.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. World Checklist of Plants
Salep	<i>Ophrys bertolonii</i>	<i>Ophrys bertolonii</i> Moretti	Y	Bertoloni's Bee Orchid (English), Ofride di Bertoloni (Italian)	GR, IT, RS, HR, SI, ME, BA, MK	<i>Ophrys bertolonii</i> grows in dry to moist, calcareous soil in full sunlight. The flowering time of the species is from March-April to June with a peak time in mid-April to mid-May (Pederson and Faurholdt 2007, Delforge 1995).	Least Concern	2011	Global & Europe	LC 2011 Global; VU 2007 HR; EN 1989 MT; NT 2012 FR	Not Threatened	IUCN Red List 2021
Salep	<i>Ophrys bombyliflora</i>	<i>Ophrys bombyliflora</i> Link	Y	Bumblebee Orchid, Silky Flowered Ophrys (English), Ophrys Bombyx (French), Orquída Abejorro (Spanish; Castilian), Bremsen-Ragwurz (German)	AL, DZ, FR, GR, IT, LY, MA, PT, ES, TN, TR, RS, HR, SI, ME, BA, MK	<i>Ophrys bombyliflora</i> can be found in garrigue, roadside slopes, grassland, open forest and woodland, pesticide-free olive groves and moist meadows. It grows in alkaline dry to very wet, calcareous soil in full sunlight to light shade. The flowering time of the species takes place from February to May with a peak time in March-April (Pederson and Faurholdt 2007, Delforge 1995).	Least Concern	2011	Europe	LC 2017 Mediterranean; LC 2010 Europe; VU 2007 HR; VU 2009 FR; NT 2012 FR	Not Threatened	Kasperek & Grimm 1999
Salep	<i>Ophrys bommuelleri</i>	<i>Ophrys bommuelleri</i> M.Schulze	Y	Unknown	CY, GR, IQ, LB, SY, PS, TR	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	World Checklist of Plants Rutherford & Groves 2017
Salep	<i>Ophrys cilicica</i>	<i>Ophrys cilicica</i> Schltr.	Y	Unknown	IR, IQ, LB, SY, TR	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	World Checklist of Plants Rutherford & Groves 2017
Salep	<i>Ophrys ferrum-equinum</i>	<i>Ophrys ferrum-equinum</i> Desf.	Y	Horseshoe Ophrys, Horseshoe Bee-Orchid (English), Dark Bee Orchid, Brownish Ophrys	AL, GR, TR, AL, DZ, LY, FH, GR, IT, LB, SY, LY	Typical habitats of <i>Ophrys ferrum-equinum</i> include roadside slopes, garrigue, stony grassland, open pine woods and pesticide-free olive groves. It grows in alkaline dry to moist, calcareous soil in full sunlight to light shade. The flowering time is from March to May with a peak time from mid-March to mid-April (Pederson and Faurholdt 2007, Delforge 1995).	Least Concern	2011	Europe	LC 2010 Europe	Not Threatened	Kasperek & Grimm 1999
Salep	<i>Ophrys fusca</i>	<i>Ophrys fusca</i> Link	Y	Unknown	GR, TR	<i>Ophrys fusca</i> can typically be found in garrigue, maquis, grassland, light-open pine and oak woods, pesticide-free olive groves and roadside verges. It prefers This subspecies is distributed in areas of the eastern Mediterranean and is particularly frequent on some of the Aegean islands (so far reported from Chios, Fourni, Kalimos, Lesbos, Naxos, Patmos, Rhodes and Samos). Plant compact, 7-20 cm tall with 1-4(-7) alternate flowers in a relatively dense spike on the uppermost one third (or more) of the stem. Sepals pale green to olive-green, 8-13 x 4-7 mm. Petals (olive-)green, often suffused with brown, 5-10 x 2-3 mm. Lip (pale) green underneath, straight, in cross section nearly flat, 8-17 x 7.5-15 mm, with a usually broad yellow (to yellowish brown) margin; side lobes spreading; mirror somewhat obscure, dull and dark reddish brown to bluish grey. (POWO)	Least Concern	2011	Europe	LC 2010 Europe; VU 2007 HR; LC 2009 FR	Not Threatened	Kasperek & Grimm 1999; Lim, T.K. (2016) Edible Medicinal and Non-
Salep	<i>Ophrys fusca</i> subsp. <i>bilthopertha</i> (Paulus & Gack) Faurh. & H.A.Pedersen	<i>Ophrys fusca</i> subsp. <i>bilthopertha</i> (Paulus & Gack) Faurh. & H.A.Pedersen	Y	Unknown	GR, TR		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Molnar et al 2017
Salep	<i>Ophrys fusca</i> subsp. <i>fusca</i>	<i>Ophrys fusca</i> subsp. <i>fusca</i>	Y	Sawfly Orchid (English)	AL, CY, DZ, ES, FR, GR, IT, LB, LY, MA, PS, PT, RO, RS, TN, TU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. World Checklist of Plants
Salep	<i>Ophrys holosericea</i>	<i>Ophrys holosericea</i> (Burm.f.) Greuter	Y	Late Spider Orchid (English)	AL, AT, BE, CZ, SK, FR, DE, GB, GR, HU, IT, LB, SY, LY, NL, PS, RO, CH, TR, RS, HR, SI, ME, BA, MK	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Threatened 2016 CH	Threatened	Kasperek & Grimm 1999; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. World Checklist of Plants
Salep	<i>Ophrys holosericea</i> subsp. <i>candica</i>	<i>Ophrys holosericea</i> subsp. <i>candica</i> (E.Nelson ex Soó) Renz & Taubenheim	Y	Unknown	GR, IT, TR	The distribution is fragmented and encompasses several areas in the central and eastern Mediterranean. Confirmed finds are known from Sicily, Puglia, Basilicata, the southern Peloponnese, Kithira, Crete, Rhodes and southwestern Anatolia. Reports from Samos should be checked, and a more widespread occurrence in Greece does not seem unlikely. Plant 15-45 cm tall with 2-7 flowers. Foliage leaves still fresh at the peak of flowering. Sepals rose-coloured to white (less frequently violet), 11-15 x 4-8 mm, 3-5(-6) times as long as the petals. Petals 2-4.5 x 1.5-3 mm. Lip with reddish brown to dark brown ground colour, nearly straight, circularquadrate with somewhat recurved sides (less frequently flat), 9-14 x 12-16 mm; appendage upcurved, less than half as long as the column; mirror covering half to two thirds of the lip, pronouncedly marbled, delimited by a broad, (very nearly) unbranched, cream band. (POWO)	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Löki et al 2015; Molnar et al 2017
Salep	<i>Ophrys kotschyi</i>	<i>Ophrys kotschyi</i> H.Fleischm. & Soó	Y	Kotschy's Ophrys (English), Yellow Be Orchid, Egg Yellow Ophrys (English), Ophrys Jaune (French), Abejas (Spanish; Castilian), Gelbe Ragwurz (German), Ofride Gialla (Italian), Erva Vespa (Portuguese)	CY, TR	Typical habitats of <i>Ophrys kotschyi</i> include grassland, garrigue and old, pesticide-free olive groves, open pine woods, roadside slopes. This species grows in calcareous, dry to moist soils in full sun to light shade. The flowering time is from mid-February to early May with a peak from mid-March to mid-April (Pederson and Faurholdt 2007, Delforge 1995). This species can occur also at wet places with moderate saline influence under planted acacia or pine. It has been reported from the following Habitats Directive listed habitats (Commission of the European Communities 2009):  5330 Thermo-Mediterranean and pre-desert scrub 5420 Sarcopoterium spinosum phryganas 6220 Pseudo-steppe with grasses and annuals of the Thero-Brachypodietea 9320 Olea and Ceratonia forests 9540 Mediterranean pine forests with endemic Mesogean pines	Near Threatened	2011	Global, Europe & Mediterranean	NT 2013 Global	Not Threatened	IUCN Red List 2021
Salep	<i>Ophrys lutea</i>	<i>Ophrys lutea</i> Cav.	Y	Unknown	AL, DZ, CY, FR, GR, IT, LB, SY, LY, MA, PS, PT, SP, TN, TR, RS, HR, SI, ME, BA, MK	Typical habitats of <i>Ophrys lutea</i> include garrigue, maquis, grassland, roadside slopes, light-open pine and oak woods, as well as pesticide-free olive-groves. It grows in dry to moist, preferably calcareous soil in full sunlight to light shade. The flowering time of the species takes place from January to May, with a peak in March-April. In some years, flowering individuals may be found by the coast as early as December (Pederson and Faurholdt 2007, Delforge 1995).	Least Concern	2011	Europe	LC 2010 Europe; EN 2007 HR; LC 2009 FR; Very Rare 1989 MT	Not Threatened	Kasperek & Grimm 1999
Salep	<i>Ophrys lutea</i> subsp. <i>galliaea</i> (H.Fleisham. & Bornm.) Soó	<i>Ophrys lutea</i> subsp. <i>galliaea</i> (H.Fleisham. & Bornm.) Soó	Y	Unknown	AL, DZ, CY, FR, GR, IT, LB, SY, MA, PS, PT, ES, TN, TR, RS, HR, SI, ME, BA, MK, IL	Typical habitats include garrigue, maquis, grassland, roadside slopes, open pine and oak woods, as well as pesticide-free olive-groves. It grows in dry to moist, preferably calcareous soil in full sunlight to light shade. The flowering time of the species takes place from January to May, with a peak in March-April.	Least Concern	2017	Mediterranean	LC 2016 Mediterranean	Not Threatened	Molnar et al 2017
Salep	<i>Ophrys reinholdii</i>	<i>Ophrys reinholdii</i> Spruner ex Fleischm.	Y	Reinhold's Bee-orchid (English)	AL, BG, CY, GR, IR, IQ, LB, SY, TR, RS, HR, SI, ME, BA, MK	Typical habitats include garrigue, scrubland, old olive groves, graveyards, roadside slopes, and open to rather dense pine and oak woods. <i>Ophrys reinholdii</i> grows in dry to moist, calcareous to slightly acid soil in full sunlight to partial shade. The flowering takes place from March to May with a peak in April in the Aegean Islands (Pederson and Faurholdt 2007, Delforge 1995, Bergman et al. 2004). In Bulgaria, the flowering time is from the first ten days of April to the second ten days of May (Bergman et al. 2004).	Least Concern	2011	Europe	LC 2010 Europe; EN 2011 BG; EN 1997 Global	Threatened	Sandal Erzurumlu et al 2018
Salep	<i>Ophrys schulzei</i>	<i>Ophrys schulzei</i> Bornm. & Fleischm.	Y	Unknown	IR, IQ, LB, SY, TR	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	World Checklist of Plants Rutherford & Groves 2017



Salep	<i>Ophrys scolopax</i>	<i>Ophrys scolopax</i> Cav. <i>Ophrys scolopax</i> subsp. <i>isaura</i> (Renz & Taubenheim)	Y	Deep Forest Ophrys, Woodcock Orchid (English), Ophrys bécasse (French), Abejera (Spanish; Castilian) Gehornte Ragwurz (German), Flor-dos-passarinhos (Portuguese); Woodcock Bee Orchid (English)	AL, DZ, BG, FR, GR, HU, IR, IT, UA, LB, SY, MA, RU, PT, RO, ES, AZ, AM, GE, TN, TR, RS, HR, SI, ME, BA, MK	Ophrys scolopax is typically found in garrigue, open pine and oak woods, grassland, roadside slopes, and olive groves free of pesticide, fertiliser and mechanical treatment of the soil. It grows in dry to moist soil in full sunlight to light shade. The flowering time is from March to June with a peak time in April in most places (Pederson and Faurholt 2007, Delforge 1995).	Least Concern	2011 Europe	LC 2010 Europe; EN 2007 HR; LC 2009 FR	Not Threatened	Kasperek & Grimm 1999; Ghorbani et al. 2014; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Sandal Erzurumlu et al 2018; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.		
Salep	<i>Ophrys scolopax</i> subsp. <i>isaura</i>	H.A.Pederson & P.J.Cribb	Y	Unknown	TR	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		
Salep	<i>Ophrys scolopax</i> subsp. <i>cornuta</i>	<i>Ophrys scolopax</i> subsp. <i>cornuta</i> (S teven) E.G.Camus	Y	Unknown	AL, DZ, FR, GR, IT, LB, SY, CY, MA, PT, ES, TN, TR, RS, HR, SI, ME, AL, AT, BE, BG, CY, CZ, SK, FR, DE, GB, GR, HU, IR, IQ, UA, LB, SY, RU, PS, PT, RO, ES, CH, TR, TMAZ, AM, GE, RS, HR, SI, ME.	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Ari et al. 2005; Molnar et al 2021	World Checklist of Plants
Salep	<i>Ophrys speculum</i> subsp. <i>speculum</i>	<i>Ophrys speculum</i> subsp. <i>speculum</i>	Y	Unknown	AL, DZ, FR, GR, IT, LB, SY, CY, MA, PT, ES, TN, TR, RS, HR, SI, ME, AL, AT, BE, BG, CY, CZ, SK, FR, DE, GB, GR, HU, IR, IQ, UA, LB, SY, RU, PS, PT, RO, ES, CH, TR, TMAZ, AM, GE, RS, HR, SI, ME.	Tuber geophyte.	Least Concern	2011 Europe & Mediterranean	Not Evaluated	Not Evaluated	Not Evaluated	Löki et al 2015; Molnar et al 2017	World Checklist of Plants
Salep	<i>Ophrys sphegodes</i>	<i>Ophrys sphegodes</i> Mill.	Y	Early Spider Orchid, Wasp-Like Ophrys (English)	AL, BG, CY, GR, IR, IQ, UA, LB, SY, RU, PS, RO, GE, AZ, AM, TR, RS, HR, SI, ME, BA, MK	Ophrys sphegodes can be found in garrigue, roadside slopes, grassland, open woods, as well as pesticide-free olive-groves. It grows in dry to moist, preferably calcareous as well as slightly acid soil in full sunlight to light shade. The flowering time is from February to June-July, with a peak in March-April (Pederson and Faurholt 2007, Delforge 1995). Plant relatively robust, 15-40 cm tall with 3-12 flowers in a relatively dense (to lax) spike. Sepals pale green to yellowish green, often with purplish brown markings, 9-14 × 3.5-5.5 mm. Petals yellowish green to olive-green (occasionally suffused with rust-red), 5-8.5 × 2-3.5 mm, approximately half as wide as the sepals. Lip with (dark) brown ground colour, provided with a broad, yellow to reddish brown margin, entire (rarely slightly three-lobed) with rounded to truncate base, 9-12 × 10-14 mm, approximately as long as the dorsal sepal, the basal part shortly velvety to subglabrous along the margin, the distal part (sub)glabrous along the margin; front edge rounded to shortly acuminate with a short terminal point, bulges weakly developed, mirror H-shaped. Stigmatic cavity speckled green/brown. Eye-like knobs of the column pale (yellowish) green. (POWO)	Least Concern	2011 Europe	EN 2003 Carpathian Mountains; CR 2014 SK; LC 2010 Europe; CR 2005 LU; VU 2007 HR; NT 1999 Global; EN 2016 CH; 2 <sup>nd</sup> 1999 AT; LC 2009 FR; CR 1999 DE; LC 2014 UK	Not Threatened	Ghorbani et al. 2014; Turkmen et al 2021; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.		
Salep	<i>Ophrys sphegodes</i> subsp. <i>aesculapii</i>	<i>Ophrys sphegodes</i> subsp. <i>aesculapii</i> (Renz) Soó ex J.J.Wood	Y	Unknown	GR		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Rutherford & Groves 2017	
Salep	<i>Ophrys sphegodes</i> subsp. <i>lycia</i>	<i>Ophrys sphegodes</i> subsp. <i>lycia</i> (Renz & Taubenheim)	Y	Bee Orchid (English)	TR	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Ghorbani et al. 2014; Caliskan et al. 2019; Kasperek & Grimm 1999; Tekinsen & Güner 2010; Molnar et al 2017; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Salep	<i>Ophrys sphegodes</i> subsp. <i>taurica</i>	<i>Ophrys sphegodes</i> subsp. <i>taurica</i> (Aggeenko) Soó ex Niketic & Djordjevic	Y	Early Spider Orchid (English)	AL, BG, CY, GR, IR, IQ, UA, LB, SY, RU, PS, RO, GE, AZ, AM, TR, RS, HR, SI, ME, BA, MK	Tuber geophyte.	Least Concern (Listed as <i>Ophrys sphegodes</i> subsp. <i>mammosa</i> )	2011 Europe	LC 2011 Europe; CR 2014 JO; VU 2007 HR	Threatened			
Salep	<i>Ophrys tenthredinifera</i> Willd.	<i>Ophrys tenthredinifera</i> Willd.	Y	Sawfly Orchid, Leaf-Wasp Carrying Ophrys (English), Ophrys Guêpe (French), Wespen-Ragwurz (German)	AL, DZ, CY, FR, GR, IT, LY, MA, PT, ES, TN, TR. (Introduced GB)	Ophrys tenthredinifera can be found in garrigue, grassland, open pine woods, as well as old olive-groves, and on roadside verges. It grows in dry to cool, calcareous to slightly acid soils in full sunlight to light shade. The flowering time of the species takes place from February to May, with a distinct peak from mid-March to mid-April (Pederson and Faurholt 2007, Delforge 1995). Typical habitats for <i>Ophrys umbilicata</i> include grassland, garrigue, roadside slopes, light-open pine woods and cypress groves as well as pesticide-free olive groves. <i>Ophrys umbilicata</i> grows in dry to somewhat moist, often calcareous soils and rarely on sandstone in full sunlight to light shade. The flowering time of the species takes place from February to April with a peak time in late March and early April. (Pederson and Faurholt 2007, Delforge 1995).	Least Concern	2011 Europe	LC 2010 Europe; DD 2006 CY; EN 1989 MT; VU 2012 FR	Not Threatened	Molnar et al 2017		
Salep	<i>Ophrys umbilicata</i>	<i>Ophrys umbilicata</i> Desf.	Y	Navel-Like ophrys (English)	AL, CY, GR, IR, IQ, LB, SY, TR, CZ, SK, FR, GR, DE, HU, IT, TR, RS, HR, SI, ME, BA, MK	Tuber geophyte.	Least Concern	2011 Europe	LC 2010 Europe	Not Threatened	Molnar et al 2017		
Salep	<i>Ophrys x vicina</i> nothosubsp. <i>vicina</i>	<i>Ophrys x vicina</i> nothosubsp. <i>vicina</i>	Y	Unknown	HR, SI, ME, BA, MK	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Molnar et al 2017	World Checklist of Plants
Salep	<i>Orchis adenocheila</i>	<i>Orchis adenocheila</i> Czerniak.	Y	Unknown	IR, AZ, AM, GE, RU	Tuber geophyte. <small>THE HISTORY OF THE SPECIES IS FROM THE BEGINNING OF THE MONTH OF MARCH, WHICH IS ALLOMAMOUS, AS THE LOW PERCENTAGE OF FLOWERS SETTING SEED INDICATES, AS DOES ITS HYBRIDISATION WITH <i>Orchis mascula</i>, <i>Orchis pauciflora</i>, <i>Orchis provincialis</i>, <i>Orchis spitzelii</i> ssp. <i>nitidifolia</i> and <i>Orchis quadripunctata</i>. The latter species builds hybrid swarms that are very often difficult to identify. Nothing is known for certain about the pollinators; presumably it involves various hymenoptera, although the spur does not produce nectar POWO</small> <small><i>Orchis antiochica</i> typically occurs in garrigue, pinewoods and open woodland. The species can also be found in areas of scrubland, wasteland and on seasonally wet soil which must be alkaline. It prefers stony dry to moist, calcareous to neutral substrates and substrates of dolomite. This species <i>Orchis anthropophora</i> hibernates as a quite large, spherical, to ovoid tuber, from which leaves have already sprouted in October, ready for the coming year; they remain green during the winter. The pollinators are small beetles, which also use the allogamous blossoms as over-night sleeping sites. Flowering time begins, according to weather, to the south of the distribution area by the April to June and sometimes to July at higher altitudes (Bourmerias and Prat 2005; Delforge 1995; Harapp and Harapp 2009; Kretzschmar et al. 2007; Lana 2005). <i>Orchis pallens</i> is a geophyte that has two ovoid to ellipsoidal tubers at flowering time, each belongs to a different vegetation cycle; the old tuber, from which the present plant has developed and a new tuber to support the shoots and new plant of the coming year. Flowering time is from the middle of April to the end of May. In the evening and at night the flowers a said to smell very unpleasant. Flowering time lasts from the end of March to the end of April. The fact that this plant is allogamous is proven by the appearance of hybrids with <i>Orchis antiochica</i>, <i>Orchis mascula</i>, <i>Orchis oliensis</i>, <i>Orchis provincialis</i>, <i>Orchis quadripunctata</i> and <i>Orchis siliacea</i>. Hybrids and probably hybrid swarms can occur with <i>Orchis mascula</i> and <i>Orchis provincialis</i>. Pollinators are unknown to</small>	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		
Salep	<i>Orchis antiochica</i>	<i>Orchis antiochica</i> Boiss.	Y	Anatolian orchis (English), سحلب (Arabic); Anatolian Orchid (English)	CY, GR, IR, IQ, LB, SY, PS, TR, TR, MT, LU, AL, DZ, AT, BE, CY, GR, FR, DE, GB, IT, LB, SY, MA, NL, PT, ES, CH, TN, AI, AL, DZ, CY, GR, TR, IT, LB, SY, LY, MA, PS, PT, ES, TN, RS, HR, SI, ME, BA, MK		Least Concern	2011 Europe	LC 2011 Europe; EN 2014 JO	Not Threatened	Kasperek & Grimm 1999; Tekinsen & Güner 2010; Sandal Erzurumlu et al 2018; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Kasperek & Grimm 1999; Kreziou 2016; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.		
Salep	<i>Orchis anthropophora</i>	<i>Orchis anthropophora</i> (L.) All.	Y	Man orchid (English), Italian orchid, Naked Man orchid (English), Flor dos Macaquinhos Dependurados (Portuguese)	AL, DZ, AT, EE, LV, LT, BY, BE, BG, RU, FR, CZ, SK, DK, GR, TR, FI, DE, GB, GR, HU, IR, IQ, DZ, AT, BY, BE, RU, CZ, SK, DK, FI, FR, DE, GB, GR, IR, IQ, IE, IT, UA, LB, SY, MA, NL, AF, AL, RU, AT, BY, BE, BG, CZ, SK, FR, GR, DE, GB, HU, IR, IT, KZ, UA, MN, PL, RO, AL, AT, BG, FR, CZ, SK, DE, GR, HU, IT, UA, RU, PL, RO, ES, CH, TR, RS, HR, SI, ME.		Least Concern	2011 Europe	LC 2011 Europe; EN 2005 LU; PES 2006 CY; LC 2009 FR; EN 2014 UK; 3S 2011 DE; CR 2012 NL	Threatened	IUCN Red List 2022, POWO 2022		
Salep	<i>Orchis italica</i>	<i>Orchis italica</i> Poir. in J.B.A.M.de Lamarck	Y	Early-Purple Orchid (English); Salep (English); Salam misri (Sanskrit, however Salab misri (Sanskrit)	AL, DZ, AT, EE, LV, LT, BY, BE, BG, RU, FR, CZ, SK, DK, GR, TR, FI, DE, GB, GR, HU, IR, IQ, DZ, AT, BY, BE, RU, CZ, SK, DK, FI, FR, DE, GB, GR, IR, IQ, IE, IT, UA, LB, SY, MA, NL, AF, AL, RU, AT, BY, BE, BG, CZ, SK, FR, GR, DE, GB, HU, IR, IT, KZ, UA, MN, PL, RO, AL, AT, BG, FR, CZ, SK, DE, GR, HU, IT, UA, RU, PL, RO, ES, CH, TR, RS, HR, SI, ME.		Least Concern	2011 Europe	LC 2011 Europe; EN 2007 HR; EN 1989 MT; VU 2006 ES; LC 2011 Europe; VU 2005 LU; VU 2008 AD; NT 2007 HR; LC 2009 FR; NT 2007 HU; NT 2010 FI; LC 2016 CH; -r 1999 AT; NT 2008 EE; V 2007 LT; V 199 DE; LC 2014 UK; VU 2012 NL; LC 2016 IE	Threatened	World Checklist of Plants		
Salep	<i>Orchis mascula</i>	<i>Orchis mascula</i> (L.) L.	Y	Salab misri (Sanskrit)	AL, DZ, AT, EE, LV, LT, BY, BE, BG, RU, FR, CZ, SK, DK, FI, FR, DE, GB, GR, IR, IQ, IE, IT, UA, LB, SY, MA, NL, AF, AL, RU, AT, BY, BE, BG, CZ, SK, FR, GR, DE, GB, HU, IR, IT, KZ, UA, MN, PL, RO, AL, AT, BG, FR, CZ, SK, DE, GR, HU, IT, UA, RU, PL, RO, ES, CH, TR, RS, HR, SI, ME.		Least Concern	2011 Europe	LC 2011 Europe; EN 2007 HR; EN 1989 MT; VU 2006 ES; LC 2011 Europe; VU 2005 LU; VU 2008 AD; NT 2007 HR; LC 2009 FR; NT 2007 HU; NT 2010 FI; LC 2016 CH; -r 1999 AT; NT 2008 EE; V 2007 LT; V 199 DE; LC 2014 UK; VU 2012 NL; LC 2016 IE	Not Threatened	IUCN Regional Red List; World Checklist of Plants		
Salep	<i>Orchis mascula</i> subsp. <i>mascula</i>	<i>Orchis mascula</i> subsp. <i>mascula</i>	Y	Early Purple Orchid (English)	IR, IQ, IE, IT, UA, LB, SY, MA, NL, AF, AL, RU, AT, BY, BE, BG, CZ, SK, FR, GR, DE, GB, HU, IR, IT, KZ, UA, MN, PL, RO, AL, AT, BG, FR, CZ, SK, DE, GR, HU, IT, UA, RU, PL, RO, ES, CH, TR, RS, HR, SI, ME.	Tuber geophyte. <small><i>Orchis militaris</i> inhabits short, poor grassland, unimproved meadows, scrub, woodland glades, woodland edges, rough field and open woodland. It prefers dry to moist, alkaline soils. This species favours full sunlight and flowers from April to June and sometimes to July at higher altitudes (Bourmerias and Prat 2005; Delforge 1995; Harapp and Harapp 2009; Kretzschmar et al. 2007; Lana 2005). <i>Orchis pallens</i> is a geophyte that has two ovoid to ellipsoidal tubers at flowering time, each belongs to a different vegetation cycle; the old tuber, from which the present plant has developed and a new tuber to support the shoots and new plant of the coming year. Flowering time is from the middle of April to the end of May. In the evening and at night the flowers a said to smell very unpleasant. Flowering time lasts from the end of March to the end of April. The fact that this plant is allogamous is proven by the appearance of hybrids with <i>Orchis antiochica</i>, <i>Orchis mascula</i>, <i>Orchis oliensis</i>, <i>Orchis provincialis</i>, <i>Orchis quadripunctata</i> and <i>Orchis siliacea</i>. Hybrids and probably hybrid swarms can occur with <i>Orchis mascula</i> and <i>Orchis provincialis</i>. Pollinators are unknown to</small>	Not Evaluated	Not Evaluated	Not Evaluated	CR 2012 CZ; LC 2011 DE	Threatened	World Checklist of Plants	
Salep	<i>Orchis militaris</i>	<i>Orchis militaris</i> L.	Y	Military orchid (English)	UA, MN, PL, RO, AL, AT, BG, FR, CZ, SK, DE, GR, HU, IT, UA, RU, PL, RO, ES, CH, TR, RS, HR, SI, ME.		Least Concern	2011 Europe	NT 2008 EE; VU 2007 LT; VU 2014 UK; TH	Threatened	Kasperek & Grimm 1999; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Kreziou et al. 2016; Ghorbani et al. 2017; Masters et al 2020; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.		
Salep	<i>Orchis pallens</i>	<i>Orchis pallens</i> L.	Y	Pale Orchid (English)	RS, HR, SI, ME.		Least Concern	2011 Europe	NT 2014 SK; LC 2011 Europe; EN 2003 Carpathian Mountains; VU 2007 HR; LC 2009 FR; NT 2007 HU; C2 2012 CZ; DD 2010 AM; VU 2016 CH; 3r 1999 AT; EN 1999 DE	Threatened	Kasperek & Grimm 1999	IUCN, POWO	
Salep	<i>Orchis pauciflora</i>	<i>Orchis pauciflora</i> Ten.	Y	Few-flowered Orchid (English)	AL, FR, GR, IT, RS, HR, SI, ME, BA, MK		Least Concern	2011 Global & Europe	VU 2012 FR	Threatened	IUCN Red List 2021		

Salep	Orchis provincialis	Orchis provincialis Balb. ex Lam. & DC.	Y	Provence Orchid (English); Orchis de Provence (unk.)	AL, BG, FR, GR, IT, UA, RU, PT, SP, CH, TR, AZ, AM, GE, RS, HR, SI, ME, BA, MK	The flowering period lasts according to altitude and season, within a region, from the end of March to the beginning of June. Although the spur produces no nectar, the species is visited and pollinated by various hymenoptera. It is allogamous, this is confirmed by a relatively low percentage of flowers setting seed and the existence of hybrids with <i>Orchis mascula</i> , including <i>Orchis punctulata</i> grows in short grassland, garrigue, maquis, scrub, Mediterranean dwarf shrubs, open woodland, forest margins and abandoned cultivated areas. It prefers dry to moist alkaline substrates and is found on limestone soils. This species grows in full sun light to mid-shade and flowers from mid-February to June (Delforge 1995, Kretzschmar et al. 2007, Philos et al. 2007). <i>Orchis purpurea</i> inhabits short grassland, garrigue, slopes, scrub or coppice, clearings and woodland edges and open woodland of beech, ash or hazel, or occurs along paths. It prefers dry to moist, alkaline to neutral soils, and is very rarely found in calcareous and limestone substrates. This species grows in full sunlight to shade and flowers from May to June (Bournérias and Prat 2005, <i>Orchis simia</i> inhabits short, poor grasslands, garrigue, maquis, scrubland, woodland edges and open woodland. It prefers dry to slightly moister conditions, neutral to calcareous soils. This species grows in full sunlight to mid-shade and flowers from March to June (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Kretzschmar et al. 2007, Lang 1995, The flowering period lasts from the beginning of April until the beginning of May, hence, about 2 to 3 weeks later than that of <i>Orchis anatolica</i> . The species is allogamous, as is confirmed by the existence of hybrids with <i>Orchis pauciflora</i> , <i>Orchis provincialis</i> and <i>Orchis quadripunctata</i> . However, to date, nothing is known regarding the species of pollinators or other biological data <i>Orchis spitzzei</i> is typically found in short mountain grassland, mountain meadows, scrubs, pine woods and open woodland. It prefers dry to moist, alkaline, often calcareous soils, substrates well covered by snow. This species grows mostly in mid-shade and the flowering time is from mid-May to end of June (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Kretzschmar et	Least Concern	2011	Europe	LC 2011 Europe; VU 2007 HR; LC 2009 FR; LC 2013 IT; LRcd 2013 AL; CR 2011 BG; CR 2016 CH	Not Threatened	Kasperek & Grimm 1999; Kreziou et al. 2016; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	
Salep	Orchis punctulata	Orchis punctulata Steven ex Lindl.	Y	Small Dotted Orchis, Punctate Orchid (English)	CY, GR, TR, IR, IQ, UA, LB, SY, RU, PS, AZ, AM, GE, AL, DZ, AT, BE, BG, FR, SK, CZ, DK, DE, GB, GR, HU, IT, UA, NL, RU, PL, RO, ES, CH, MK, BA, ME, SI, HR, HU, GR, GB, DE, FR, CY, BG, BE, DZ, AL, RO, PS, RU, NL, LY,		Vulnerable	2011	Europe	VU 2011 Europe	Threatened	Rutherford & Groves 2017	
Salep	Orchis purpurea	Orchis purpurea Huds.	Y	Lady Orchid, The Purple Orchis			Least Concern	2011	Europe	NT 2014 SK; LC 2011 Europe; VU 2005 LU; VU 2007 HR; LC 2009 FR; CR 2011 DE; EN 2012 NL; EN 2012 CZ; VU 2016 CH; 3r! 1999 AT; NT 2007 HU; VU 2010 ES; VU 2014 UK	Threatened	Kasperek & Grimm 1999; Caliskan et al 2020; Sandal Erzurumlu et al 2018 Kasperek & Grimm 1999; Tekinşen & Güner 2010; Ghorbani et al 2014; Ghorbani et al 2017; Kreziou et al 2016; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants:	
Salep	Orchis simia	Orchis simia Lam.	Y	Monkey Orchid (English)			Least Concern	2011	Europe	LC 2011 Global; RE 2005 LU; VU 2007 HR; LC 2009 FR; VU 1999 Global; VU 2016 CH; 2 1999 AT; NT 2007 HU; EN 1999 DE; VU 2014 UK; CR 2012 NL	Threatened		
Salep	Orchis sitiaca	Orchis sitiaca (Renz) P.Delforge	Y	Creatan Orchid (English)	GR (Endemic to Crete)		Endangered	2011	Global, Europe & Mediterranean	EN 2011 Global	Threatened	IUCN Red List 2022, POWO 2022	Rutherford & Groves 2017
Salep	Orchis spitzzei	Orchis spitzzei Saut. ex W.D.J.Koch	Y	Spitzzei's orchis, Spitzzei's Orchid (English); L'orchis de Spitzzei (unk.)	AZ, GE, SE, AL, DZ, AT, BG, FR, GR, IR, IQ, IT, LB, SY, MA, RU, ES, TR, AM, RS, HR,		Near Threatened	2011	Europe	NT 2011 Europe; EN 2014 SK; CR 2003 Carpathian Mountains; EN 2007 HR; LC 2009 FR; CR 2008 ES; CR 2011 BG; CR 2016 CH; 2r! 1999 AT; EX 1999 DE; VU 2010 SE	Threatened	Kasperek & Grimm 1999; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	
Edible	Orthoceras novae-zeelandiae	Orthoceras novae-zeelandiae (A.Rich.) M.A.Clem., D.L.Jones & Molloy	Y	horned orchid, Māikaika (Maori??)	NZ	An orchid reaching up to 70 cm when flowering, with narrow leaves which sheath the stem. Flowers are 1 cm or more in length and deep purple, with two long horns (sepals) and a drooping lip with a yellow stripe. Flowers in the summer.; Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Crowe A. A field guide to the native edible plants of New Zealand, pp. 81.	World Checklist of Plants
Edible	Peristylus constrictus	Peristylus constrictus (Lindl.) Lindl.	Y	Constricted Peristylus (English) Lesser butterfly orchis, Two-leafed <i>Platanthera</i> (English); Lesser Butterfly Orchid (English)	BD, CN, IN, KH, MM, NP, PH, TH, VE, AL, DZ, RU, AT, ES, EE, LV, LT, BY, BE, BG, FR, CZ, SK, DK, FI, FR, DE, GB, HU, IR, IE, IT, AL, AT, EE, LV, LT, BY, DE, BG, RU, HU, GR, GB, DE, FR, FI, DU, SK, CZ, IR, IQ, IE, IT, NL,	Tuber geophyte. Tubers 2, more or less conical, attenuate at apex.(POWO) <i>Platanthera bifolia</i> is found in a wide ecological range including short grassland, moorland, heathland, margins of valley bogs, marshes and open woodland. It prefers dry to moist, often calcareous and open chalk, neutral or mildly acidic soils. This species grows in full sunlight to shade and flowers from May to July (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Kretzschmar et al. 2007, Lang 1995, The flowering period lasts from the beginning of April until the beginning of May, hence, about 2 to 3 weeks later than that of <i>Orchis anatolica</i> . The species is allogamous, as is confirmed by the existence of hybrids with <i>Orchis pauciflora</i> , <i>Orchis provincialis</i> and <i>Orchis quadripunctata</i> . However, to date, nothing is known regarding the species of pollinators or other biological data <i>Orchis spitzzei</i> is typically found in short mountain grassland, mountain meadows, scrubs, pine woods and open woodland. It prefers dry to moist, alkaline, often calcareous soils, substrates well covered by snow. This species grows mostly in mid-shade and the flowering time is from mid-May to end of June (Bournérias and Prat 2005, Delforge 1995, GIROS 2009, Kretzschmar et	Not Evaluated	2013	China	Near Threatened EN 2018 Global and Mediterranean; LC 2011 Europe; EN 2011 DE; LC 2013 CN; VU 2005 LU; LC 2009 FR; LC 2007 HU; CR 2011 MN; VU 2012 CZ; CR 2007 HR; LC 2016 CH; -r 1999 AT; LC 2008 EE; EN 2014 UK; EN 2012 NL; LC 2016 LC 2013 CN; NT 2014 SK; LC 2001 Europe; VU 2005 LU; LC 2009 FR; NT 2007 HU; VU 2012 CZ; VU 2007 HR; LC 2016 CH; -r 1999 AT; LC 2008 EE; I 2007 LT; Declining 1999 DE; LC 2014 UK; EX 2005 DE (Berlin); LC 2011 DE; LC 2016	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Ghorbani et al 2014; Masters et al 2020; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	
Salep	Platanthera bifolia	Platanthera bifolia (L.) Rich.	Y	Lesser Butterfly Orchid (English)			Least Concern	2011	Europe	LC 2008 EE; EN 2014 UK; EN 2012 NL; LC 2016 LC 2013 CN; NT 2014 SK; LC 2001 Europe; VU 2005 LU; LC 2009 FR; NT 2007 HU; VU 2012 CZ; VU 2007 HR; LC 2016 CH; -r 1999 AT; LC 2008 EE; I 2007 LT; Declining 1999 DE; LC 2014 UK; EX 2005 DE (Berlin); LC 2011 DE; LC 2016	Threatened	IUCN Red List 2022	
Salep	Platanthera chlorantha	Platanthera chlorantha (Custer) Rchb.	Y	Green Patanthera, Green butterfly orchid (English) Large purple fringed orchid, greater purple fringed orchid, large purple-fringe orchis, Plume-royal (English),	US, CA	Hemicycryptophyte or tuber geophyte. Slender terrestrial herb 12–45 cm tall, glabrous except roots; tubers 8–18 × 5–10 mm, ellipsoid to globose, densely tomentose. Leaves 5–16, the lowermost 3–9 forming a basal tuft, spreading; the rest spaced along the stem, becoming bract-like. Largest leaf 1.5–6 cm long, 2–8 mm wide, linear or linear-lanceolate. Inflorescence compact, up to c. 3 cm long, densely 1–6(9)-	Not Evaluated	Not Evaluated	Not Evaluated	LC 1984 Global	Not Threatened	Turkmen et al 2021	Threatsearch!
Salep	Platanthera grandiflora	Platanthera grandiflora (Bigelow) Lindl.	Y	Plume-royal (English),			Not Evaluated	Not Evaluated	Not Evaluated	LC 1984 Global	Not Threatened	Turkmen et al 2021	Threatsearch!
Chikanda	Platycoryne crocea	Platycoryne crocea Rolfe	Y	Kabula seke, Kapapa & Myala (Zambian)	AO, BI, CM, CF, CG, ET, KE, MW, SD, TZ, UG, ZM, CD, ZW		Not Evaluated	2011	Global	Least Concern	Not Threatened	Veldman et al (2018)	Plants of the World Online
Edible	Prasophyllum brevibrabre	Prasophyllum brevibrabre (Lindl.) Hook.f.	Y	Short-Lipped Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum campestre	Prasophyllum campestre R.J.Bates & D.L.Jones	Y	Starry Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Rare 1997 Global; CR 2009 AUS (Queensland)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum caudiculum	Prasophyllum caudiculum D.L.Jones	Y	Ben Lomond Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum dosseum	Prasophyllum dosseum R.J.Bates & D.L.Jones	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Rare 1997 Global	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum elatum	Prasophyllum elatum R.Br.	Y	Tall Leek Orchid, Piano Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum flavum	Prasophyllum flavum R.Br.	N	Yellow Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum odoratum	Prasophyllum odoratum R.S.Rogers	Y	Scented Leek Orchid, Sweet Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Vulnerable	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum patens	Prasophyllum patens R.Br.	Y	Broad-Lipped Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum rogersii	Prasophyllum rogersii Rupp	Y	Marsh Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prasophyllum solstitium	Prasophyllum solstitium D.L.Jones	Y	Summer Leek Orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Prosthechea cochleata	Prosthechea cochleata (L.) W.E.Higgins	Y	Black orchid (English, Belize), Cockleshell orchid (English)	HN, JM, MX, NI, PA, PR, SR, US, VE	Pseudobulb epiphyte or geophyte.: Sea level to 2,600 m. Epiphytic on trees in moist woodland and swamps. In tropical rainforest this species is often found between 2 and 20 m high on the vertical trunks of large trees, in a micro-habitat above other more shade-tolerant orchids. The smooth pseudobulbs of <i>Prosthechea cochleata</i> are oblong-discoid in shape. Each pseudobulb bears	Not Evaluated	Not Evaluated	Not Evaluated	EN 2013 FR; LC 2009 GT; LC 2016 DO; CR 2019 GP; LC 2013 PR	Not Threatened	colplanta.org; Plants of the World Online	
Edible	Pterostylis abrupta	Pterostylis abrupta D.L.Jones	Y	Abrupt Greenhood, Drooping Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	Pterostylis alata	Pterostylis alata (Labill.) Rchb.f.	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Data Deficient	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants

Edible	<i>Pterostylis bicolor</i>	<i>Pterostylis bicolor</i> M.A.Clem & D.L.Jones	Y	Two-Color Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Endangered	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis boormanii</i>	<i>Pterostylis boormanii</i> Rupp	Y	Boorman's Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Endangered	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis chaetophora</i>	<i>Pterostylis chaetophora</i> M.A.Clem & D.L.Jones	Y	Hair-Lip Ruddyhood (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	VU 2016 AU (NSW); EN 2017 AU (Queensland)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis coccina</i>	<i>Pterostylis coccina</i> Fitzg.	Y	Alpen Greenhood (English); Redhood (English)	AU	Tuber geophyte. Tuber geophyte.; Terrestrial, perennial herb arising from small round tubers to form large colonies. Leaves are in a ground-hugging rosette of 2-6, shortly petiolate, dark green, ovate to elliptic or oblong and 1.5-10 cm long by 8-30 mm wide, with entire or wavy margins. Scape is 30 cm with a single erect flower. Flower 35 mm long, white and green with brown infusions in the galea.	Not Evaluated	2014	Australia (Victoria)	Vulnerable	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	
Edible	<i>Pterostylis curta</i>	<i>Pterostylis curta</i> R.Br.	Y	Blunt Greenhood (English)	AU, NC		Not Evaluated	Not Evaluated	Not Evaluated	Rare 2018 AU	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis cyncocephala</i>	<i>Pterostylis cyncocephala</i> Fitzg.	Y	Swan Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Endangered	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis daintreana</i>	<i>Pterostylis daintreana</i> F.Muell. ex Benth.	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis decurva</i>	<i>Pterostylis decurva</i> R.S.Roers	Y	Summer Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis fischii</i>	<i>Pterostylis fischii</i> Nicholls	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Least Concern	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis hamata</i>	<i>Pterostylis hamata</i> Blackmore & Clemesha	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Least Concern	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis hildae</i>	<i>Pterostylis hildae</i> Nicholls	N	Rainforest Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis laxa</i>	<i>Pterostylis laxa</i> Blackmore	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Least Concern	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis longicurva</i>	<i>Pterostylis longicurva</i> Rupp	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis longifolia</i>	<i>Pterostylis longifolia</i> R.Br.	Y	Tall Greenhood (English); Common leafy greenhood (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food.	World Checklist of Plants	
Edible	<i>Pterostylis longipetala</i>	<i>Pterostylis longipetala</i> Rupp	Y	Unknown	AU	Tuber geophyte. Tuber geophyte. This species is a small terrestrial, rosette-forming, tuberous orchid, which is common in sclerophyll forests and grasslands in southern and eastern Australia. The taxon is found from 0 to 900 m asl, over 12 ecoregions. It favours grassy woodlands, in well drained soil and prefers dryer habitat but will form at the end of horizontal or vertical roots, some- times at a considerable distance from the original plant. The darker tubers are older and lower in starch than the new whitish tubers. [In AU] Has been recorded at a density of 440 plants/ m2. Such an area could yield approximately 800 tubers	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Pterostylis mutica</i>	<i>Pterostylis mutica</i> R.Br.	Y	Midget Greenhood (English)	AU		Least Concern	2013	Global	LC 2013 Global	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis nutans</i>	<i>Pterostylis nutans</i> R.Br.	Y	Nodding Greenhood (English); Parrot's Beak orchid (English)	AU, NZ		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.; Teoh, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food.	World Checklist of Plants <a href="https://www.nzpcn.org.nz/flora/species/pte">https://www.nzpcn.org.nz/flora/species/pte</a>	
Edible	<i>Pterostylis obtusa</i>	<i>Pterostylis obtusa</i> R.Br.	Y	Jug-Lip Greenhood (English); Blunt Tongue Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	
Edible	<i>Pterostylis parviflora</i>	<i>Pterostylis parviflora</i> R.Br.	Y	Tiny Greenhood, Jug Orchid, Green Snail Orchid (English); Baby Greenhood (English)	AU	Tuber geophyte. Tuber geophyte.; Occurs in moist sheltered habitats in sclerophyll forest of coastal and near-coastal districts in Queensland, New South Wales, Victoria, Tasmania and Lord Howe Island. It thrives on moist soil in leaf litter in fern gullies and moist to wet forests in dappled to full shade. A terrestrial perennial herb, 25 cm high, arising from small round tubers to form large colonies. It has	Not Evaluated	2018	Australia	Endangered	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	
Edible	<i>Pterostylis pedunculata</i>	<i>Pterostylis pedunculata</i> R.Br.	Y	Maroon Greenhood (English)	AU		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis praetermissa</i>	<i>Pterostylis praetermissa</i> M.A.Clem & D.L.Jones	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	2014	Global	Least Concern	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis reflexa</i>	<i>Pterostylis reflexa</i> R.Br.	Y	Autumn Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	2014	Australia (Victoria)	Least Concern	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	
Edible	<i>Pterostylis setifera</i>	<i>Pterostylis setifera</i> M.A.Clem, Matthias & D.L.Jones	Y	Unknown	AU	Tuber geophyte.	Not Evaluated	2018	Australia	Endangered	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	<i>Pterostylis truncata</i>	<i>Pterostylis truncata</i> Fitzg.	Y	Little Dumpies, Sausage Greenhood (English); Brittle Greenhood (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Threatened 2016 AU (VIC)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants; Plants of the World Online	

Use	Species	Author	Y	Country	Geophyte	Conservation	Global	Local	Assessment	Threatened	References	Checklist	
Edible	<i>Pterostylis woolisii</i>	Pterostylis woolisii Fitzg.	Y	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Rare 1997 Global; EN 2014 AU (VIC)	Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Tanaka, T. (1976). Tanaka's Cyclopedica of Edible Plants of the World. Keigaku Publishing Co., Tokyo. pp. 618.; Tech, E.S. (2019) Orchids as Aphrodisiac, Medicine or Food. Hamisy, 2007; Challe, 2009; Challe, Struik & Price (2018); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Kasulo, C., Mwabumba, L. & Cry, M. (2009) A review of edible orchids of Malawi; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs.	World Checklist of Plants	
Edible	<i>Renanthera moluccana</i>	Renanthera moluccana Blume	Y	PG, ID, SB	Epiphytic chamaephyte. Terrestrial herb, 30-85 cm tall. Leaves up to 10 along the stem, lowermost sheathing, linear-lanceolate, up to 14.5 cm long. Inflorescence up to 17 cm long, densely many-flowered. Flowers green. Dorsal sepal erect; lateral sepals erect or spreading. Petals erect, twisted and folded around the column, serrated in the apical part. Lip 3-lobed; lobes linear, joined at the base for c. 3 Terrestrial herb 20-65 cm high; tubers more or less ovoid, up to 3.5 cm long. Sterile shoot 3-4-leaved, lower 2-3 leaves sheath-like, upper leaves lanceolate, up to 18 long. Flowering stem with 5-9 leaves, largest erect, in the middle of the stem, more or less lanceolate, 10-17 cm long, loosely sheathing at base. Inflorescence fairly densely many-flowered, 5-20 cm long. Flowers Slender terrestrial, up to 1 m. <i>Foliage leaves on a separate shoot</i> , flowering stem with sheathing leaves along the stem. Inflorescence long and narrow, up to 30 cm, many-flowered. Flowers cream to pale lilac, ovary and rhachis dark purple-red. <i>Lip fleshy</i> , forming a hood with a narrow mouth. <i>Spurs</i> 10-14 mm, <i>curving upwards</i> and diverging from each other. Terrestrial herb, 10 - 60 cm tall. Foliage leaves 4 on a separate sterile shoot, lanceolate, up to 30 x 2 cm, lower leaves sheath-like. Flowering stem with 5-8 leaves along the stem, erect, lanceolate, up to 25 x 5 cm, largest in the middle. Inflorescence densely few-many-flowered, often short and pyramidal in shape, particularly when young. Flowers pale-deep pink to purple-red, sometimes with	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	World Checklist of Useful Plants; World Checklist of Plants
Chikanda	<i>Roeperocharis wentzeliana</i>	Roeperocharis wentzeliana Kraenzl	N	MW, TZ, ZM, CD	Terrestrial herb 30-70 cm tall with separate sterile and fertile shoots; tubers ovoid, 1.5-4 x 1-2 cm, tomentose; sterile shoots 3-5 leaved, developing at flowering, lowermost 2-3 leaves sheath-like, upper leaves up to 20 x 3.5 cm, lanceolate; flowering stem with 5-8 sheathing leaves, sometimes imbricate, up to 8 cm long; inflorescence 8-14 x 3-5 cm, laxly up to 20-flowered; ovary and pedicel 10-15 mm long, curved; bracts pinkish-brown, c. 30 mm at base of inflorescence; flowers white, scented; sepals and petals deflexed, joined to each other and lip in basal quarter; dorsal sepal 10-13 x 1.5-3 mm, oblong, rounded at apex; lateral sepals slightly longer and wider, oblique; petals similar to dorsal sepal but usually slightly wider with the margin ciliate, lip 10-15 mm long and wide when spread out, very convex and hooded with the apex recurved, wide mouthed, hairy inside towards apex; spurs 4.5-7.5 cm long, slender, pendent; column 7.5-10 mm high; stigma 2-4 x 4-6 mm. Tuber geophyte. Wet montane grassland species, 700-2,400 m, flowering Dec-Jan.	Not Evaluated	2001 Unknown		Least Concern	Not Threatened	Flora of Zambia ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=185150">https://www.zambiaflora.com/speciesdata/species.php?species_id=185150</a> ) Flora of Zambia ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=209500">https://www.zambiaflora.com/speciesdata/species.php?species_id=209500</a> )		
Chikanda	<i>Satyrium amblyosaccos</i>	<i>Satyrium amblyosaccos</i> Schltr.	Y	Chinaka (Malawi)	Terrestrial herb, 10 - 60 cm tall. Foliage leaves 4 on a separate sterile shoot, lanceolate, up to 30 x 2 cm, lower leaves sheath-like. Flowering stem with 5-8 leaves along the stem, erect, lanceolate, up to 25 x 5 cm, largest in the middle. Inflorescence densely few-many-flowered, often short and pyramidal in shape, particularly when young. Flowers pale-deep pink to purple-red, sometimes with	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Modified Stems, Roots, Bulbs.	World Checklist of Useful Plants	
Chikanda	<i>Satyrium anomalum</i>	<i>Satyrium anomalum</i> Schltr.	Y	Unknown	Terrestrial herb, 10 - 60 cm tall. Foliage leaves 4 on a separate sterile shoot, lanceolate, up to 30 x 2 cm, lower leaves sheath-like. Flowering stem with 5-8 leaves along the stem, erect, lanceolate, up to 25 x 5 cm, largest in the middle. Inflorescence densely few-many-flowered, often short and pyramidal in shape, particularly when young. Flowers pale-deep pink to purple-red, sometimes with	Data Deficient	2018 Global		DD 2017 Global	Not Evaluated		IUCN Red List 2021	
Chikanda	<i>Satyrium breve</i>	<i>Satyrium breve</i> Rolfe	N	Chinaka (Malawi); Chikanda (unk.) tribe: Makete district, Tanzania); Sunzalapai (Matengo tribe, Mbinga district, Tanzania); Dochamua, Ligosi, Lisekedochamua, Lisekedume, Masekeni magosi (Kinga and Bena tribes, Tanzania), Visekenivigosi (Kinga and Wanji tribes, Tanzania), Lisekekiume, Masekenidume, Masekenidume, Titiisigosi (Kinga tribe,	Terrestrial herb 30-70 cm tall with separate sterile and fertile shoots; tubers ovoid, 1.5-4 x 1-2 cm, tomentose; sterile shoots 3-5 leaved, developing at flowering, lowermost 2-3 leaves sheath-like, upper leaves up to 20 x 3.5 cm, lanceolate; flowering stem with 5-8 sheathing leaves, sometimes imbricate, up to 8 cm long; inflorescence 8-14 x 3-5 cm, laxly up to 20-flowered; ovary and pedicel 10-15 mm long, curved; bracts pinkish-brown, c. 30 mm at base of inflorescence; flowers white, scented; sepals and petals deflexed, joined to each other and lip in basal quarter; dorsal sepal 10-13 x 1.5-3 mm, oblong, rounded at apex; lateral sepals slightly longer and wider, oblique; petals similar to dorsal sepal but usually slightly wider with the margin ciliate, lip 10-15 mm long and wide when spread out, very convex and hooded with the apex recurved, wide mouthed, hairy inside towards apex; spurs 4.5-7.5 cm long, slender, pendent; column 7.5-10 mm high; stigma 2-4 x 4-6 mm. Tuber geophyte. Wet montane grassland species, 700-2,400 m, flowering Dec-Jan.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Nyomora, 2005; Veldman et al. (2017); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Flora of Zimbabwe Online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117570">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117570</a> ) Flora of Zambia online ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=117580">https://www.zambiaflora.com/speciesdata/species.php?species_id=117580</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Chikanda	<i>Satyrium buchananii</i>	<i>Satyrium buchananii</i> Schltr.	Y	AO, MW, TZ, ZM, CD, ZW	Terrestrial herb 30-70 cm tall with separate sterile and fertile shoots; tubers ovoid, 1.5-4 x 1-2 cm, tomentose; sterile shoots 3-5 leaved, developing at flowering, lowermost 2-3 leaves sheath-like, upper leaves up to 20 x 3.5 cm, lanceolate; flowering stem with 5-8 sheathing leaves, sometimes imbricate, up to 8 cm long; inflorescence 8-14 x 3-5 cm, laxly up to 20-flowered; ovary and pedicel 10-15 mm long, curved; bracts pinkish-brown, c. 30 mm at base of inflorescence; flowers white, scented; sepals and petals deflexed, joined to each other and lip in basal quarter; dorsal sepal 10-13 x 1.5-3 mm, oblong, rounded at apex; lateral sepals slightly longer and wider, oblique; petals similar to dorsal sepal but usually slightly wider with the margin ciliate, lip 10-15 mm long and wide when spread out, very convex and hooded with the apex recurved, wide mouthed, hairy inside towards apex; spurs 4.5-7.5 cm long, slender, pendent; column 7.5-10 mm high; stigma 2-4 x 4-6 mm. Tuber geophyte. Wet montane grassland species, 700-2,400 m, flowering Dec-Jan.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Davenport & Ndangalasi, 2001; Bingham et al. 2003; Hamisy, 2007; Mapunda, 2007; Challe, 2009; Kasulo, C., Mwabumba, L. & Cry, M. (2009) A review of edible orchids of Malawi; Challe, Struik & Price (2018); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.; Veldman et al. 2018 Bingham et al. 2003; Kasulo, C., Mwabumba, L. & Cry, M. (2009) A review of edible orchids of Malawi; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Useful Plants	
Chikanda	<i>Satyrium carsonii</i>	<i>Satyrium carsonii</i> Rolfe	Y	Kabatika (Malawi); utupata (Serenje District, Zambia); Iringe (Zambian)	Tuber geophyte. Brachystegia woodland species, 1,300-1,750 m, flowering Jan-Feb. Terrestrial herb, usually 40 to 60 cm. Leaves on the lower flowering stem. Inflorescence fairly densely many-flowered. Flowers yellow-green; bracts reflexed. Lip forming a hood with a narrow mouth; sepals and petals curled under; spurs 8 - 20mm long. This species can be distinguished from the similar <i>S. flavum</i> by the somewhat larger size and the basal leaves not being pressed	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants	
Chikanda	<i>Satyrium chlorocorys</i>	<i>Satyrium chlorocorys</i> Robt.f. ex Rolfe	Y	Chinaka (Malawi); Chikanda Jike Rukwa (unk.)	Terrestrial herb 20-60 cm tall; tubers to 2 cm long, ellipsoid or globose, almost glabrous. Leaves 6-10; the lowermost 1-2 leaves sheath-like; stem leaves 6-14 x 0.7-1.3 cm, linear or lanceolate-linear, acute; the 3 uppermost leaves much smaller. Inflorescence 1-6 x 1-2 cm, shortly cylindrical, densely 4- to many-flowered. Flowers arched, spreading, white tinged green; rhachis shortly cylindrical, densely many-flowered, 8-30 cm long. Flowers deep red, pink or Robust terrestrial herb to 1 m tall growing from a short, stout rootstock. Leaves 8-13 scattered along stem with the largest near the stem base, lanceolate, semi-spreading, up to 40 cm long, heavily veined; upper leaves gradually decreasing in size becoming erect and sheath-like. Inflorescence cylindrical, densely many-flowered, up to c. 30 cm long. Flowers pale pink; bracts c. 25	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants	
Chikanda	<i>Satyrium compactum</i>	<i>Satyrium compactum</i> Summerh.	N	Unknown	Terrestrial herb 20-60 cm tall; tubers to 2 cm long, ellipsoid or globose, almost glabrous. Leaves 6-10; the lowermost 1-2 leaves sheath-like; stem leaves 6-14 x 0.7-1.3 cm, linear or lanceolate-linear, acute; the 3 uppermost leaves much smaller. Inflorescence 1-6 x 1-2 cm, shortly cylindrical, densely 4- to many-flowered. Flowers arched, spreading, white tinged green; rhachis shortly cylindrical, densely many-flowered, 8-30 cm long. Flowers deep red, pink or Robust terrestrial herb to 1 m tall growing from a short, stout rootstock. Leaves 8-13 scattered along stem with the largest near the stem base, lanceolate, semi-spreading, up to 40 cm long, heavily veined; upper leaves gradually decreasing in size becoming erect and sheath-like. Inflorescence cylindrical, densely many-flowered, up to c. 30 cm long. Flowers pale pink; bracts c. 25	Data Deficient	2018 Global		DD 2017 Global	Not Evaluated		IUCN Red List 2021; Plants of the World Online	
Chikanda	<i>Satyrium comptum</i>	<i>Satyrium comptum</i> Summerh.	N	Unknown Chinaka (Malawi), Kikande, Chikanda, Masehelesehele,	Terrestrial herb 40-80 cm high, growing from an ellipsoid tuber up to 5.5 cm long. Main leaves 3-5 on a separate sterile shoot; lowermost 1-3 leaves sheathing; upper leaves lanceolate or ovate, 6-15 cm long. Flowering stem with 10-15 sheathing leaves up to 10 cm long. Inflorescence narrowly cylindrical, densely many-flowered, 8-30 cm long. Flowers deep red, pink or Robust terrestrial herb to 1 m tall growing from a short, stout rootstock. Leaves 8-13 scattered along stem with the largest near the stem base, lanceolate, semi-spreading, up to 40 cm long, heavily veined; upper leaves gradually decreasing in size becoming erect and sheath-like. Inflorescence cylindrical, densely many-flowered, up to c. 30 cm long. Flowers pale pink; bracts c. 25	Not Evaluated	Not Evaluated	Not Evaluated	Possibly threatened 1997 Global	Not Threatened	Veldman et al. (2017)	Plants of the World Online	
Chikanda	<i>Satyrium coriophoroides</i>	<i>Satyrium coriophoroides</i> A.Rich.	Y	BI, CM, CF, ET, KE, MW, RW, SD, TZ, UG, ZM, CD, ZW	Terrestrial herb 40-80 cm high, growing from an ellipsoid tuber up to 5.5 cm long. Main leaves 3-5 on a separate sterile shoot; lowermost 1-3 leaves sheathing; upper leaves lanceolate or ovate, 6-15 cm long. Flowering stem with 10-15 sheathing leaves up to 10 cm long. Inflorescence narrowly cylindrical, densely many-flowered, 8-30 cm long. Flowers deep red, pink or Robust terrestrial herb to 1 m tall growing from a short, stout rootstock. Leaves 8-13 scattered along stem with the largest near the stem base, lanceolate, semi-spreading, up to 40 cm long, heavily veined; upper leaves gradually decreasing in size becoming erect and sheath-like. Inflorescence cylindrical, densely many-flowered, up to c. 30 cm long. Flowers pale pink; bracts c. 25	Not Evaluated	2011 Global		Least concern	Not Threatened	Nyomora, 2005; Veldman et al. (2017); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer. Nyomora, 2005; Hamisy, 2007; Challe, Struik & Price (2018); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Useful Plants; World Checklist of Plants	
Chikanda	<i>Satyrium crassaule</i>	<i>Satyrium crassaule</i> Rendle	Y	BI, CM, ET, KE, MW, NG, RW, TZ, UG, ZM, CD	Terrestrial herb 40-80 cm high, growing from an ellipsoid tuber up to 5.5 cm long. Main leaves 3-5 on a separate sterile shoot; lowermost 1-3 leaves sheathing; upper leaves lanceolate or ovate, 6-15 cm long. Flowering stem with 10-15 sheathing leaves up to 10 cm long. Inflorescence narrowly cylindrical, densely many-flowered, 8-30 cm long. Flowers deep red, pink or Robust terrestrial herb to 1 m tall growing from a short, stout rootstock. Leaves 8-13 scattered along stem with the largest near the stem base, lanceolate, semi-spreading, up to 40 cm long, heavily veined; upper leaves gradually decreasing in size becoming erect and sheath-like. Inflorescence cylindrical, densely many-flowered, up to c. 30 cm long. Flowers pale pink; bracts c. 25	Not Evaluated	2011 Global		Least Concern	Not Threatened		World Checklist of Useful Plants	
Chikanda	<i>Satyrium elongatum</i>	<i>Satyrium elongatum</i> Rolfe	N	Unknown	Tuber geophyte. Damp grasslands and swamps; 1500-1900 m. A terrestrial herb 4.5-9 dm. high, glabrous except for the roots. Tubers ellipsoid to elongate-ovoid, 4-4.5 cm. long, 1-2 cm. in diameter, densely tomentose. Roots slender, flexuous, pubescent. Sterile stem to 7 cm. long, 3-4 leaved; 2 lower leaves sheath-like, obtuse, the upper leaves lanceolate to oblanceolate, acute, up to 17-19 cm. long and 3.5-5.5 cm. broad. Fertile stem slender to rather stout, almost covered by sheathing leaves; sheaths 6-10, lanceolate, acute, up to 5-12 cm. long and 1.5-3 cm. broad. Inflorescence narrowly cylindrical, 11-30 cm. long, 2 cm. in diameter, rather loosely many-flowered; bracts soon reflexed, lanceolate, acute, 8-27 mm. long, the lower ones longer than the flowers. Flowers curved outwards, sessile, green or greenish-white, becoming brown; ovary stout, 5-7 mm. long. Sepals and petals much decurved, united to one another and to the lip in their basal third. Intermediate sepal elliptical-oblong, rounded, 4-5 mm. long, scarcely 1 mm. broad; laterals obliquely oblanceolate-oblong, obtuse, a little longer than the intermediate, ± 1.5 mm. broad, 2-veined. Petals oblanceolate, rounded, shorter than sepals, 0.5 mm. broad, 1-veined. Lip ellipsoid, with a narrow mouth, the apex shortly recurved, 5.5-8 mm. long. Spurs parallel to ovary, 6-7.5 mm. long, ± 1 mm. in diameter, scarcely tapering. Column inside lip, much curved, 3.5-4 mm. high; stigma erect, ± concave, transversely elliptical, 1.5 mm. high, 2 mm. broad, rostellum 3-lobed, the middle-lobe much larger than the tooth-like side lobes, broadly spoon-shaped from a narrow base, apex upcurved.	Data Deficient	2018 Global		DD 2017 Global	Not Evaluated	Veldman et al. (2017)		IUCN Red List 2021; Plants of the World Online
Chikanda	<i>Satyrium ketumbense</i>	<i>Satyrium ketumbense</i> Kraenzl.	N	ichinyeka mulundu (Serenje District, Zambia)	Robust terrestrial herb, 35-75 cm high. Basal leaves 2, appressed to the ground, broadly ovate to kidney-shaped; leaves along the stem 3-6, sheathing, up to 7 cm long. Inflorescence c. 10 cm long, up to 12-flowered. Flowers white with green tipped spurs. Petals and median sepal 18-23 cm long, oblanceolate; lip 16-23 c. long, very convex with a wide mouth; spurs 24-35 mm long. Terrestrial herb, 15 - 65cm. Foliage leaves on a separate sterile shoot. Leaves along the flowering stem sheathing. Inflorescence fairly dense with long, leaf-like bracts, often reddish. Flowers white, variably tinged with pink at the apices of the flower parts. Petals and sepals deflexed in older flowers. Lip forming a hood with a wide mouth; spurs 3-4.5cm, rarely 5cm long, mostly tucked behind the bracts.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Bingham et al. 2003, Veldman et al (2018)	Flora of Mozambique online ( <a href="https://www.mozambiqueflora.com/speciesdata/species.php?species_id=180870">https://www.mozambiqueflora.com/speciesdata/species.php?species_id=180870</a> )
Chikanda	<i>Satyrium longicauda</i>	<i>Satyrium longicauda</i> Lindl.	Y	Blushing bride satyrium, unokleshe (Zulu tribe, South Africa)	Robust terrestrial herb up to 80 cm tall. Leaves 6-10, lowest sheath-like, next 2 large and spreading, ovate, up to 24 x 8 cm, glossy light green, not appressed to the ground; remaining leaves much smaller, sheath-like along the stem. Inflorescence up to 22 cm long, densely many-flowered. Bracts up to 3 cm long, lanceolate, acute, reflexed. Flowers pale to deep pink. Sepals and petals pointing forward, or slightly decurved. Petals slightly shorter than median sepal. Lip convex, forming a wide-mouthed hood; spurs 12-20 mm long, parallel to the ovary. Found in damp or poorly drained upland grassland, edges of scrub or open Brachystegia woodland, 1,200-2,900 m. Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Jacobs, T.V. (2001). Underutilized Edible Plants from South Africa: a Perspective in Hawkes, J.G. (ed.) The Evolution of Plant Genetic Resources and the Work of O.H. Frankel.	Flora of Zimbabwe online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117660">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117660</a> )	
Chikanda	<i>Satyrium macrophyllum</i>	<i>Satyrium macrophyllum</i> Lindl.	Y	Kikande, Nyamachebele, Nyamasebele (Bena tribe, Tanzania), Kikande (Hehe tribe, Tanzania), Chikande (Wanji tribe, Tanzania); unokleshe (Zulu tribe, South Africa)	Robust terrestrial herb up to 80 cm tall. Leaves 6-10, lowest sheath-like, next 2 large and spreading, ovate, up to 24 x 8 cm, glossy light green, not appressed to the ground; remaining leaves much smaller, sheath-like along the stem. Inflorescence up to 22 cm long, densely many-flowered. Bracts up to 3 cm long, lanceolate, acute, reflexed. Flowers pale to deep pink. Sepals and petals pointing forward, or slightly decurved. Petals slightly shorter than median sepal. Lip convex, forming a wide-mouthed hood; spurs 12-20 mm long, parallel to the ovary. Found in damp or poorly drained upland grassland, edges of scrub or open Brachystegia woodland, 1,200-2,900 m. Tuber geophyte.	Not Evaluated	2005 South Africa		Least Concern	Not Threatened	Jacobs, T.V. (2001). Underutilized Edible Plants from South Africa: a Perspective in Hawkes, J.G. (ed.) The Evolution of Plant Genetic Resources and the Work of O.H. Frankel.; Peters, C.R., O'Brien, E.M. and Drummond, R.B. (1992). Edible Wild Plants of Sub-Saharan Africa. pp. 36-37	World Checklist of Useful Plants	

Chikanda	Satyrium microcorys	Satyrium microcorys Schltr.	N	Unknown	MW, TZ, ZM	Terrestrial slender herb, 10-40 cm tall, glabrous; tubers ellipsoid, 1-2x0.4-1.1 cm; stem leafy; leaves 5-8, the lowest 1-2 sheath-like, next 2 spreading, close to base, elliptical, 2.5-13x1-4.5 cm, the remaining bract-like 2.5-6.5x0.7-1.2 cm; inflorescence 5-14 cm long, cylindrical, 1-2 cm Ø, many-flowered; flowers yellow(-green) or cream, sometimes fragrant; bracts lanceolate, 5-15x4 mm, reflexed; ovary 5-6 mm long; sepals and petals decurved, ciliate at apex; dorsal sepal oblanceolate, c. 3x0.5 mm; laterals longer and wider; petals smaller; lip hooded, ellipsoid, 3-4 mm long, fleshy, apex shortly recurved, mouth narrow; spurs 3-5 mm long, parallel to ovary, apex bulbous.	Data Deficient	2018	Global	DD 2017 Global; VU 2001 ZM	Not Evaluated	IUCN Red List 2021	African Plant Database online ( <a href="http://www.ville-ge.ch/musinfo/bd/cjb/afrika/details.php?language=an&amp;id=46345">http://www.ville-ge.ch/musinfo/bd/cjb/afrika/details.php?language=an&amp;id=46345</a> )		
Chikanda	Satyrium monadenum	Satyrium monadenum Schltr.	N	Kabatika wa mu Nyika (Malawi) Kikande, Nyamachebele, (Bena tribe, Tanzania), Limwapembe (Hehe tribe, Tanzania), Chikande (Kinga tribe, Tanzania), Chikande, Kikande-mangorji-matali (Matengo tribe, Tanzania), Kikande-mangorji-matali (Ngoni tribe, Tanzania), Chikande	MW, TZ, ZM	Terrestrial herb 30-60 cm, high, sometimes forming colonies; tubers globose to ovoid, 1.5-2 cm long, hairy. Sterile shoot with 3-4 leaves, usually developing at flowering time, the lowest 2 sheath-like, the terminal one lanceolate, c. 5 cm long. Flowering stem purplish in upper half with 6-7 loosely sheathing leaves up to 7 cm long. Inflorescence densely many-flowered, 9-15 cm long. Flowers rich carmine-red; bracts to 25 mm long at base of inflorescence, reflexed, tinged red. Sepals and petals spreading and projecting forwards, joined to each other and lip for about a third of their length. Median sepal narrowly oblong, 12-14 mm long, rounded; lateral sepals similar but broader and oblique. Petals similar to median sepal. Lip hooded with a wide mouth, 10-12 mm long, slightly reflexed at the apex. Spurs slender, 12-15 mm long, parallel to ovary.	Data Deficient	2018	Global	DD 2016 Global; VU 2001 ZM	Not Evaluated	Davenport & Ndangalasi, 2001	IUCN Red List 2021	Flora of Zambia online ( <a href="https://www.zambiaflora.com/speciesdata/species.php?species_id=209540">https://www.zambiaflora.com/speciesdata/species.php?species_id=209540</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	
Chikanda	Satyrium neglectum	Satyrium neglectum Schltr.	Y		TZ, MW, MZ, ZM, ZW, ZA, LS, ZA(KwaZulu-Natal, Free State & unnamed Northern Provinces), SZ	Tuber geophyte. Robust terrestrial herb 25-80 cm high; tubers 2-3 x 1 cm, ellipsoid. Sterile shoot 2-5-leaved; the lowermost 1-2 leaves sheath-like, the upper leaves up to 27 x 8 cm, lanceolate or elliptic. Flowering stem sheathed by 6-12 sheathing leaves up to 13 cm long. Inflorescence 5-35 x 2-3 cm, densely many-flowered. Flowers pale to deep pink, rarely yellowish-white. Sepals and petals joined to each other and lip in basal third or quarter. Median sepal 5.5-8 x 1.5-2 mm, oblong, rounded, decurved; lateral sepals spreading and slightly twisted, oblique, slightly longer and broader than median sepal. Petals similar to median sepal, curled under. Lip 5-10 mm long, 5-8 mm wide when spread out, very convex and hooded, the apex recurved. Spurs 6-17 mm long, slender, parallel to ovary. Column 4.5-7 mm high; stigma 1-1.5 x 2 mm; rostellum mid-lobe spoon-shaped or orbicular with a narrow base, the side lobes much shorter and tooth-like. Ovary and pedicel 10-12 mm long.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Challe, Struik & Price (2018) Pant, B., 2013. Medicinal orchids and their uses: tissue culture a potential alternative for conservation. African Journal of plant science, 7(10), pp.448-467. Orchid preparations, Singh, Kishore, Kumar, Singh.; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	Ruffo, C., Birnie, E. and Tengnas, B. 2002. Edible wild plants of Tanzania in ed. Palzer, C. Tree nursery manual for Entrea pp. 348-351, 576-579.	
Edible	Satyrium nepalense	Satyrium nepalense D.Don	Y	Nepal Satyrium (English)	IN, CN, MM, NP, PK, LK, TH	Tuber geophyte. A terrestrial herb 1-3.5 dm. high, glabrous except for the roots. Tubers globose to elliptical-fusiform, 6-22 mm. long, 5-8 mm. in diameter, ± densely tomentose. Roots slender, flexuous, pubescent. Upland grassland; 1400-1950 m.	Not Evaluated	Not Evaluated	Not Evaluated	Not Threatened 2012 LK	Not Threatened	World Checklist of Plants			
Chikanda	Satyrium orbiculare	Satyrium orbiculare Rolfe	N	Kabatika wa mu Nyika	MW, RW, TZ, ZM, CD	Slender terrestrial herb 20-40 cm high. Basal leaf 1, appressed to the ground, 3.5-5 x 4.5 cm, heart-shaped; stem with 3-6 sheathing leaves up to 3 cm long. Inflorescence c. 6 x 2 cm, fairly densely up to 20-flowered. Flowers bright rose-pink, bracts purplish. Pedicel and ovary 7-8 mm long; bracts reflexed, up to 15 x 5 mm, lanceolate, acute. Sepals and petals projecting forwards, joined to each other and lip for 2-3 mm. Median sepal 7-9 x 1-1.3 mm, ligulate to oblanceolate, rounded at apex; lateral sepals oblique, of similar length and slightly wider. Petals similar to median sepal but slightly shorter. Lip 6-7 mm long, 6-7 mm wide when spread out, very convex, the apex reflexed. Spurs 11-18 mm long, slender, tapering, parallel to ovary. Column slender, erect, 4.5-6.5 mm high; stigma 1-1.5 x 2 mm; rostellum shortly and almost equally 3-toothed, the middle tooth bifid.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.			
Chikanda	Satyrium princeae	Satyrium princeae Kraenzl.	Y	Chinaka (Malawi)	MW, TZ, ZM	Terrestrial herb 40-80 cm high; tubers ovoid or ellipsoid, up to 4.5 cm long, hairy. Sterile shoot 3-4-leaved, lowermost 1-2 leaves sheathing; upper leaves lanceolate or elliptic, to 10 cm long. Flowering stem with 7-12 sheathing leaves up to 7 cm long. Inflorescence cylindrical, 11-32 cm long, fairly laxly many-flowered. Flowers greenish-yellow, tinged with brown and purple; bracts 1-3 cm long at base of inflorescence, reflexed. Sepals and petals decurved, joined to each other and lip for about half their length. Median sepal oblong, 5-7.5 mm long; lateral sepals obliquely oblanceolate, of similar length. Petals slightly shorter than sepals, finely velvety. Lip fleshy, ellipsoid, 5.5-7 mm long, the apex reflexed, narrow-mouthed. Spurs slender, 18-25 mm long, straggling, ascending in young flowers but more or less pendent in older flowers; often with an extra pair of vestigial spurs.	Data Deficient	2018	Global	DD 2016 Global; VU 2001 ZM	Not Evaluated	Challe, Struik & Price (2018)	IUCN Red List 2021	African Orchids ( <a href="http://www.africanorchids.dk/330-satyrium/1536-satyrium-princeae">http://www.africanorchids.dk/330-satyrium/1536-satyrium-princeae</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	
Chikanda	Satyrium riparium	Satyrium riparium Rchb.f.	N	kalobo (Serenje District, Zambia)	AO, MW, TZ, ZM, ZW, CD	Tuber geophyte. Swampy grassland or bogs, especially near streams; 1350-3300 m. A terrestrial herb 2.5-7 dm. high, glabrous except for the roots. Tubers small, ovoid or ellipsoid, 1-2 cm. long, 5-8 mm. in diameter, ± tomentose. Roots in a tuft, numerous, flexuous, pubescent. Stem erect, rather stout, terete, leafy along its length. Leaves 7-11, mostly bunched towards the base of the stem; lowest one sometimes sheath-like, 4-6 above spreading or suberect, sometimes ± recurved, lanceolate to broadly ovate, acute, the largest 8-28 cm. long and 3-5.5 cm. broad, upper ones sheathing, often much smaller than the lower ones, lanceolate, acute. Inflorescence cylindrical, 5-24 cm. long, 3-4 cm. in diameter, densely 11- to many-flowered; bracts soon reflexed, lanceolate, acute, 1.3-3.2 cm. long, lower ones longer than the flowers. Flowers spreading or half-spreading, usually bright pink to crimson, sometimes paler pink; ovary with pedicel curved, ± 1 cm. long. Sepals and petals projecting forwards, united to one another and to the lip in their basal quarter or fifth only. Intermediate sepal oblanceolate, obtuse, 8-12 mm. long, 2-3 mm. broad; laterals obliquely oblanceolate-oblong or elliptical-oblong, obtuse, equalling the intermediate but slightly broader. Petals similar to the intermediate sepal; all tepals 2-3-veined. Lip very convex, hooded, the extreme apex shortly recurved, 7-10 mm. long, the mouth 6-7 mm. broad, 2-spurred at base. Spurs slender, parallel to the ovary, 12-18 mm. long, ± 1.5 mm. in diameter at the base. Column erect, enclosed by the lip, the slender stalk equalling or exceeding the fertile part in length, 6-8 mm. high; anther-loculi pendent, ellipsoid; stigma erect, semi-orbicular, 2.5-3 mm. broad, rostellum projecting downwards, 3-lobed, the side lobes short, acute, the middle lobe much longer, spoon-shaped from a narrower base.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Bingham et al. 2003, Veldman et al. (2017)	Not Evaluated	Hamsy, 2007; Rutherford & Groves 2017; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Plants of the World Online
Chikanda	Satyrium robustum	Satyrium robustum Schltr.	N	Ligosi (Kinga tribe, Makete district, Tanzania); Kidume (unk.)	KE, TZ, UG	Robust terrestrial herb to 90 cm tall. Sterile shoot with 3-4 leaves. Flowering stem with c. 10 imbricate sheathing leaves. Inflorescence 7-26 x 3-3.5 cm, densely many-flowered. Flowers orange, apricot-yellow or salmon-red. Sepals and petals decurved, joined to each other and lip in basal quarter. Median sepal 7-11 mm, oblanceolate; lateral sepals longer, broader. Petals similar to median sepal. Lip thick-textured with a wide mouth, very convex and hooded with the apex reflexed. Spurs 13-17 mm long, slender. Column 7-11 m tall., Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Hamsy, 2007; Rutherford & Groves 2017; Challe, Struik & Price (2018); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Flora of Zimbabwe online ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117730">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117730</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.		
Chikanda	Satyrium sceptrum	Satyrium sceptrum Schtr.	Y	Chinaka (Malawi); Chikanda (English)	KE, MW, SD, TZ, UG, ZM, CD, ZW	Slender terrestrial herb 13-45 cm tall. Leaves 6-7; the lower leaves spreading, near the stem base but not appressed to ground, broadly lanceolate to ovate, 5-14.5 cm long, light green; upper leaves bract-like, spaced along the stem. Inflorescence fairly densely several-many-flowered, 3-15 cm long. Flowers creamy-white; bracts reflexed, up to 15 mm long. Sepals and petals deflexed, the lateral sepals spirally twisted. Median sepal oblong-oblanceolate, 3-4 mm long; lateral sepals slightly longer and almost twice as wide. Petals similar sepal but narrower. Lip more or less globose with a slight dorsal keel, 4-5 mm long, fleshy with a narrow mouth. Spurs 8-12 mm long, slender, parallel to ovary; some flowers with 2 additional vestigial spurs.	Data Deficient	2018	Global	VU 2001 ZM; DD 2017 Global	Not Evaluated	Veldman et al. (2017),	IUCN Red List 2021	Flora of Malawi online ( <a href="https://www.malawiflora.com/speciesdata/species.php?species_id=209590">https://www.malawiflora.com/speciesdata/species.php?species_id=209590</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.	
Chikanda	Satyrium shireense	Satyrium shireense Rolfe.	N	Chinaka (Malawi)	MW, TZ, ZM	Upland grassland, sometimes with scattered bushes; 1350-2500 m. A terrestrial herb 2.5-11 dm. high, glabrous except for the roots. Tubers ellipsoid to fusiform-cylindrical, 1.5-4.5 cm. long, 7-17 mm. in diameter, ± densely tomentose. Roots slender, flexuous, pubescent.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.			
Chikanda	Satyrium sphaeranthum	Satyrium sphaeranthum	N	Chinaka	MW, BI, RW, TZ, CD, ZW		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.			



				Lidala (female) (Kings tribe, Makete district, Tanzania); Ingingi, Jike, Lidala, Lisekenijike, Lisekenilidala, Madala, Masekenimadala, Numbunumbu, Sidala, Visekenividala, Vjike (Kings tribe, Tanzania), Lisekenijike, Masekenimadala, Sidala (Bena tribe, Tanzania), Lisekeni, Lisekenilidala, Visekenividala (Wanji tribe, Tanzania); Chinaka (Malawi); matibu (Serenje District, Zambia); Chikande Ligosi, Lisekejike (unk.)	AO, BI, CM, ZA, CF, KM, CG, GN, MG, MW, MZ, NG, RW, SL, SD, SZ, TZ, UG, ZM, CD, ZW	Terrestrial herb, up to 1m tall. Flowers many, densely packed in conical spikes, which appear white. Flowers white with the median sepal and petals sometimes yellow. Bracts white at the margins near apex. Tuber geophyte. Terrestrial herb 45–85 cm tall, growing from an ellipsoid, woolly tuber, up to 5 cm long. Leaves 3-4 on a separate sterile shoot; lowermost 1–2 sheathing; upper ones lanceolate or elliptic, up to 18 cm long. Flowering stem with 7–13 sheathing leaves up to 10 cm long. Inflorescence narrowly cylindrical, 10–40 cm long, fairly densely many-flowered. Flowers green or yellow-green, sometimes tinged with brown; scented; bracts up to 35 mm long at base of inflorescence, reflexed. Sepals and petals curled under. Median sepal oblanceolate, 3.5–5 mm long, rounded at apex; lateral sepals slightly longer and about twice as wide, oblique. Petals similar to median sepal. Lip ellipsoid, 4.5–5.5 mm long, hooded, reflexed at the apex, fleshy with a narrow mouth. Spurs 14–22 mm long, slender, pendent, sometimes with 2 extra rudimentary spurs less than 1 mm long below them.	Least Concern	2018	Global	LC 2005 ZA; LC 2018 Global	Not Threatened	Hamisy, 2007; Mapunda, 2007; Challe, 2009; Bingham et al. 2003, Veldman et al. (2017); Challe, Struik & Price (2018); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2021	Flora of Malawi online ( <a href="https://www.malawiflora.com/speciesdata/species.php?species_id=117750">https://www.malawiflora.com/speciesdata/species.php?species_id=117750</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, Draft Report.
Chikanda	Satyrium trinerve	Satyrium trinerve Lindl.	Y											
Chikanda	Satyrium volkensii	Satyrium volkensii Schltr.	Y	Volkens 'Satyrium (English)	CM, KE, MW, NG, SD, TZ, ZM, CD, ZW		Not Evaluated	2011	Global	Least Concern			Veldman et al. (2017); Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Flora of Zimbabwe ( <a href="https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117760">https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=117760</a> ); Namoto, M. (2018). Status of chikanda orchids on Nyika, draft report.
Chikanda	Satyrium rhynchatooides	Satyrium rhynchanthoides Schltr.	N	Chinaka	MW, TZ, ZM	Slender terrestrial herb 12–32 cm tall; tubers to 3.5 cm long, globose to ellipsoid, woolly.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated				
Edible	Selenipedium chica	Selenipedium chica Rchb.f.	Y	Vanilla chica, vainilla en arbol (vanilla on a tree) (Indian tribe in Panama mtns.)	PA, CO	Found in 3 locations in Panama, populations decreasing and fragmented. Selenipedium chica grows as a terrestrial herb in very humid areas on roadside banks and the floor of woodlands. Upper elevation limit is 100 m. Herb, epiphyte. Hemicryptophyte. The habitat of Selenipedium vanillocarpum is tropical moist forest and it flowers in May.	Endangered Critically	2016	Global	EN 2016 Global	Threatened		IUCN Red List 2021; World Checklist of Plants; Plants of the World Online	Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew, 1892) Vol.1892 No. 67/68, pp. 181-183.
Salep	Selenipedium vanillocarpum	Selenipedium vanillocarpum Barb. Rodr.	N	Unknown	BR		Endangered	2016	Global	CR 2016 Global	Threatened		IUCN Red List 2021	
Salep	Serapias lingua	Serapias lingua L.	Y	Tongue Orchid, Tongue Serpias (English) Sérapias de Nurra (French), Sérapias de la Nurra (English)	AL, FR, GR, IT, LY, DZ, MA, PT, ES, TN, TR, RS, HR, SI, ME, BA, MK (GB Introduced)	Serapias lingua is found in short, poor grassland, garrigue, scrub, dune slacks, olive groves, damp meadows, marshy meadows and open woodland. It prefers moist to wet, alkaline to acidic substrates. This species grows in full sunlight to mid-shade and flowers from March to June. (Bourmérias and Prat 2005, Delforge 1995, GIROS 2009, Harrap and Harrap 2009, Lang 2004, Pignatti 1982, Rossi 2002). Tubers 2-5, 1 sessile, the others on stolons, ovoid to subglobose (POWO 2022). Serapias nurrica prefers dry acidic substrates. This species grows in full sunlight to mid-shade and flowers from April to June. (Bourmérias and Prat 2005, Delforge 1995, GIROS 2009, Pignatti 1982, Rossi 2002).	Least Concern	2011	Europe	LC 2011 Europe; NT 2009 FR; EN 1989 MT; VU 2010 ES	Not Threatened	Turkmen et al 2021	IUCN Red List 2022, POWO 2022	
Salep	Serapias nurrica	Serapias nurrica Corrias	Y	Serapias nurrica (English)	ES, FR, IT, TN, CY, GR, TR, IT, LB, SY, RU, PS, AZ, AM, GE, RS, HR, ME, BA, MK	Serapias nurrica prefers dry acidic substrates. This species grows in full sunlight to mid-shade and flowers from April to June. (Bourmérias and Prat 2005, Delforge 1995, GIROS 2009, Pignatti 1982, Rossi 2002). Tuber geophyte. Stem not more than 25(-30) cm. Spike short, rather dense, (2-)3- to 4(-6)-flowered. Bracts equalling or slightly exceeding flowers. Outer median perianth-segments horizontal. Labelium with middle lobe 11-23 mm wide.	Near Threatened	2011	Global, Europe & Mediterranean	NT 2011 Global; VU 2008 ES; VU 2012 FR	Threatened		IUCN Red List 2021	
Salep	Serapias orientalis	Serapias orientalis (Greuter) H.Baumann & Künkele	Y	Eastern Serapias (English) Long Lipped Serapias, Plow-Share Serapias (English), Sérapias en soc, Sérapias à labeille long (French), Sérapias de labio alargado (Spanish), Serapide maggiore (Italian)	AL, BG, CY, FR, GR, IT, MA, ES, CH, TR, RS, HR, SI, ME, BA, MK	Serapias vomeracea is found in short, poor grassland, garrigue, scrub, damp meadows, olive groves and open woodland. It prefers dry to damp, alkaline to slightly acidic substrates. This species grows in full sunlight to mid-shade and it flowers from March to June. (Bourmérias and Prat 2005, Delforge 1995, GIROS 2009, Pignatti 1982, Rossi 2002). Pseudobulb epiphyte of rainforests. Leaves: Upright, oblong leaves (35 cm long and 10 cm wide), each arise from a single pseudobulb, which form tight clusters. Flowers: The large flowers are scented and produced in groups of 2-4 in a pendulous inflorescence up to 15 cm long. Individual flowers have yellow petals and sepals and are heavily spotted and streaked purplish-brown. Each sepal is reflexed (bent backwards) and measures up to 8.0 cm long and 5.0 cm wide. The petals are around 7.0 cm long and 1.5 cm wide. Pollination is by male euglossine bees (also known as orchid bees), which collect floral fragrance compounds from the lip of the flowers.	Not Evaluated	Not Evaluated	Not Evaluated	Possibly Threatened 1997 Global	Not Threatened	Tekinson & Güner 2010; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	Threatsearch!; Plants of the World Online	Rutherford & Groves 2017
Salep	Serapias vomeracea	Serapias vomeracea (Burm.f.) Briq.	Y				Least Concern	2011	Europe	LC 2018 Mediterranean; LC 2011 Europe; VU 2007 HR; LC 2009 FR; EN 1989 MT; EN 2011 BG; CR 2016 CH	Threatened	Kasperek & Grimm 1999; Caliskan et al 2020; Sandal Erzurumlu et al 2018	IUCN Red List 2022	
Edible	Stanhopea tigrina	Stanhopea tigrina Bateman ex Lindl.	Y	Tiger-spotted stanhopea (English)	MX		Not Evaluated	Not Evaluated	Not Evaluated	Threatened 2010 Global	Threatened		colplanta.org; Plants of the World Online	
Salep	Steveniella satyrioides	Steveniella satyrioides (Spreng.) Schltr.	Y	Satyrium-Like Steveniella	IR, UA, RU, GE, AZ, AM, TR	Steveniella satyrioides is found in short grassland, woodland edges, hazel plantations, alongside mountain paths and tracks, and in open deciduous and coniferous woodland. It prefers dry to damp, calcareous to neutral substrates. This species grows in full sunlight to mid-shade and the flowering time is from April to June (Delforge 1995, Vakhrameeva et al. 2008).	Endangered	2011	Europe	EN 2011 Europe; VU 2010 AM	Threatened	Ghorbani et al 2014; Ghorbani et al 2017; Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	IUCN Red List 2022	
Edible	Thelymitra carnea	Thelymitra carnea R.Br.	Y	Tiny sun orchid, Pink sun orchid (English)	AU, NZ	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not threatened 2012 NZ; Rare 2018 AU	Threatened		World Checklist of Plants	
Edible	Thelymitra circumsepta	Thelymitra circumsepta Fitzg.	Y	Naked sun orchid (English)	AU	Tuber geophyte. Thelymitra cyanea is a medium sized (to 50 cm), tuberous terrestrial orchid, which grows in sphagnum bogs or among the grasses, sedges and restidas of damp, peaty soils, in lowland to subalpine areas, from 200 to 1,800 m, over a minimum of eight ecoregions. The taxon has been collected in various, often riparian habitats, for example in temperate rainforest, swamps, open montane grasslands, in gumland scrub, on snowy flats and on banks of road cuttings. Thelymitra cyanea grows in colonies of four to 20 plants arising from vegetative extension. Thelymitra cyanea responds well to frequent disturbance and burning but is able to tolerate dense restiad vegetation and so is often the last sun orchid to persist for example in dense Sporadanthus dominated vegetation (New Zealand Plant Conservation Network 2005, Bernhardt 2009). Thelymitra cyanea flowers from October to March and fruits from December to June. Thrips tabacci have been observed as pollinators (New Zealand Plant Conservation Network 2005). Thelymitra cyanea is most likely to be confused with T. pulchella Hook.f., a rather variable species, which may grow in similar habits, and has a similar geographic distribution. Thelymitra cyanea is well marked by the usually distinctly darker blue striped flowers, obviously larger, wider, blunt ended and often wavy labelium, absence of a post anther lobe, and whose column are yellow, flattened, ribbon-like, mostly spirally twisted and intumed, lack cilia and have unequally bifid apices. The anther is usually fully exposed and the apex distinctly bifid. Thelymitra pulchella is extremely variable but its column arms are much more prominent, mostly toothed, adorned with yellow fimbriae or ciliate. Thelymitra pulchella is a species derived from past hybridisation between T. cyanea and T. longifolia (New Zealand Plant Conservation Network 2005).	Not Evaluated	2018	Australia (Victoria)	EN	Threatened		World Checklist of Plants	
Edible	Thelymitra cyanea	Thelymitra cyanea (Lindl.) Benth.	Y	Blue Sun-Orchid, Striped Sun Orchid, Swamp Sun Orchid, Veined sun orchid (English)	AU, NZ		Least Concern	2013	Global	LC 2013 Global; Not Threatened 2012 NZ; EN 2018 AU	Not Threatened	Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants	
Edible	Thelymitra fragrans	Thelymitra fragrans D.L.Jones & M.A.Clem	N	Unknown	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Plants	

Edibility	Species	Author	Y/N	Common Name	Distribution	Description	Conservation Status	Global Status	Regional Status	Threats	References		
Edible	<i>Thelymitra longifolia</i>	Thelymitra longifolia J.R.Forst. & G.Forst	Y	White sun orchid, Māikuku	AU, NZ	Broad-leaved orchid, 5-50 cm tall, with blue, pink or white flowers, and potato-like tubers. The leaves are 10-20 mm wide. Flowers in the summer. Probably the most widespread orchid in NZ, it grows on rocks, banks, and open ground to subalpine altitudes.; Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Threatened 2012 NZ	Not Threatened	Crowe A. A field guide to the native edible plants of New Zealand. pp.106 Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Thelymitra megalalyptra</i>	Thelymitra megalalyptra Fitzg.	Y	Scented sun orchid (English)	AU	Tuber geophyte.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Crowe A. A field guide to the native edible plants of New Zealand. pp.106 Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Thelymitra nuda</i>	Thelymitra nuda R.Br.	Y	Plain sun orchid (English)	AU	Tuber geophyte. This species is a tuber geophyte which grows in montane to subalpine, often peaty grasslands, in sunny exposed situations in stony, sandy clay, loamy soils or ultramafic rocks, in tree fern grasslands, montane forests and in disturbed areas such as roadsides, landslips, edges of walking tracks and abandoned garden sites.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Crowe A. A field guide to the native edible plants of New Zealand. pp.106 Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Thelymitra papuana</i>	Thelymitra papuana J.J.Sm.	Y	Unknown	AU, NZ		Least Concern	2013 Global	LC 2013 Global		Not Threatened		World Checklist of Useful Plants
Edible	<i>Thelymitra pulchella</i>	Thelymitra pulchella Hook.f.	Y	Striped sun orchid, Māikaika	AU, NZ	Broad-leaved orchid, 15-60 cm tall, with leaves are 6-10 mm wide. Flowers in the summer. Found throughout NZ on clay banks, gumland, and open and boggy places.; Tuber geophyte	Not Evaluated	Not Evaluated	Not Evaluated	Not Threatened 2012 NZ	Not Threatened	Crowe A. A field guide to the native edible plants of New Zealand. pp.106 Lim, T.K. (2016) Edible Medicinal and Non-Medicinal Plants: Modified Stems, Roots, Bulbs. Switzerland: Springer.	World Checklist of Plants
Edible	<i>Vanda tessellata</i>	Vanda tessellata (Roxb.) Hook. ex G.Don in J.C.Loudon	Y	Rasna, Rasna root (Unspecified & known to be used for multiple species); Grey orchid (English); Vanda (Indian)	IN, BD, NP, LK, MM	Lowland epiphytic orchid growing on trees and rocks in dry and intermediate zones (15-700 m.); Epiphytic chamaephyte.; Forest & shrubland.	Least Concern	2014 Global	LC 2014 Global; VU 2012 LK		Not Threatened	Rutherford, C. & Groves M. (2017). CITES - Case Study of Vanda tessellata (Vanda roxburghii) in Case Study of Vanda coerulea.....	World Checklist of Plants; IUCN Red List; POWO
Edible	<i>Vanilla abundiflora</i>	Vanilla abundiflora J.J.Sm.	N	Unknown	ID, MY	Climbing.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Tanaka, T. (1976). Tanaka's Cyclopedia of Edible Plants of the World. Keigaku Publishing Co., Tokyo. pp. 757.	World Checklist of Useful Plants; World Checklist of Plants
Edible	<i>Vanilla griffithii</i>	Vanilla griffithii Rchb.f.	Y	Telinga kerbau (Malayan and/or Indian)	ID, MY, TH, BR, CO, GF, GY, SR	Climbing.	Not Evaluated	Not Evaluated	Not Evaluated	Rare 1994 SG	Threatened	Tanaka, T. (1976). Tanaka's Cyclopedia of Edible Plants of the World. Keigaku Publishing Co., Tokyo. pp. 757.	World Checklist of Useful Plants; Plants of the World Online
Edible	<i>Vanilla quianensis</i>	Vanilla quianensis Spitzg.	Y	Vainilla	BR, CO, EC, GF, GY, PE, SR, VE	Climbing. Forest and woodland and native grassland habitat.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Online colplanta.org; Plants of the World Online
Edible	<i>Vanilla palmarum</i>	Vanilla palmarum (Salzm. ex Lindl.) Lindl.	Y	Unknown	GY, PE, SR, VE	Climbing epiphyte. Terrestrial herb. in forest and woodland, and shrubland.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Online colplanta.org; Plants of the World Online
Edible	<i>Vanilla planifolia</i>	Vanilla planifolia Andrews	Y	Mexican vanilla, Bourbon vanilla, Vanilla (English), Vanilla Platanillo, Bania, Platanillo, Vanilla Cimarrona, Vanilla Gruesa, platano (Spanish; Castilian), West Indian Vanilla (West Indies)	BD, BR, BZ, KY, CO, KM, CK, CR, PW, DO, EC, SV, GT, GY, HN, JM, MG, GU, MX, NC, PG, PA, PY, PE, RU, SC, SR, TO, TT, VE, CD	Climbing orchid. Widely cultivated for its seed pods. This species can be found in subtropical/tropical moist lowland forest. It seems to prefer moist forest, seasonally dry in spring, and favours calcareous terrain. It is absent in volcanic areas and in the wet tropical rainforests of Mexico. In moister areas it can be found in secondary, mature forests. It flowers mainly in April to May, towards the end of the dry season. In Northern Australia (Darwin/Cairns), flowering occurs in the period October to December at the beginning of the wet season, during the time locally known as the "build up";. Cultivated in Colombia, alt. 0-730 m.	Endangered	2020 Global	EN 2017 Global		Threatened	Teoh, E.S. (2016). Medicinal orchids of Asia;	IUCN Red List 2021 World Checklist of Plants Plants of the World Online; colplanta.org
Edible	<i>Vanilla pompona</i>	Vanilla pompona Schiede	Y	Vanilla x tahitensis	BO, BR, CO, CR, EC, GF, GT, GY, HN, JM, MX, NI, PA, PE, SR, TT, VE, DM.	This species occurs in several types of subtropical/tropical moist lowland forest (deciduous, subdeciduous, evergreen, lower mountain, gallery forest), in savannas or warm pine-oak forest, and also in flooded areas. It is common in seasonally very dry areas. It is usually absent from wet forests. The flowering period is from April to early June (Soto-Arenas 2009, Soto-Arenas and Dressler 2010);. Occurs in alt. 184-1700 m. Climbing.	Endangered	2020 Global	EN 2017 Global; Not Threatened 2009 GT		Threatened	Tanaka, T. (1976). Tanaka's Cyclopedia of Edible Plants of the World. Keigaku Publishing Co., Tokyo. pp. 757.	IUCN Red List 2021 World Checklist of Useful Plants
Edible	<i>Vanilla tahitensis</i>	Vanilla tahitensis J.W.Moore	Y	Tahitian bean	n/a	Vanilla odorata x V. planifolia, artificial hybrid.	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		World Checklist of Useful Plants
Salep	<i>Zeuxine strateumatica</i>	Zeuxine strateumatica (L.) Schlt.	Y	Kanjhar Puttyroot, Adam and Eve	AE, BD, MY, ID, KH, CN, IN, IR, JP, LA, MM, NP, PG, PK, PH, LK, TJ, TW, TH, TM, UZ, VN (US, BS, BM, BR, CU, JM, PR, SA Introduced)	The species occurs in a wide variety of wetland types, from deep shaded forests, to river margins and rice fields. 160-330 m asl.	Least Concern	2011 Global	Not Evaluated		Not Evaluated	Subedi, A. et al. (2013). Collection and trade of wild-harvested orchids in Nepal.	IUCN Red List 2022
Edible	<i>Aplectrum hyemale</i>	Aplectrum hyemale (Muhl. ex Willd.) Torr.	Y	Tree orchid	US, CA		Not Evaluated	Not Evaluated	Not Evaluated	LC 1984 Global	Not Threatened		Facciola 1998
Edible	<i>Prosthechea cochleata</i>	Prosthechea cochleata (L.) W.E.Higgins	Y	Tree orchid	VE		Not Evaluated	Not Evaluated	Not Evaluated	LC 2016 DO; LC 2013 PR; EN 2013 FR; LC 2009 GT; CR 2019 GP	Not Threatened		Facciola 1998
Edible	<i>Cremastra appendiculata</i>	Cremastra appendiculata (D.Don) Makino	Y	Unknown	IN, CN, BT, MM, NP, KR, JP, LA, RU, TH, TW, VN		Not Evaluated	Not Evaluated	Not Evaluated	LC 2017 TW; NT 2012 KR; NT 2013 CN	Not Threatened		Kunkel 1984
Edible	<i>Disa hians</i>	Disa hians (L.f.) Spreng.	Y	Unknown	ZA		Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 ZA	Not Threatened		Kunkel 1984
Edible	<i>Disa barbata</i>	Disa barbata (L.f.) Sw.	Y	Unknown	ZA		Not Evaluated	Not Evaluated	Not Evaluated	CR 2012 ZA	Threatened		Kunkel 1984
Edible	<i>Malaxis monophyllos</i> var. <i>monophyllos</i>	Malaxis monophyllos var. monophyllos	Y	(Listed on RL as Malaxis monophyllos) Single Leaf Malaxis; White Adder's Mouth (English)	US, RU, AT, EE, LT, LV, CA, CN, CZ, SK, FI, FR, MN, IT, JP, KR, NO, PH, PL, RO, SE, CH, TW, NP, BT, MM, UA, RS, ME, Extinct: HU	Malaxis monophyllos is found in damp meadows, woodland margins, flushed slopes, bogs in conifer and deciduous forests, peat bogs and fens. It likes damp to wet, neutral or slightly alkaline soils and grows in mid-shade and more often in moderate humidity conditions. The flowering time of the species is from June to August (Delforge 1995, GIROS 2009, Pignatti 1982, Rossi 2002, Vakhrameeva et al. 2008). From RL	Near Threatened	2011 Europe	Not Evaluated	LC 2013 CN; NT 2014 SK; NT 2011 Europe; CR 2006 NO; VU 2005 SE; VU 2003 Carpathian Mountains; EX 2007 HU; EN 2010 FI; VU 2010 SE; CR 2012 CZ; CR 2007 HR; VU 2016 CH; LC 2017 TW; -r 1999 AT; VU 2008 EE; TH 1999 DE; VU 2012 KR	Threatened		Kunkel 1984
Edible	<i>Vanilla appendiculata</i>	Vanilla appendiculata Rolfe	Y	Unknown	BR, CO, GY, PE, UK, CU, DO, JM, PR		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Kunkel 1984
Edible	<i>Vanilla claviculata</i>	Vanilla claviculata Sw.	Y	Unknown	PR		Not Evaluated	Not Evaluated	Not Evaluated	LC 2005 CU; VU 2016 DO; LC 2013 PR	Not Threatened		Kunkel 1984
Edible	<i>Vanilla odorata</i>	Vanilla odorata C.Presl	Y	Vainilla Tlatepusco, Vainilla de Teutitla (Spanish; Castilian); Vainilla, Vainillo (unk.)	BZ, BO, BR, CO, CR, EC, GF, GT, GY, HN, MX, NI, PA, PR, SR, VE, BS, BR, CO, CR, CU, DO, SV, US, JM, MX, PA, TT, VE	This species can be common in secondary vegetation derived from tall, evergreen, tropical forest and rainforest, in gaps or in slopes with cleared canopy in primary forests. Flowering time is mainly in April and May, but the vanilla growers in the Oaxaca Chinantla mention other sporadic flowering in August and November. The flowers remain open until 14:30 (Soto-Arenas and Dressler 2010).	Endangered	2017 Global	EN 2017 Global		Threatened		Kunkel 1984; Gretzinger & Dean In: Hawkin-Frenkel & Belanger 2011
Edible	<i>Vanilla phaeantha</i>	Vanilla phaeantha Rchb.f	Y	Tapia (Spanish; Castilian)	JM, MX, PA, TT, VE	This species grows in subtropical/tropical swamp forest. The known specimens are	Endangered	2020 Global	NT 2005 CU; CR 2016 DO; EN 2010 US; EN 2017 Global		Threatened		Kunkel 1984
Edible	<i>Platanthera dilatata</i>	Platanthera dilatata (Pursh) Lindl. ex L.C.Beck	Y	White bog orchid, Rein	US, CN		Not Evaluated	Not Evaluated	Not Evaluated	LC 2016 Global	Not Threatened		Kirk 1970
Edible	<i>Caladenia latifolia</i>	Caladenia latifolia R.Br.	Y	Kar. Kararr (Noonoeer)	AU (SOA, TAS, VIC)	Pink Fairy Orchid is a tuberous, perennial plant growing up to 45cm in height. It has	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Hansen & Horsfall (2019)
Edible	<i>Prasophyllum fimbria</i>	Prasophyllum fimbria Rchb.	Y	Djubak, Tuboc (Noongt AU (WA)		The Fringed Leek Orchid is an impressive, tuberous, perennial plant that grows to	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Hansen & Horsfall (2019)
Edible	<i>Pterostylis vittata</i>	Pterostylis vittata Lindl.	Y	Banded Greenhood On AU (SOA, TAS, VIC)		Tuberous perennial orchid that only grow to around 0.45m high. Nonflowering pla	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Hansen & Horsfall (2019)
Edible	<i>Pterostylis recurva</i>	Pterostylis recurva Benth.	Y	Juq Orchid (English); K AU (WA)		Tuberous perennial plant that grows to around 0.8m in height. It is easily recognis	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Hansen & Horsfall (2019)
Edible	<i>Pyrorchis nigricans</i>	Pyrorchis nigricans (R.Br.) [	Y	Pyrorchis nigricans, Pot NZ (North)	AU (SOA, TAS, VIC)	Tuberous, perennial plants that grow to 30cm in height. They have large, ear-shap	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Hansen & Horsfall (2019)
Edible	<i>Cyrtostylis reniformis</i>	Cyrtostylis reniformis R.Br.	Y	Mosquito orchid (English) AU (NSW, SOA)			Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Cherikoff (1997)
Edible	<i>Caladenia patersonii</i>	Caladenia patersonii R.Br.	Y	Ground orchid (English) AU (NSW, SOA)			Not Evaluated	Not Evaluated	Not Evaluated	EN 2014 AU (VIC)	Not Evaluated		Cherikoff (1997)
Edible	<i>Chiloglottis trapeziformis</i>	Chiloglottis trapeziformis F	Y	Broad-lipped bird orchid NZ (North), AU (NSW, SOA, TAS, VIC)			Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Cherikoff (1997)
Edible	<i>Gastrodia lacista</i>	Gastrodia lacista D.L.Jones	N	Unknown	AU (WA)		Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated		Hansen & Horsfall (2019)

Synonyms

Taxon_name & author WCSP	Synonyms
Abelmoschus esculentus	Abelmoschus bammia Webb
Abelmoschus esculentus	Abelmoschus longifolius (Willd.) Kostel.
Abelmoschus esculentus	Abelmoschus officinalis (DC.) Endl.
Abelmoschus esculentus	Abelmoschus praecox (Forssk.) Sickenb.
Abelmoschus esculentus	Abelmoschus tuberculatus Pal & Singh
Abelmoschus esculentus	Abelmoschus tuberculatus var. deltoideifolius T.K.Paul & M.P.Nayar
Abelmoschus esculentus	Hibiscus bammia Tozzetti
Abelmoschus esculentus	Hibiscus esculentus L.
Abelmoschus esculentus	Hibiscus ficifolius Mill.
Abelmoschus esculentus	Hibiscus hispidissimus A.Chev.
Abelmoschus esculentus	Hibiscus longifolius Willd.
Abelmoschus esculentus	Hibiscus praecox Forssk.
Acianthus exsertus R.Br.	Epipactis exserta (R.Br.) Poir.
Acianthus exsertus R.Br.	Acianthus pusillus D.L.Jones
Acianthus fornicates R.Br.	Epipactis fornicata (R.Br.) Poir
Acianthus fornicates R.Br.	Acianthus brunonis F.Muell.
Acianthus fornicates R.Br.	Acianthus apprimus D.L.Jones
Acianthus fornicates R.Br.	Acianthus borealis D.L.Jones
Acianthus fornicates R.Br.	Acianthus collinus D.L.Jones
Acianthus fornicates R.Br.	Acianthus exiguus D.L.Jones
Anacamptis boryi (Rchb.f.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis morio subsp. boryi (Rchb.f.) Soó
Anacamptis boryi (Rchb.f.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis boryi Rchb.f.
Anacamptis boryi (Rchb.f.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis quadripunctata var. boryi (Rchb.f.) Nyman
Anacamptis boryi (Rchb.f.) R.M.Bateman, Pridgeon & M.W.Chase	Herorchis boryi (Rchb.f.) D.Tyteca & E.Klein
Anacamptis boryi (Rchb.f.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis boryi var. alba C.Alibertis & A.Alibertis
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis collina Banks & Sol.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Barlia collina (Banks & Sol. ex Russell) Szlach.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Herorchis collina (Banks & Sol. ex Russell) D.Tyteca & E.Klein
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Vermeulenla collina (Banks & Sol. ex Russell) P.Delforge
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis saccata Ten.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis sparsiflora Spruner ex Rchb.f.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis chlorotica Woronow
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis fedtschenkoi Czerniak.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis saccata f. orbicularis Ruppert
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis saccata subsp. fedtschenkoi (Czerniak.) Soó
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis papilionacea subsp. chlorotica (Woronow) Soó
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis collina var. flavescens Soó
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis saccata lusus flavescens Soó
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis leucoglossa O.Schwarz
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis collina f. purpurea Maire & Weiller
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Vermeulenla chlorotica (Woronow) Á.Löve & D.Löve
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Vermeulenla fedtschenkoi (Czerniak.) Á.Löve & D.Löve
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Vermeulenla saccata (Ten.) Á.Löve & D.Löve
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis dulukae Hautz.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeon	Orchis saccata var. fedtschenkoi (Czerniak.) Hautz.

Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Orchis saccata f. flavescens (Soó) Raynaud
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Orchis collina f. flavescens (Soó) D.Rivera & Lopez Velez
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Orchis collina subsp. chlorotica (Woronow) Aver.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Orchis collina subsp. fedtschenkoi (Czerniak.) Aver.
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Anacamptis collina f. flavescens (Soó) F.M.Vázquez
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Anacamptis collina f. laxispicata F.M.Vázquez
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Anacamptis dulukae (Hautz.) B.Bock
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Anacamptis collina subsp. fedtschenkoi (Czerniak.) Kuropatkin & Efimov
Anacamptis collina (Banks & Sol. ex Russell) R.M.Bateman, Pridgeor	Vermeulenella collina f. leucoglossa (O.Schwarz) P.Delforge
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora L.
Anacamptis coriophora (L.) R.M.Bateman	Anteriorchis coriophora (L.) E.Klein & Strack
Anacamptis coriophora (L.) R.M.Bateman	Herorchis coriophora (L.) D.Tyteca & E.Klein
Anacamptis coriophora (L.) R.M.Bateman	Orchis cimicina Crantz
Anacamptis coriophora (L.) R.M.Bateman	Orchis fragrans Pollini
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. inodora DC.
Anacamptis coriophora (L.) R.M.Bateman	Orchis polliniana Spreng.
Anacamptis coriophora (L.) R.M.Bateman	Orchis cassidea M.Bieb.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. polliniana (Spreng.) Pollini
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. symphyetala Brot.
Anacamptis coriophora (L.) R.M.Bateman	Orchis fragrans f. cassidea (M.Bieb.) Rchb.
Anacamptis coriophora (L.) R.M.Bateman	Orchis fragrans f. grandiflora Rchb.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. latifolia Tinant
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. fragrans (Pollini) Boiss.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. odorata Ten. ex Rchb.f.
Anacamptis coriophora (L.) R.M.Bateman	Orchis martinii Timb.-Lagr.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. carpetana Willk.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. cibiniensis Schur
Anacamptis coriophora (L.) R.M.Bateman	Orchis coreosmus St.-Lag.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. cassidea (M.Bieb.) Nyman
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora subsp. cimicina (Crantz) Arcang.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora subsp. martinii (Timb.-Lagr.) Nyman
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora subsp. carpetana (Willk.) K.Richt.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora subsp. fragrans (Pollini) K.Richt.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. cimicina (Crantz) Arcang.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. martinii (Timb.-Lagr.) Gaut.
Anacamptis coriophora (L.) R.M.Bateman	Orchis fragrans var. apricorum Duffort
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. major E.G.Camus
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. czeremossica Zapal.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora f. alba E.G.Camus
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora subsp. cimicina (Crantz) E.G.Camus
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora f. virescens E.G.Camus
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora f. nana W.Zimm.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora proles fragrans (Pollini) Rouy
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora proles martinii (Timb.-Lagr.) Rouy
Anacamptis coriophora (L.) R.M.Bateman	Orchis carpetana (Willk.) Pau
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora f. borosiana Soó

Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. sennenii A.Camus
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. dolichoceras Maire
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. lusciniarum Maire
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. elongata Maire
Anacamptis coriophora (L.) R.M.Bateman	Orchis nervulosa Sakalo
Anacamptis coriophora (L.) R.M.Bateman	× Orchidactyla carpetana (Willk.) Borsos & Soó
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora subsp. carpetana (Willk.) Malag.
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora subsp. nervulosa (Sakalo) Soó
Anacamptis coriophora (L.) R.M.Bateman	Orchis fragrans var. elongata (Maire) Raynaud
Anacamptis coriophora (L.) R.M.Bateman	Orchis coriophora var. subsancta Balayer
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora subsp. fragrans (Pollini) R.M.Bateman
Anacamptis coriophora (L.) R.M.Bateman	Anteriorchis coriophora subsp. fragrans (Pollini) Jacquet
Anacamptis coriophora (L.) R.M.Bateman	Anteriorchis coriophora subsp. martrinii (Timb.-Lagr.) Jacquet
Anacamptis coriophora (L.) R.M.Bateman	Anteriorchis fragrans (Pollini) Szlach.
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora subsp. carpetana (Willk.) Bernardos
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora subsp. martrinii (Timb.-Lagr.) Jacquet & Scappat.
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis fragrans (Pollini) R.M.Bateman
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora subsp. nervulosa (Sakalo) Mosyakin & Timch.
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora var. carpetana (Willk.) Kreutz
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora var. martrinii (Timb.-Lagr.) Kreutz
Anacamptis coriophora (L.) R.M.Bateman	Herorchis coriophora subsp. fragrans (Pollini) D.Tyteca & E.Klein
Anacamptis coriophora (L.) R.M.Bateman	Herorchis coriophora subsp. martrinii (Timb.-Lagr.) D.Tyteca & E.Klein
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora f. alba (E.G.Camus) F.M.Vázquez
Anacamptis coriophora (L.) R.M.Bateman	Anacamptis coriophora f. virescens (E.G.Camus) F.M.Vázquez
Anacamptis coriophora (L.) R.M.Bateman	Anteriorchis coriophora var. carpetana (Willk.) P.Delforge
Anacamptis coriophora (L.) R.M.Bateman	Anteriorchis coriophora var. martrinii (Timb.-Lagr.) P.Delforge
Anacamptis coriophora (L.) R.M.Bateman	Anteriorchis fragrans f. apricorum (Duffort) P.Delforge
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis coriophora L.
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis coriophora (L.) E.Klein & Strack
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Herorchis coriophora (L.) D.T
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis coriophora f. alba (E.G.Camus) F.M.Vázquez
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis coriophora var. carpetana (Willk.) Kreutz
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis coriophora subsp. carpetana (Willk.) Bernardos
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis coriophora subsp. fragrans (Pollini) R.M.Bateman, Pridgeon & M.W.Chase
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis coriophora var. martrinii (Timb.-Lagr.) Kreutz
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis coriophora subsp. martrinii (Timb.-Lagr.) Jacquet & Scappat.
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis coriophora f. virescens (E.G.Camus) F.M.Vázquez
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis fragrans (Pollini) R.M.Bateman
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis coriophora (L.) E.Klein & Strack
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis coriophora var. carpetana (Willk.) P.Delforge
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis coriophora subsp. fragrans (Pollini) Jacquet
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis coriophora var. martrinii (Timb.-Lagr.) P.Delforge
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis coriophora subsp. martrinii (Timb.-Lagr.) Jacquet
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis fragrans (Pollini) Szlach.
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis fragrans f. apricorum (Duffort) P.Delforge
Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase	Herorchis coriophora (L.) D.Tyteca & E.Klein



Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Herorchis coriophora subsp. fragrans (Pollini) D.Tyteca & E.Klein  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Herorchis coriophora subsp. martrinii (Timb.-Lagr.) D.Tyteca & E.Klein  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase × Orchidactyla carpetana (Willk.) Borsos & Soó  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis carpetana (Willk.) Pau  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis cassidea M.Bieb.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis cimicina Crantz  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coreosmus St.-Lag.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora L.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora f. alba E.G.Camus  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora subsp. carpetana (Willk.) K.Richt.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora var. carpetana Willk.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora subsp. carpetana (Willk.) Malag.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora subsp. cimicina (Crantz) E.G.Camus  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora subsp. cimicina (Crantz) Arcang.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora subsp. fragrans (Pollini) K.Richt.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora subsp. martrinii (Timb.-Lagr.) Nyman  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora subsp. nervulosa (Sakalo) Soó  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora var. subsancta Balayer  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis coriophora f. virescens E.G.Camus  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis fragrans Pollini  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis fragrans var. apricorum Duffort  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis martrinii Timb.-Lagr.  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis nervulosa Sakalo  
 Anacamptis coriophora (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis polliniana Spreng.  
 Anacamptis laxiflora (Lam.) R.M.Bateman, Pridgeon & M.W.Chase Orchis laxiflora Lam.  
 Anacamptis laxiflora (Lam.) R.M.Bateman, Pridgeon & M.W.Chase Orchis palustris subsp. laxiflora (Lam.) Batt.  
 Anacamptis laxiflora (Lam.) R.M.Bateman, Pridgeon & M.W.Chase Herorchis laxiflora (Lam.) D.Tyteca & E.Klein  
 Anacamptis laxiflora (Lam.) R.M.Bateman, Pridgeon & M.W.Chase Paludorchis laxiflora (Lam.) P.Delforge  
 Anacamptis laxiflora subsp. dinsmorei (Schltr.) H.Kretzschmar, Eccarius & H.Dietr.  
 Anacamptis laxiflora subsp. dinsmorei (Schltr.) H.Kretzschmar, Eccar Herorchis dinsmorei (Schltr.) D.Tyteca & E.Klein  
 Anacamptis laxiflora subsp. dinsmorei (Schltr.) H.Kretzschmar, Eccar Orchis dinsmorei (Schltr.) H.Baumann & Dafni  
 Anacamptis laxiflora subsp. dinsmorei (Schltr.) H.Kretzschmar, Eccar Orchis elegans var. dinsmorei (Schltr.) H.I.Schäf.  
 Anacamptis laxiflora subsp. dinsmorei (Schltr.) H.Kretzschmar, Eccar Orchis laxiflora subsp. dinsmorei (Schltr.) Kreutz  
 Anacamptis laxiflora subsp. dinsmorei (Schltr.) H.Kretzschmar, Eccar Orchis laxiflora var. dinsmorei Schltr.  
 Anacamptis laxiflora subsp. dinsmorei (Schltr.) H.Kretzschmar, Eccar Paludorchis dinsmorei (Schltr.) P.Delforge  
 Anacamptis morio (L.) R.M.Bateman, Pridgeon & M.W.Chase Herorchis morio (L.) D.Tyteca & E.Klein  
 Anacamptis morio (L.) R.M.Bateman, Pridgeon & M.W.Chase Orchis morio L.  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Anacamptis longicornu (Poir.) R.M.Bateman, Pridgeon & M.W.Chase  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Anacamptis longicornu subsp. linkiana F.M.Vázquez  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Anacamptis morio f. leuca Oddone & Casabianca  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Anacamptis morio f. pallida (Maire & Weiller) Oddone & Casabianca  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Herorchis longicornu (Poir.) D.Tyteca & E.Klein  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Orchis longicornu Poir.  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Orchis longicornu f. albiflora E.G.Camus  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Orchis longicornu f. pallida Maire & Weiller  
 Anacamptis morio subsp. longicornu (Poir.) H.Kretzschmar, Eccarius Orchis morio subsp. longicornu (Poir.) Douin

Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Anacamptis picta (Loisel.) R.M.Bateman
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Anacamptis picta f. nivea F.M.Vázquez
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Anacamptis picta f. trimaculata F.M.Vázquez
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Herorchis morio subsp. picta (Loisel.) D.Tyteca & E.Klein
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Herorchis picta (Loisel.) P.Delforge
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Orchis aschersonii (Rouy) Soó
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Orchis morio subsp. picta (Loisel.) K.Richt.
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Orchis picta Loisel.
Anacamptis morio subsp. picta (Loisel.) Jacquet & Scappat.	Orchis picta f. trimaculata (F.M.Vázquez) Hervás, De Bellard, Calzado, J.C.Huertas, Reyes Carr. & Ruíz Cano
Anacamptis morio subsp. syriaca (E.G.Camus) H.Kretzschmar, Eccae	Anacamptis syriaca (E.G.Camus) R.M.Bateman, Pridgeon & M.W.Chase
Anacamptis morio subsp. syriaca (E.G.Camus) H.Kretzschmar, Eccae	Herorchis syriaca (Boiss. ex H.Baumann & Künkele) D.Tyteca & E.Klein
Anacamptis morio subsp. syriaca (E.G.Camus) H.Kretzschmar, Eccae	Orchis morio subsp. syriaca E.G.Camus
Anacamptis morio subsp. syriaca (E.G.Camus) H.Kretzschmar, Eccae	Orchis picta subsp. libani Renz
Anacamptis morio subsp. syriaca (E.G.Camus) H.Kretzschmar, Eccae	Orchis syriaca (E.G.Camus) Boiss. ex H.Baumann & Künkele
Anacamptis palustris (Jacq.) R.M.Bateman, Pridgeon & M.W.Chase	Anacamptis laxiflora subsp. palustris (Jacq.) Kuropatkin & Efimov
Anacamptis palustris (Jacq.) R.M.Bateman, Pridgeon & M.W.Chase	Herorchis palustris (Jacq.) D.Tyteca & E.Klein
Anacamptis palustris (Jacq.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis laxiflora subsp. palustris (Jacq.) Corb.
Anacamptis palustris (Jacq.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis laxiflora subsp. palustris (Jacq.) Bonnier & Layens
Anacamptis palustris (Jacq.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis palustris Jacq.
Anacamptis palustris (Jacq.) R.M.Bateman, Pridgeon & M.W.Chase	Paludorchis palustris (Jacq.) P.Delforge
Anacamptis papilionacea (L.) R.M.Bateman, Pridgeon & M.W.Chase	Herorchis papilionacea (L.) D.Tyteca & E.Klein
Anacamptis papilionacea (L.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis papilionacea L.
Anacamptis papilionacea (L.) R.M.Bateman, Pridgeon & M.W.Chase	Vermeulenia papilionacea (L.) Á.Löve & D.Löve
Anacamptis pyramidalis (L.) Rich.	* Orchis pyramidalis L.
Anacamptis pyramidalis (L.) Rich.	Aceras pyramidale (L.) Rchb.f.
Anacamptis sancta (L.) R.M.Bateman, Pridgeon & M.W.Chase	Anteriorchis sancta (L.) E.Klein & Strack
Anacamptis sancta (L.) R.M.Bateman, Pridgeon & M.W.Chase	Herorchis sancta (L.) D.Tyteca & E.Klein
Anacamptis sancta (L.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis coriophora subsp. sancta (L.) Hayek
Anacamptis sancta (L.) R.M.Bateman, Pridgeon & M.W.Chase	Orchis sancta L.
Anoectochilus albolineatus C.S.P. Parish & Rchb.f.	Anoectochilus siamensis Schltr.
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Aplectra elatior Raf.
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Aplectrum shortii Rydb.
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Aplectrum spicatum Britton, Sterns & Poggenb.
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Aplectrum hyemale var. pallidum (House) Barnhart
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Aplectrum hyemale f. pallidum (House) House
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Aplectrum spicatum var. pallidum House
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Corallorhiza hyemalis (Muhl. ex Willd.) Nutt.
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Epidendrum hyemale (Muhl. ex Willd.) Poir.
Aplectrum hyemale (Muhl. ex Willd.) Torr.	Cymbidium hyemale Muhl. ex Willd.
Arachis hypogaea	Arachidna hypogaea (L.) Moench
Arachis hypogaea	Arachis africana Lour.
Arachis hypogaea	Arachis americana Ten.
Arachis hypogaea	Arachis asiatica Lour.
Arachis hypogaea	Arachis guaraniana Bertoni
Arachis hypogaea	Arachis hypogaea var. aequatoriana Krapov. & W.C.Greg.

Arachis hypogaea	Arachis hypogaea subsp. fastigiata Waldron
Arachis hypogaea	Arachis hypogaea subsp. nambyquarae (Hoehne) A.Chev.
Arachis hypogaea	Arachis hypogaea var. nambyquarae (Hoehne) Burkart
Arachis hypogaea	Arachis hypogaea f. nambyquarae (Hoehne) F.J.Herm.
Arachis hypogaea	Arachis hypogaea var. peruviana Krapov. & W.C.Greg.
Arachis hypogaea	Arachis hypogaea subsp. procumbens Waldron
Arachis hypogaea	Arachis hypogaea f. typica Hoehne
Arachis hypogaea	Arachis nambyquarae Hoehne
Arachis hypogaea	Arachis oleifera A.Chev.
Arachis hypogaea	Arachis rasteiro A.Chev.
Brachycorythis pubescens Harv.	Platanthera brachycorythis Schltr.
Brachycorythis pubescens Harv.	Peristylus hispidulus Rendle
Brachycorythis pubescens Harv.	Platanthera hispidula (Rendle) Gilg
Brachycorythis pubescens Harv.	Brachycorythis goetziana Kraenzl.
Brachycorythis pubescens Harv.	Brachycorythis kassneriana Kraenzl.
Brachycorythis pubescens Harv.	Brachycorythis baumii Schltr.
Brachycorythis pubescens Harv.	Brachycorythis hispidula (Rendle) Schltr.
Brachycorythis pubescens Harv.	Brachycorythis stolzii Schltr.
Brachycorythis pubescens Harv.	Brachycorythis sudanica Schltr.
Bulbophyllum leopardinum (Wall.) Lindl. ex Wall.	Bulbophyllum colomaculosum Z.H.Tsi & S.C.Chen
Bulbophyllum leopardinum (Wall.) Lindl. ex Wall.	Bulbophyllum schmidtianum Rchb.f.
Bulbophyllum leopardinum (Wall.) Lindl. ex Wall.	Dendrobium leopardinum Wall.
Bulbophyllum leopardinum (Wall.) Lindl. ex Wall.	Phyllorkis leopardina (Wall.) Kuntze
Bulbophyllum leopardinum (Wall.) Lindl. ex Wall.	Phyllorkis schmidtiana (Rchb.f.) Kuntze
Bulbophyllum leopardinum (Wall.) Lindl. ex Wall.	Sarcopodium leopardinum (Wall.) Lindl. & Paxton
Caladenia caerulea R.Br.	Caladenia caerulea var. caerulea
Caladenia caerulea R.Br.	Caladenia caerulea var. heliotropica Rupp
Caladenia caerulea R.Br.	Pentisea caerulea (R.Br.) Szlach.
Caladenia caerulea R.Br.	Cyanicula caerulea (R.Br.) Hopper & A.P.Br.
Caladenia carnea R.Br.	Petalochilus carneus (R.Br.) D.L.Jones & M.A.Clem.
Caladenia carnea R.Br.	Caladenia angustata Hook.f.
Caladenia carnea R.Br.	Caladenia atkinsonii Rodway
Caladenia carnea R.Br.	Caladenia carnea var. subulata Nicholls
Caladenia carnea R.Br.	Caladenia catenata f. carnea (R.Br.) N.Hallé
Caladenia carnea R.Br.	Calonema filamentosum (R.Br.) Szlach.
Caladenia filamentosa R.Br.	Calonemorichis filamentosa (R.Br.) Szlach.
Caladenia filamentosa R.Br.	Jonesiopsis filamentosa (R.Br.) D.L.Jones & M.A.Clem.
Caladenia fuscata (Rchb.f.) M.A.Clem & D.L.Jones	Petalochilus fuscatus (Rchb.f.) D.L.Jones & M.A.Clem.
Caladenia fuscata (Rchb.f.) M.A.Clem & D.L.Jones	Caladenia carnea var. fuscata Rchb.f.
Caladenia gracilis R.Br.	Caladenia angustata Lindl.
Caladenia gracilis R.Br.	Caladenia carnea var. quadriseriata Benth.
Caladenia gracilis R.Br.	Stegostyla angustata (Lindl.) D.L.Jones & M.A.Clem.
Caladenia gracilis R.Br.	Stegostyla gracilis (R.Br.) D.L.Jones & M.A.Clem.
Caladenia gracilis R.Br.	Caladenia testacea var. angustata (Lindl.) Ewart
Caladenia latifolia R.Br.	Caladenia elongata Lindl.



Cephalanthera damasonium (Mill.) Druce	Cephalanthera lancifolia (Murray) Dumort.
Cephalanthera damasonium (Mill.) Druce	Cephalanthera latifolia Janch.
Cephalanthera damasonium (Mill.) Druce	Cephalanthera ochroleuca (Baumg.) Rchb.
Cephalanthera damasonium (Mill.) Druce	Cephalanthera pallens subsp. ochroleuca (Baumg.) Nyman
Cephalanthera damasonium (Mill.) Druce	Cephalanthera yunnanensis Hand.-Mazz.
Cephalanthera damasonium (Mill.) Druce	Cymbidium pallens Sw.
Cephalanthera damasonium (Mill.) Druce	Epipactis alba Crantz
Cephalanthera damasonium (Mill.) Druce	Epipactis lancifolia (Murray) F.W.Schmidt
Cephalanthera damasonium (Mill.) Druce	Epipactis ochroleuca Baumg.
Cephalanthera damasonium (Mill.) Druce	Serapias damasonium Mill.
Cephalanthera damasonium (Mill.) Druce	Serapias grandiflora Oeder
Cephalanthera damasonium (Mill.) Druce	Serapias grandiflora subsp. lancifolia (Murray) Ehrh.
Cephalanthera damasonium (Mill.) Druce	Serapias lancifolia Murray
Cephalanthera damasonium (Mill.) Druce	Serapias latifolia Mill.
Cephalanthera damasonium (Mill.) Druce	Serapias ochroleuca (Baumg.) Steud.
Cephalanthera damasonium (Mill.) Druce	Serapias pallens (Sw.) S.B.Jundz.
Cephalanthera damasonium (Mill.) Druce	Serapias tota-alba Gilib.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera acuminata Wall. ex Lindl.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera alpicola Fukuy.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera alpicola var. shizuoi (F.Maek.) T.Hashim.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera angustifolia Simonk.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera conferta (B.Baumann & H.Baumann) Kreutz
Cephalanthera longifolia (L.) Fritsch	Cephalanthera elegans Schltr.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera ensifolia Rich.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera grandiflora Gray
Cephalanthera longifolia (L.) Fritsch	Cephalanthera lonchophylla Rchb.f.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera longifolia subsp. conferta B.Baumann & H.Baumann
Cephalanthera longifolia (L.) Fritsch	Cephalanthera longifolia f. conformis Suetsugu & H.Hayak.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera longifolia var. rosea Perko
Cephalanthera longifolia (L.) Fritsch	Cephalanthera mairei Schltr.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera maravignae Tineo
Cephalanthera longifolia (L.) Fritsch	Cephalanthera pallens Rich.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera shizuoi F.Maek.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera taiwaniana S.S.Ying
Cephalanthera longifolia (L.) Fritsch	Cephalanthera thomsonii Rchb.f.
Cephalanthera longifolia (L.) Fritsch	Cephalanthera xiphophyllum Rchb.f.
Cephalanthera longifolia (L.) Fritsch	Cymbidium xiphophyllum (Ehrh. ex L.f.) Sw.
Cephalanthera longifolia (L.) Fritsch	Epipactis ensifolia F.W.Schmidt
Cephalanthera longifolia (L.) Fritsch	Epipactis grandiflora (L.) Sm.
Cephalanthera longifolia (L.) Fritsch	Epipactis grandifolia All.
Cephalanthera longifolia (L.) Fritsch	Epipactis longifolia (L.) All.
Cephalanthera longifolia (L.) Fritsch	Epipactis pallens Sw.
Cephalanthera longifolia (L.) Fritsch	Epipactis pallida Sw.
Cephalanthera longifolia (L.) Fritsch	Epipactis xiphophylla (Ehrh. ex L.f.) Sw.
Cephalanthera longifolia (L.) Fritsch	Helleborine longifolia (L.) Moench
Cephalanthera longifolia (L.) Fritsch	Limodorum acuminatum (Wall. ex Lindl.) Kuntze



Cephalanthera longifolia (L.) Fritsch	Limodorum grandiflorum (L.) Kuntze
Cephalanthera longifolia (L.) Fritsch	Limodorum longifolium (L.) Kuntze
Cephalanthera longifolia (L.) Fritsch	Serapias alba (Crantz) Salisb.
Cephalanthera longifolia (L.) Fritsch	Serapias ensifolia (L.f.) Murray
Cephalanthera longifolia (L.) Fritsch	Serapias grandiflora L.
Cephalanthera longifolia (L.) Fritsch	Serapias grandiflora subsp. ensifolia (L.f.) Ehrh.
Cephalanthera longifolia (L.) Fritsch	Serapias helleborine var. longifolia L.
Cephalanthera longifolia (L.) Fritsch	Serapias lonchophyllum L.f.
Cephalanthera longifolia (L.) Fritsch	Serapias longifolia (L.) L.
Cephalanthera longifolia (L.) Fritsch	Serapias nivea Vill.
Cephalanthera longifolia (L.) Fritsch	Serapias pallida Wahlenb.
Cephalanthera longifolia (L.) Fritsch	Serapias xiphophyllum Ehrh. ex L.f.
Cephalanthera rubra (L.) Rich.	Cephalanthera comosa Tineo
Cephalanthera rubra (L.) Rich.	Cephalanthera rubra f. alba Raynaud
Cephalanthera rubra (L.) Rich.	Cephalanthera rubra f. comosa (Tineo) Robatsch
Cephalanthera rubra (L.) Rich.	Cymbidium rubrum (L.) Sw.
Cephalanthera rubra (L.) Rich.	Dorycheile rubra (L.) Fuss
Cephalanthera rubra (L.) Rich.	Epipactis purpurea Crantz
Cephalanthera rubra (L.) Rich.	Epipactis rubra (L.) F.W.Schmidt
Cephalanthera rubra (L.) Rich.	Helleborine rubra (L.) Schrank
Cephalanthera rubra (L.) Rich.	Limodorum rubrum (L.) Kuntze
Cephalanthera rubra (L.) Rich.	Serapias rubra L.
Chiloglottis diphylla R.Br.	Caladenia diphylla (R.Br.) Rchb.f.
Chiloglottis formicifera Fitzg.	Myrmechila formicifera (Fitzg.) D.L.Jones & M.A.Clem.
Chiloglottis platyptera D.L.Jones	Myrmechila platyptera (D.L.Jones) D.L.Jones & M.A.Clem.
Chiloglottis pluricallata D.L.Jones	Simpliglottis pluricallata (D.L.Jones) Szlach.
Chiloglottis trapeziformis Fitzg.	Myrmechila trapeziformis (Fitzg.) D.L.Jones & M.A.Clem.
Chiloglottis trapeziformis Fitzg.	Myrmechila trapeziformis (Fitzg.) D.L.Jones & M.A.Clem.
Chiloglottis trilabra Fitzg.	Chiloglottis dockrillii Rupp
Coelogyne ovalis Lindl.	Pleione fuliginosa (Lodd. ex Hook.) Kuntze
Coelogyne ovalis Lindl.	Coelogyne arunachalensis H.J.Chowdhery & G.D.Pal
Coelogyne ovalis Lindl.	Coelogyne mishmensis Gogoi
Coelogyne ovalis Lindl.	Coelogyne decora Wall. ex Voigt
Coelogyne ovalis Lindl.	Coelogyne fuliginosa Lodd. ex Hook.
Coelogyne ovalis Lindl.	Coelogyne longeciliata Teijsm. & Binn.
Coelogyne ovalis Lindl.	Coelogyne pilosissima Planch.
Corybas fimbriatus (R.Br.) Rchb.f.	Corybas callosus Blume
Corybas fimbriatus (R.Br.) Rchb.f.	Corysanthes callosa (Blume) Blume
Corybas fimbriatus (R.Br.) Rchb.f.	Corysanthes fimbriata R.Br.
Corybas hispidus D.L.Jones	Corysanthes hispida (D.L.Jones) D.L.Jones & M.A.Clem.
Corybas montanus D.L.Jones	Anzybas montanus (D.L.Jones) D.L.Jones & M.A.Clem.
Cremastra appendiculata (D.Don) Makino	Cremastra wallichiana Lindl.
Cremastra appendiculata (D.Don) Makino	Cymbidium appendiculatum D.Don
Cremastra appendiculata (D.Don) Makino	Cremastra appendiculata var. appendiculata
Cremastra appendiculata (D.Don) Makino	Cremastra appendiculata var. variabilis (Blume) I.D.Lund

*Crepidium ridleyi* (J.J.Sm.) Szlach.  
*Crepidium ridleyi* (J.J.Sm.) Szlach.  
*Crepidium ridleyi* (J.J.Sm.) Szlach.  
*Crepidium ridleyi* (J.J.Sm.) Szlach.  
*Cryptostylis leptochila* F.Muell. ex Benth.  
*Cryptostylis subulata* (Labill.) Rchb.f.  
*Cryptostylis subulata* (Labill.) Rchb.f.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium canaliculatum* R.Br.  
*Cymbidium elegans* Lindl.  
*Cymbidium elegans* Lindl.  
*Cymbidium elegans* Lindl.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium goeringii* (Rchb.f.) Rchb.f.  
*Cymbidium hookerianum* Rchb.f.  
*Cymbidium hookerianum* Rchb.f.  
*Cymbidium hookerianum* Rchb.f.  
*Cymbidium hookerianum* Rchb.f.  
*Cymbidium madidum* Lindl.  
*Cymbidium madidum* Lindl.  
*Cymbidium madidum* Lindl.  
*Cymbidium madidum* Lindl.  
*Cymbidium madidum* Lindl.  
*Cymbidium madidum* Lindl.  
*Cymbidium suave* R.Br.  
*Cynorkis flexuosa* Lindl.  
*Cynorkis flexuosa* Lindl.  
*Cynorkis flexuosa* Lindl.  
*Cynorkis flexuosa* Lindl.  
*Cynorkis flexuosa* Lindl.  
*Cypripedium acaule* Aiton  
*Malaxis ridleyi* (J.J.Sm.) Bakh.f.  
*Microstylis ridleyi* J.J.Sm.  
*Microstylis ridleyi* J.J.Sm.  
*Malaxis ridleyi* (J.J.Sm.) Bakh.f.  
*Cryptostylis leptochila* var. *frenchiana* F.Muell.  
*Malaxis subulata* Labill.  
*Cryptostylis longifolia* R.Br.  
*Cymbidium canaliculatum* f. *aureolum* Rupp  
*Cymbidium canaliculatum* var. *barrettii* Nicholls  
*Cymbidium canaliculatum* f. *barrettii* (Nicholls) O.Gruss & M.Wolff  
*Cymbidium canaliculatum* f. *fuscum* Rupp  
*Cymbidium canaliculatum* var. *marginatum* Rupp  
*Cymbidium canaliculatum* f. *purpurascens* Rupp  
*Cymbidium canaliculatum* f. *sparkesii* (Rendle) O.Gruss & M.Wolff  
*Cymbidium canaliculatum* var. *sparkesii* (Rendle) F.M.Bailey  
*Cymbidium canaliculatum* f. *viridiflorum* D.P.Banks  
*Cymbidium sparkesii* Rendle  
*Cymbidium elegans* var. *elegans*  
*Cymbidium elegans* var. *lushuiense* (Z.J.Liu, S.C.Chen & X.C.Shi) Z.J.Liu & S.C.Chen  
*Cyperorchis elegans* (Lindl.) Blume  
*Cymbidium forrestii* Rolfe  
*Cymbidium goeringii* var. *mackinnonii* (Duthie) A.N.Rao  
*Cymbidium mackinnonii* Duthie  
*Cymbidium pseudovirens* Schltr.  
*Cymbidium tentyozanense* Masam.  
*Cymbidium uniflorum* T.C.Yen  
*Cymbidium virens* Rchb.f.  
*Cymbidium virescens* Lindl.  
*Cymbidium yunnanense* Schltr.  
*Maxillaria goeringii* Rchb.f.  
*Cymbidium giganteum* var. *hookerianum* Rchb.f.  
*Cymbidium grandiflorum* Griff.  
*Cymbidium grandiflorum* var. *punctatum* Gogn.  
*Cyperorchis grandiflora* Schltr.  
*Cymbidium queeneanum* Klinge  
*Cymbidium madidum* var. *leroyi* (St.Cloud) Menninger  
*Cymbidium albuciflorum* F.Muell.  
*Cymbidium iridifolium* A.Cunn. ex Lindl.  
*Cymbidium leae* Rendle  
*Cymbidium leroyi* St.Cloud  
*Cymbidium gomphocarpum* Fitzg.  
*Cynorkis flexuosa* var. *bifoliata* Schltr.  
*Cynorkis flexuosa* var. *flexuosa*  
*Cynorkis flexuosa* var. *bifoliata* Schltr.  
*Cynorkis flexuosa* var. *flexuosa*  
*Calceolus hirsutus* (Mill.) Nieuwl.

Cypripedium acaule Aiton	Cypripedium acaule f. albiflora E.L.Rand & Redfield
Cypripedium acaule Aiton	Cypripedium acaule f. biflorum P.M.Br.
Cypripedium acaule Aiton	Cypripedium acaule f. lancifolia House
Cypripedium acaule Aiton	Cypripedium catesbianum Raf.
Cypripedium acaule Aiton	Cypripedium hirsutum Mill.
Cypripedium acaule Aiton	Cypripedium humile Salisb.
Cypripedium acaule Aiton	Cypripedium vittatum var. planum Raf.
Cypripedium acaule Aiton	Fissipes acaulis (Aiton) Small
Cypripedium acaule Aiton	Fissipes acaulis f. lancifolia House
Cypripedium acaule Aiton	Fissipes hirsuta (Mill.) Farw.
Cypripedium acaule Aiton	Fissipes hirsuta f. albiflora (E.L.Rand & Redfield) Farw.
Cypripedium guttatum Sw.	Cypripedium bouffordianum Yong H.Zhang & H.Sun
Cypripedium guttatum Sw.	Cypripedium guttatum f. albiflorum Aver.
Cypripedium guttatum Sw.	Cypripedium guttatum f. bouffordianum (Yong H.Zhang & H.Sun) J.M.H.Shaw
Cypripedium guttatum Sw.	Cypripedium guttatum f. punicum Y.N.Lee
Cypripedium guttatum Sw.	Cypripedium orientale Spreng.
Cypripedium guttatum Sw.	Cypripedium variegatum Georgi
Cyrtochilum revolutum (Lindl.) Dalstrom	Odontoglossum bogotense Schltr.
Cyrtochilum revolutum (Lindl.) Dalstrom	Odontoglossum jamaicense Griseb.
Cyrtochilum revolutum (Lindl.) Dalstrom	Odontoglossum lindenii Lindl.
Cyrtochilum revolutum (Lindl.) Dalstrom	Odontoglossum platyodon Rchb.f.
Cyrtochilum revolutum (Lindl.) Dalstrom	Odontoglossum platyotum Rchb.f.
Cyrtochilum revolutum (Lindl.) Dalstrom	Odontoglossum revolutum Lindl.
Cyrtochilum revolutum (Lindl.) Dalstrom	Oncidium revolutum (Lindl.) Beer
Cyrtostylis reniformis	Caladenia reniformis (R.Br.) Rchb.f.
Cyrtostylis reniformis	Acianthus reniformis (R.Br.) Schltr.
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata (Poir.) Verm.
Dactylorhiza elata (Poir.) Soó	Dactylorhiza munbyana (Boiss. & Reut.) Verm.
Dactylorhiza elata (Poir.) Soó	Dactylorhiza sesquipedalis (Willd.) Verm.
Dactylorhiza elata (Poir.) Soó	Dactylorhiza atlantica Kreutz & Vlaciha
Dactylorhiza elata (Poir.) Soó	Dactylorhiza brennensis (E.Nelson) D.Tyteca & Gathoye
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata f. alba (Soó) Raynaud
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata var. algerica (Rchb.f.) P.Delforge
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. ambigua (J.A.Guim.) Kreutz
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. atlantica (Kreutz & Vlaciha) Eccarius
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. brennensis E.Nelson
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata var. brennensis (E.Nelson) P.Delforge
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata f. cordata Landwehr
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. elongata (Maire) Kreutz, Rebbas & Véla
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. iberica (T.Stephenson) Kreutz
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata f. leucantha (Maire & Weiller) Raynaud
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subvar. maroccanica (Soó) Raynaud
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. mauritanica B.Baumann & H.Baumann
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. munbyana (Boiss. & Reut.) Kreutz
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata var. occitanica (Geniez, Melki, Pain & Soca) P.Delforge

Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata f. pallida (Maire & Weiller) Raynaud
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata f. peltieri (Soó) Raynaud
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata var. sesquipedalis (Willd.) Landwehr
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subsp. sesquipedalis (Willd.) Soó
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subvar. speciosissima (Soó) Raynaud
Dactylorhiza elata (Poir.) Soó	Dactylorhiza elata subvar. stephensonii (Maire & Weiller) Raynaud
Dactylorhiza elata (Poir.) Soó	Dactylorhiza incarnata subsp. africana (Klinge) P.D.Sell
Dactylorhiza elata (Poir.) Soó	Dactylorhiza incarnata subsp. elata (Poir.) H.Sund.
Dactylorhiza elata (Poir.) Soó	Dactylorhiza majalis subsp. sesquipedalis (Willd.) H.A.Pedersen & Hedrén
Dactylorhiza elata (Poir.) Soó	Dactylorhiza munbyana (Boiss. & Reut.) Holub
Dactylorhiza elata (Poir.) Soó	Dactylorhiza occitanica Geniez, Melki, Pain & Soca
Dactylorhiza elata (Poir.) Soó	Dactylorhiza sesquipedalis (Willd.) M.Lainz
Dactylorhiza elata (Poir.) Soó	Dactylorhiza vestita (Lag. & Rodr.) Aver.
Dactylorhiza elata (Poir.) Soó	Gymnadenia elata (Poir.) Lindl.
Dactylorhiza elata (Poir.) Soó	× Orchidactyla kabyliensis (G.Keller) Aver.
Dactylorhiza elata (Poir.) Soó	Orchis africana (Klinge) A.W.Hill
Dactylorhiza elata (Poir.) Soó	Orchis ambigua Martrin-Donos
Dactylorhiza elata (Poir.) Soó	Orchis elata Poir.
Dactylorhiza elata (Poir.) Soó	Orchis elata subsp. ambigua (J.A.Guim.) Soó
Dactylorhiza elata (Poir.) Soó	Orchis elata subsp. munbyana (Boiss. & Reut.) E.G.Camus
Dactylorhiza elata (Poir.) Soó	Orchis elata subsp. sesquipedalis (Willd.) P.Fourn.
Dactylorhiza elata (Poir.) Soó	Orchis elata subsp. sesquipedalis (Willd.) Soó
Dactylorhiza elata (Poir.) Soó	Orchis incarnata var. algerica Rchb.f.
Dactylorhiza elata (Poir.) Soó	Orchis incarnata subsp. sesquipedalis (Willd.) E.G.Camus
Dactylorhiza elata (Poir.) Soó	Orchis kabyliensis G.Keller
Dactylorhiza elata (Poir.) Soó	Orchis latifolia subsp. elata (Poir.) Maire
Dactylorhiza elata (Poir.) Soó	Orchis latifolia var. elongata Maire
Dactylorhiza elata (Poir.) Soó	Orchis latifolia subsp. lusitanica (Steud.) Gand.
Dactylorhiza elata (Poir.) Soó	Orchis latifolia subsp. sesquipedala (Willd.) Maire
Dactylorhiza elata (Poir.) Soó	Orchis latifolia subsp. sesquipedalis (Willd.) Maire
Dactylorhiza elata (Poir.) Soó	Orchis lusitanica Steud.
Dactylorhiza elata (Poir.) Soó	Orchis munbyana Boiss. & Reut.
Dactylorhiza elata (Poir.) Soó	Orchis orientalis subsp. africana Klinge
Dactylorhiza elata (Poir.) Soó	Orchis rassautae (Alleiz.) Alleiz.
Dactylorhiza elata (Poir.) Soó	Orchis sesquipedalis Willd.
Dactylorhiza elata (Poir.) Soó	Orchis sesquipedalis var. iberica T.Stephenson
Dactylorhiza elata (Poir.) Soó	Orchis vestita Lag. & Rodr.
Dactylorhiza euxina (Nevski) Czerep.	Dactylorhiza cataonica subsp. caucasica (Klinge) Soó
Dactylorhiza euxina (Nevski) Czerep.	Dactylorhiza caucasica (Klinge) Soó
Dactylorhiza euxina (Nevski) Czerep.	Dactylorhiza euxina var. markowitschii (Soó) Renz & Taubenheim
Dactylorhiza euxina (Nevski) Czerep.	Dactylorhiza majalis subsp. caucasica (Klinge) H.Sund.
Dactylorhiza euxina (Nevski) Czerep.	Dactylorhiza markowitschii (Soó) Aver.
Dactylorhiza euxina (Nevski) Czerep.	Orchis caucasica (Klinge) Medw.
Dactylorhiza euxina (Nevski) Czerep.	Orchis cordigera var. caucasica (Klinge) Klinge
Dactylorhiza euxina (Nevski) Czerep.	Orchis euxina Nevski
Dactylorhiza euxina (Nevski) Czerep.	Orchis monticola subsp. caucasica Klinge





Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis incarnata var. kotschyi Rchb.f.
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis kotschyi (Rchb.f.) Schltr.
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis merovenis Grossh.
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis olocheilos (Boiss.) Soó
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis orientalis subsp. cilicica Klinge
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis orientalis subsp. osmanica Klinge
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis orientalis subsp. turcestanica Klinge
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis osmanica (Klinge) A.W.Hill
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis persica Schltr.
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis sanasunitensis H.Fleischm.
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis turkestanica (Klinge) Klinge ex B.Fedtsch.
Dactylorhiza incarnata subsp. cilicica (Klinge) H.Sund.	Orchis umbrosa Kar. & Kir.
Dactylorhiza incarnata subsp. incarnata	Orchis condensa Schur
Dactylorhiza incarnata subsp. incarnata	Orchis fistulata Stokes
Dactylorhiza incarnata subsp. incarnata	Orchis fistulosa Moench
Dactylorhiza incarnata subsp. incarnata	Orchis palmata Gilib.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata var. haussknechtii (Klinge) Buttler
Dactylorhiza incarnata subsp. incarnata	Orchis altaica (Rchb.f.) Soó
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza strictifolia (Opiz) Rauschert ex Hudziok
Dactylorhiza incarnata subsp. incarnata	Orchis angustifolia Wimm. & Grab.
Dactylorhiza incarnata subsp. incarnata	Orchis angustifolia Loisel. ex Rchb.
Dactylorhiza incarnata subsp. incarnata	Orchis angustifolia var. haussknechtii Klinge
Dactylorhiza incarnata subsp. incarnata	Orchis comosa Schur
Dactylorhiza incarnata subsp. incarnata	Orchis comosa Scop.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata var. hyphaematodes (Neuman) Løjtnant
Dactylorhiza incarnata subsp. incarnata	Orchis divaricata Boreau
Dactylorhiza incarnata subsp. incarnata	Orchis divaricata Rich. ex Loisel.
Dactylorhiza incarnata subsp. incarnata	Orchis extensa (Hartm.) Pritz.
Dactylorhiza incarnata subsp. incarnata	Orchis impudica Crantz
Dactylorhiza incarnata subsp. incarnata	Orchis incarnata var. intermedia Serg.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata f. brevibracteata (Landwehr) P.Delforge
Dactylorhiza incarnata subsp. incarnata	Orchis lanceata A.Dietr.
Dactylorhiza incarnata subsp. incarnata	Orchis latifolia L.
Dactylorhiza incarnata subsp. incarnata	Orchis macra Schur
Dactylorhiza incarnata subsp. incarnata	Orchis serotina (Hauskn. ex M.Schulze) A.F.Schwarz
Dactylorhiza incarnata subsp. incarnata	Orchis militaris Puccin. ex Parl.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata var. immaculata Romolini & Sodi
Dactylorhiza incarnata subsp. incarnata	Orchis mixta Retz.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza kafiriana subsp. baumgartneriana (B.Baumann, H.Baumann, R.Lorenz & Ruedi Peter) Sczep. & Kreutz
Dactylorhiza incarnata subsp. incarnata	Orchis strictiflora Opiz
Dactylorhiza incarnata subsp. incarnata	Orchis strictifolia Opiz
Dactylorhiza incarnata subsp. incarnata	Orchis tharandina Rchb.f.
Dactylorhiza incarnata subsp. incarnata	Orchis traunsteineri Saut. ex W.D.J.Koch
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata subsp. baumgartneriana B.Baumann, H.Baumann, R.Lorenz & Ruedi Peter
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza serotina (Hauskn. ex M.Schulze) G.H.Loos
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza latifolia (L.) Rothm.

Dactylorhiza incarnata subsp. incarnata	Orchis latifolia subsp. impudica Soó
Dactylorhiza incarnata subsp. incarnata	Orchis incarnata subsp. lanceata (A.Dietr.) E.G.Camus
Dactylorhiza incarnata subsp. incarnata	Orchis incarnata subsp. fraasii K.Richt.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza comosa (Scop.) P.D.Sell
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata subsp. jugicrucis Akhalk., R.Lorenz & Mosul.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata var. jugicrucis (Akhalk., R.Lorenz & Mosul.) P.Delforge
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza fistulosa H.Baumann & Künkele
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata subsp. pulchella (Druce) Soó
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata f. punctata (Verm.) R.M.Bateman & Denholm
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata subsp. punctata R.Doll
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata subsp. pyrenaica Balayer
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata subsp. serotina (Hauskn. ex M.Schulze) Soó & D.M.Moore
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata var. trifurca (Rchb.f.) Aver.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza intermedia (Serg.) Kulikov & E.G.Philippov
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza latifolia (L.) Soó
Dactylorhiza incarnata subsp. incarnata	Orchis incarnata f. elatior Serg.
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata lusus albida (Rchb.f.) Soó
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza incarnata var. baumgartneriana (B.Baumann, H.Baumann, R.Lorenz & Ruedi Peter) P.Delforge
Dactylorhiza incarnata subsp. incarnata	Dactylorhiza pulchella (Druce) Aver.
Dactylorhiza incarnata subsp. incarnata	Orchis richardii Tratt.
Dactylorhiza maculata (L.) Soó	Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.
Dactylorhiza maculata (L.) Soó	Dactylorhiza maculata subsp. maculata
Dactylorhiza maculata (L.) Soó	Dactylorhiza maculata subsp. maurusia (Emb. & Maire) Soó
Dactylorhiza maculata (L.) Soó	Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic
Dactylorhiza maculata (L.) Soó	Dactylorchis maculata (L.) Verm.
Dactylorhiza maculata (L.) Soó	Orchis basilica L. ex Klinge
Dactylorhiza maculata (L.) Soó	Orchis basilica subsp. maculata (L.) Klinge
Dactylorhiza maculata (L.) Soó	Orchis maculata L.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	× Dactylanthera chevallieriana nothosubsp. somersetensis (A.Camus) J.M.H.Shaw
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	× Dactylanthera somersetensis (A.Camus) B.Bock
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorchis fuchsii (Druce) Verm.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorchis fuchsii subsp. sooana Borsos
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza andoeyana Perko
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii (Druce) Soó
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. alpina (Landwehr) R.M.Bateman & Denholm
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii f. andoeyana (Perko) P.Delforge
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii subsp. fuchsii
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii subsp. hebridensis (Wilmott) Soó
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. hebridensis (Wilmott) R.M.Bateman & Denholm
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. longibracteata Vöth
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii f. meyeri (Rchb.f.) P.Delforge
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. okellyi (Druce) R.M.Bateman & Denholm
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii subsp. okellyi (Druce) Soó
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. psychrophila (Schltr.) B.Bock
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii subsp. psychrophila (Schltr.) Holub
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii subsp. punicea J.Essink, L.Essink & Kreutz

Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii f. rhodochila (Turner Ettl.) P.Delforge
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. rhodochila Turner Ettl.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. sooana (Borsos) Kreutz
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii subsp. sooana (Borsos) Borsos
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza fuchsii var. trilobata (Bréb.) P.D.Sell
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza hebridensis (Wilmott) Aver.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza longibracteata (F.W.Schmidt) Holub
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza maculata subsp. hebridensis (Wilmott) H.Baumann & Künkele
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza maculata subsp. meyeri (Rchb.f.) Tournay
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza maculata subsp. okellyi (Druce) H.Baumann & Künkele
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza maculata var. psychrophila (Schltr.) Vöth
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza meyeri (Rchb.f.) Aver.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza okellyi (Druce) Aver.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Dactylorhiza psychrophila (Schltr.) Aver.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	× Orchiplatanthera somersetiensis A.Camus
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Orchis fuchsii Druce
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Orchis hebridensis Wilmott
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Orchis longibracteata F.W.Schmidt
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Orchis maculata subsp. meyeri (Rchb.f.) K.Richt.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Orchis maculata var. meyeri Rchb.f.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Orchis maculata var. psychrophila Schltr.
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	Orchis okellyi (Druce) Druce
Dactylorhiza maculata subsp. fuchsii (Druce) Hyl.	× Rhizanthera somersetiensis (A.Camus) Soó
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Dactylorchis saccifera (Brongn.) Verm.
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Dactylorhiza bithynica H.Baumann
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Dactylorhiza saccifera (Brongn.) Soó
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Dactylorhiza saccifera subsp. bithynica (H.Baumann) Kreutz
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Dactylorhiza saccifera var. lanceolata Landwehr
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Dactylorhiza urvilleana subsp. bithynica (H.Baumann) H.Baumann & R.Lorenz
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis basilica subsp. saccifera (Brongn.) Klinge
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis bonanniana Tod.
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis macrostachys Tineo
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis maculata var. heuffelii (Borsos & Soó) Pauca
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis maculata subsp. macrostachys (Tineo) Soó
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis maculata subsp. saccifera (Brongn.) K.Richt.
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis nesogenes (Briq.) Rouy
Dactylorhiza maculata subsp. saccifera (Brongn.) Diklic	Orchis saccifera Brongn.
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. baltica (Klinge) H.Sund.
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. calcifugiens H.A.Pedersen
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. cordigera (Fr.) H.Sund.
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. elatior (Fr.) M.Hedré & H.A.Pedersen
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. kalopissii (E.Nelson) H.A.Pedersen, P.J.Cribb & Rolf Kühn
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. macedonica (J.Hözl. & Künkele) H.A.Pedersen, P.J.Cribb & Rolf Kühn
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. majalis
Dactylorhiza majalis (Rchb.) P.F.Hunt & Summerh.	Dactylorhiza majalis subsp. nieschalkiorum (H.Baumann & Künkele) H.A.Pedersen, P.J.Cribb & Rolf Kühn



Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. obtusa Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. parvicalcarata Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. pyramidalis Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. sparsiflora Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. traunsteineriiformis Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. trifida Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. trilobata Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. vulgaris Harz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera subsp. bosniaca (Beck) Klinge
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis monticola subsp. bosniaca (Beck) Klinge
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis rocheliana (Klinge) Klinge
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera var. bosniaca (Beck) Klinge
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera var. grisebachii (Pant.) Klinge
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. orbiculatus Zapal.
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera f. banatica Asch. & Graebn.
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera proles rochelii (Griseb. & Schenk) Asch. & Graebn.
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia var. macrochlamys Asch. & Graebn.
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera var. klingei E.G.Camus
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis traunsteineri var. grisebachii (Pant.) E.G.Camus
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera subsp. siculorum Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera f. grisebachii (Pant.) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera f. simonkaiana Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cruenta subsp. blyttii
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis siculorum (Soó) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis blyttii (Rchb.f.) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera f. macrobracteata (Schur) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera f. rivularis (Heuff. ex Schur) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera f. subtriloba Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia f. densa (Harz) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis latifolia f. inaequiloba (Harz) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis hungarica Pant. ex G.Keller & Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera subsp. bosniaca (Beck) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera var. grisebachii (Pant.) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera var. rochelii (Griseb. & Schenk) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera subsp. siculorum (Soó) Soó
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Orchis cordigera var. siculorum (Soó) Pauca
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera f. albiflora Landwehr
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza graeca H.Baumann
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza lagotis (Rchb.f.) H.Baumann
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza serreana H.Baumann
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza bosniaca (Beck) Aver.
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera var. vermionica B.Willing & E.Willing
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera var. graeca (H.Baumann) Presser
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera subsp. graeca (H.Baumann) Kreutz
Dactylorhiza majalis subsp. cordigera (Fr) H. Sund.	Dactylorhiza cordigera var. rhodopeia Presser
Dactylorhiza majalis subsp. kalopissii (E.Nelson) H.A.Pedersen, P.J.(	Dactylorhiza kalopissii E.Nelson





Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis angustata Arv.-Touv.  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis angustifolia subsp. friesii (Klinge) Neuman  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis angustifolia subsp. pycnantha Neuman  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis angustifolia f. schurii Klinge  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis angustifolia subsp. subcapitata Neuman  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis angustifolia subsp. traunsteineri (Saut. ex Rchb.) Klinge  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis curvifolia F.Nyl.  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis gracilis Höppner  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis lapponica (Laest. ex Hartm.) K.Richt.  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis maculata subsp. lapponica (Laest. ex Hartm.) Nyman  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis maculata var. schurii (Klinge) Pauca  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis maculata subsp. traunsteineri (Saut.) Douin  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis pseudocordigera Neuman  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis × pseudotraunsteineri subsp. suevica A.Fuchs  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis recurva F.Nyl. ex Fr.  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis rhenana Höppner  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis rigida Höppner  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis steegeri Höppner  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis traunsteineri Saut. ex Rchb.  
Dactylorhiza majalis subsp. lapponica (Laest. ex Hartm.) H.Sund.      Orchis wirtgenii Höppner  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza baumanniana J.Hözl. & Künkele  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza baumanniana subsp. smolikana (B.Willing & E.Willing) H.Baumann & R.Lorenz  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza cordigera subsp. pindica (B.Willing & E.Willing) H.Baumann & R.Lorenz  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza koutsourana B.Willing & E.Willing  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza pindica B.Willing & E.Willing  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza salictina B.Willing & E.Willing  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza smolikana B.Willing & E.Willing  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza soufliensis B.Willing & E.Willing  
Dactylorhiza majalis subsp. pindica (B.Willing & E.Willing) H.A.Peder Dactylorhiza soufliensis nothosubsp. salictina (B.Willing & E.Willing) Eccarius  
Dactylorhiza romana (Sebast.) Soó      Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Taubenheim  
Dactylorhiza romana (Sebast.) Soó      Dactylorhiza romana subsp. guimaraesii (E.G.Camus) H.A.Pedersen  
Dactylorhiza romana (Sebast.) Soó      Dactylorhiza romana subsp. romana  
Dactylorhiza romana (Sebast.) Soó      Dactylorhiza romana (Sebast.) Verm.  
Dactylorhiza romana (Sebast.) Soó      Dactylorhiza sambucina subsp. romana (Sebast.) Bornm.  
Dactylorhiza romana (Sebast.) Soó      Orchis romana Sebast.  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Dactylorhiza flavescens (K.Koch) Verm.  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Dactylorhiza flavescens (K.Koch) Holub  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Dactylorhiza ruprechtii Aver.  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Dactylorhiza sambucina subsp. georgica (Klinge) H.Sund.  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Dactylorhiza sulphurea subsp. georgica (Klinge) Herrero & Ó.Sánchez  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Orchis flavescens K.Koch  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Orchis georgica (Klinge) Medw.  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Orchis mediterranea subsp. georgica Klinge  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Orchis romana subsp. georgica (Klinge) E.G.Camus  
Dactylorhiza romana subsp. georgica (Klinge) Soó ex Renz & Tauber Orchis tenuifolia K.Koch  
Dactylorhiza sambucina (L.) Soó      Dactylorhiza sambucina (L.) Verm.





*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium salaccense* (Blume) Lindl.  
*Dendrobium speciosum* Sm.  
*Dendrobium speciosum* Sm.  
*Dendrobium speciosum* Sm.  
*Dendrobium speciosum* Sm.  
*Dendrobium speciosum* var. *hillii* Mast.  
*Dendrobium speciosum* var. *hillii* Mast.  
*Dendrobium speciosum* var. *hillii* Mast.  
*Dendrobium speciosum* var. *hillii* Mast.  
*Dendrobium speciosum* var. *hillii* Mast.  
*Dendrobium speciosum* var. *hillii* Mast.  
*Denia cylindrostachya* Lindl.  
*Denia cylindrostachya* Lindl.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Dipodium squamatum* (G.Forst.) R.Br.  
*Disa aconitoides* subsp. *concinna* (N.E.Br.) H.P.Linder  
*Disa aconitoides* subsp. *concinna* (N.E.Br.) H.P.Linder  
*Disa aconitoides* subsp. *concinna* (N.E.Br.) H.P.Linder  
*Disa barbata* (L.f.) Sw.  
*Disa barbata* (L.f.) Sw.  
*Disa barbata* (L.f.) Sw.  
*Disa barbata* (L.f.) Sw.  
*Disa baurii* Bolus  
*Disa baurii* Bolus  
*Disa baurii* Bolus  
*Dendrobium intermedium* Teijsm. & Binn.  
*Dendrobium haemoglossum* Thwaites  
*Dendrobium bambusifolium* C.S.P.Parish & Rchb.f.  
*Dendrobium cathcartii* Hook.f.  
*Callista bambusifolia* (C.S.P.Parish & Rchb.f.) Kuntze  
*Callista cathcartii* (Hook.f.) Kuntze  
*Callista haemoglossa* (Thwaites) Kuntze  
*Callista intermedia* (Teijsm. & Binn.) Kuntze  
*Grastidium bambusifolium* (C.S.P.Parish & Rchb.f.) Brieger  
*Grastidium cathcartii* (Hook.f.) M.A.Clem. & D.L.Jones  
*Grastidium haemoglossum* (Thwaites) M.A.Clem. & D.L.Jones  
*Callista speciosa* (Sm.) Kuntze  
*Dendrobium speciosum* var. *typicum* Domin  
*Dendrocoryne speciosum* (Sm.) Brieger  
*Tropilis speciosa* (Sm.) Butzin  
*Thelychiton speciosus* (Sm.) M.A.Clem & D.L.Jones  
*Dendrobium speciosum* f. *hillii* (Mast.) Dockrill  
*Dendrobium hillii* Hook.  
*Dendrocoryne speciosa* var. *hillii* Brieger  
*Dendrobium speciosum* subsp. *hillii* (Mast.) D.P.Banks & Clemesha  
*Dendrobium tarberi* M.A.Clem. & D.L.Jones  
*Thelychiton tarberi* (M.A.Clem. & D.L.Jones) M.A.Clem. & D.L.Jones  
*Malaxis cylindrostachya* (Lindl.) Kuntze  
*Microstylis cylindrostachya* (Lindl.) Rchb.f.  
*Corallorhiza squamata* (G.Forst.) Poir.  
*Cymbidium squamatum* (G.Forst.) Sw.  
*Dipodium punctatum* var. *album* F.M.Bailey  
*Trichochilus neoebudicus* Ames  
*Ophrys squamata* G.Forst.  
*Dendrobium punctatum* Sm.  
*Wailesia punctata* (Sm.) G.Nicholson  
*Dipodium punctatum* (Sm.) R.Br.  
*Dipodium gracile* Kraenzl.  
*Dipodium heimianum* Kraenzl.  
*Dipodium carinatum* Schltr.  
*Epidendrum squamatum* (G.Forst.) Poir.  
*Disa concinna* N.E.Br.  
*Disa equestris* var. *concinna* (N.E.Br.) Kraenzl.  
*Disa bisetosa* Kraenzl.  
*Orchis barbata* L.f.  
*Satyrium barbatum* (L.f.) Thunb.  
*Herschelia barbata* (L.f.) Bolus  
*Herschelianthe barbata* (L.f.) Rauschert  
*Disa hamatopetala* Rendle  
*Herschelia bachmanniana* Kraenzl.  
*Herschelia baurii* (Bolus) Kraenzl.

*Disa baurii* Bolus  
*Disa baurii* Bolus  
*Disa baurii* Bolus  
*Disa baurii* Bolus  
*Disa caffra* Bolus  
*Disa caffra* Bolus  
*Disa dichroa* Summerh.  
*Disa dichroa* Summerh.  
*Disa engleriana* Kraenzl.  
*Disa erubescens* subsp. *carsonii* (N.E.Br.) H.P.Linder  
*Disa erubescens* subsp. *carsonii* (N.E.Br.) H.P.Linder  
*Disa erubescens* subsp. *carsonii* (N.E.Br.) H.P.Linder  
*Disa fragrans* Schltr.  
*Disa fragrans* Schltr.  
*Disa fragrans* Schltr. subsp. *fragrans*  
*Disa fragrans* Schltr. subsp. *fragrans*  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hians* (L.f.) Spreng.  
*Disa hircicornis* Rchb.f.  
*Disa hircicornis* Rchb.f.  
*Disa hircicornis* Rchb.f.  
*Disa katangensis* De Wild  
*Disa ochrostachya* Rchb.f.  
*Disa ochrostachya* Rchb.f.  
*Disa robusta* N.E.Br.  
*Disa robusta* N.E.Br.  
*Disa satyriopsis* Kraenzl.  
*Disa saxicola* Schltr.  
*Disa walleri* Rchb.f.  
*Disa walleri* Rchb.f.  
*Disa walleri* Rchb.f.  
*Disa welwitschii* Rchb.f.  
*Disa welwitschii* Rchb.f.  
*Disa welwitschii* subsp. *occultans* (Schltr.) H.P.Linder  
*Disa welwitschii* subsp. *occultans* (Schltr.) H.P.Linder  
*Disa welwitschii* subsp. *occultans* (Schltr.) H.P.Linder  
*Disa welwitschii* subsp. *occultans* (Schltr.) H.P.Linder  
*Disa zombica* N.E.Br.

*Herschelia hamatopetala* (Rendle) Kraenzl.  
*Herschelianthe bachmanniana* (Kraenzl.) Rauschert  
*Herschelianthe baurii* (Bolus) Rauschert  
*Herschelianthe hamatopetala* (Rendle) Rauschert  
*Disa compta* Summerh.  
*Disa perrieri* Schltr.  
*Disa aconitoides* var. *dichroa* (Summerh.) Geerinck  
*Disa concinna* var. *dichroa* (Summerh.) Geerinck  
*Disa subscutellifera* Kraenzl.  
*Disa carsonii* N.E.Br.  
*Disa erubescens* var. *carsonii* (N.E.Br.) Geerinck  
*Disa stoltzii* Schltr.  
*Disa fragrans* subsp. *deckenii* (Rchb.f.) H.P.Linder  
*Disa fragrans* subsp. *fragrans*  
*Disa leucostachys* Kraenzl.  
*Monadenia junodiana* Kraenzl.  
*Disa lacera* Sw.  
*Disa outeniquensis* Schltr.  
*Limodorum hians* (L.f.) Thunb.  
*Satyrium hians* L.f.  
*Herschelia lacera* (Sw.) Fourc.  
*Graphorkis hians* (L.f.) Kuntze  
*Herschelianthe hians* (L.f.) Rauschert  
*Herschelianthe lacera* (Sw.) Rauschert  
*Herschelia hians* (L.f.) A.V.Hall  
*Disa amblyopetala* Schltr.  
*Disa culveri* Schltr.  
*Disa laeta* Rchb.f.  
*Disa erubescens* var. *katangensis* (De Wild.) Geerinck  
*Disa adolphi-fridericii* Kraenzl.  
*Disa aurantiaca* Rchb.f.  
*Disa coccinea* Kraenzl.  
*Disa praestans* Kraenzl.  
*Disa ochrostachya* var. *latipetala* G.Will.  
*Disa uliginosa* Kraenzl.  
*Disa leopoldii* De Wild. & T.Durand  
*Disa princeae* Kraenzl.  
*Disa zombaensis* Rendle  
*Disa welwitschii* subsp. *welwitschii*  
*Disa welwitschii* subsp. *occultans* (Schltr.) H.P.Linder  
*Disa occultans* Schltr.  
*Disa subaequalis* Summerh.  
*Disa tanganyikensis* Summerh.  
*Disa welwitschii* var. *occultans* (Schltr.) Geerinck  
*Disa nyassana* Schltr.

Disperis anthoceros Rchb.f.  
 Disperis anthoceros Rchb.f.  
 Disperis anthoceros Rchb.f.  
 Diuris abbreviata F.Meull. Ex Benth.  
 Diuris abbreviata F.Meull. Ex Benth.  
 Diuris abbreviata F.Meull. Ex Benth.  
 Diuris abbreviata F.Meull. Ex Benth.  
 Diuris alba R.Br.  
 Diuris cuneata Fitzg.  
 Diuris lanceolata Lindl.  
 Diuris maculata Sm.  
 Diuris pedunculata R.Br.  
 Diuris pedunculata R.Br.  
 Diuris platichila Fitzg.  
 Diuris platichila Fitzg.  
 Diuris platichila Fitzg.  
 Diuris platichila Fitzg.  
 Diuris platichila Fitzg.  
 Diuris platichila Fitzg.  
 Diuris punctata Sm.  
 Diuris punctata Sm.  
 Diuris punctata Sm.  
 Diuris punctata Sm.  
 Diuris punctata Sm.  
 Diuris striata Rupp  
 Diuris striata Rupp  
 Diuris striata Rupp  
 Diuris striata Rupp  
 Diuris sulphurea R.Br.  
 Diuris sulphurea R.Br.  
 Diuris sulphurea R.Br.  
 Diuris sulphurea R.Br.  
 Diuris tricolor Fitzg.  
 Diuris tricolor Fitzg.  
 Epipactis condensata Boiss. ex D.P. Young  
 Epipactis condensata Boiss. ex D.P. Young  
 Epipactis condensata Boiss. ex D.P. Young  
 Epipactis condensata Boiss. ex D.P. Young  
 Epipactis condensata Boiss. ex D.P. Young  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Epipactis helleborine (L.) Crantz  
 Disperis anthoceros var. anthoceros  
 Disperis anthoceros var. grandiflora Verdc.  
 Disperis anthoceros var. humbertii (H.Perrier) la Croix  
 Diuris althoferi Rupp  
 Diuris citrina Nicholls  
 Diuris cucullata Rupp  
 Diuris rhomboidalis Rupp  
 Diuris punctata var. alba (R.Br.) Ewart & B.Rees  
 Diuris punctata var. longissima Benth.  
 Diuris pedunculata var. lanceolata (Lindl.) Domin  
 Diuris maculata var. concolor Benth.  
 Diuris pedunculata var. gigantea Nicholls  
 Diuris pallens Benth.  
 Diuris curtifolia Rupp  
 Diuris cuneilabris Rupp  
 Diuris flavopurpurea Messmer  
 Diuris goonoensis Rupp  
 Diuris lineata Messmer  
 Diuris maculosissima Rupp  
 Diuris daltonii (C.Walter) D.L.Jones & M.A.Clem.  
 Diuris dendrobioides Fitzg.  
 Diuris elongata Sw.  
 Diuris lilacina F.Muell. ex Lindl.  
 Diuris punctata var. daltonii C.Walter  
 Diuris punctata f. striata (Rupp) Clemesha  
 Diuris punctata var. minor Benth.  
 Diuris spathulata Fitzg.  
 Diuris minor (Benth.) D.L.Jones & M.A.Clem.  
 Diuris latifolia Rupp  
 Diuris oculata F.Muell. ex Lindl.  
 Diuris sulphurea f. immaculata Gand.  
 Diuris sulphurea f. tasmanica Gand.  
 Diuris colemaniae Rupp  
 Diuris sheaffiana Fitzg.  
 Epipactis condensata subsp. kuenkeleana (Akhalk., H.Baumann, R.Lorenz & Mosul.) Kreutz, Fatoryga & Efimov  
 Epipactis helleborine subsp. condensata (Boiss. ex D.P.Young) H.Sund.  
 Epipactis kuenkeleana (Akhalk., H.Baumann, R.Lorenz & Mosul.) P.Delforge  
 Epipactis purpurata subsp. kuenkeleana (Akhalk., H.Baumann, R.Lorenz & Mosul.) Kreutz  
 Epipactis viridiflora subsp. kuenkeleana Akhalk., H.Baumann, R.Lorenz & Mosul.  
 Epipactis helleborine subsp. bithynica (Robatsch) Kreutz  
 Epipactis helleborine subsp. helleborine  
 Epipactis helleborine subsp. neerlandica (Verm.) Buttler  
 Epipactis helleborine var. tangutica (Schltr.) S.C.Chen & G.H.Zhu  
 Epipactis helleborine subsp. tremolsii (Pau) E.Klein  
 Epipactis latifolia subsp. helleborine (L.) Rivas Goday & Borja  
 Helleborine helleborine (L.) Druce





Eulophia dabia (D.Don) Hochr.	Bletia dabia D.Don
Eulophia dabia (D.Don) Hochr.	Eulophia campestris Wall. ex Lindl.
Eulophia dabia (D.Don) Hochr.	Eulophia faberi Rolfe
Eulophia dabia (D.Don) Hochr.	Eulophia hemileuca Lindl.
Eulophia dabia (D.Don) Hochr.	Eulophia hormusjii Duthie
Eulophia dabia (D.Don) Hochr.	Eulophia ramentacea (Roxb.) Lindl.
Eulophia dabia (D.Don) Hochr.	Eulophia rupestris Wall. ex Lindl.
Eulophia dabia (D.Don) Hochr.	Eulophia turkestanica (Litv.) Schltr.
Eulophia dabia (D.Don) Hochr.	Geodorum ramentaceum (Roxb.) Voigt
Eulophia dabia (D.Don) Hochr.	Graphorkis campestris (Wall. ex Lindl.) Kuntze
Eulophia dabia (D.Don) Hochr.	Graphorkis dabia (D.Don) Kuntze
Eulophia dabia (D.Don) Hochr.	Graphorkis rupestris (Wall. ex Lindl.) Kuntze
Eulophia dabia (D.Don) Hochr.	Limodorum dabia (D.Don) Buch.-Ham. ex D.Don
Eulophia dabia (D.Don) Hochr.	Limodorum ramentaceum Roxb.
Eulophia dabia (D.Don) Hochr.	Limodorum turkestanicum Litv.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Aerobion carinatum Spreng.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Angraecum carinatum (Willd.) Kostel.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Calanthe carinata (Willd.) Lindl.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Eulophia carinata (Willd.) Lindl.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Eulophia epidendroides (Willd.) Schltr.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Eulophia virens (Roxb.) Spreng.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Eulophia viridiflora Steud.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Eulophus carinatus (Willd.) R.Br.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Eulophus virens (Roxb.) R.Br.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Graphorkis virens (Roxb.) Kuntze
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Limodorum carinatum Willd.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Limodorum epidendroides Willd.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Limodorum variegatum Lam.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Limodorum virens Roxb.
Eulophia epidendreaea (J.Koenig ex Retz.) C.E.C.Fisch.	Serapias epidendreaea J.Koenig ex Retz.
Eulophia eustachya (Rchb.f.) Geerinck	Pteroglossaspis engleriana Kraenzl.
Eulophia eustachya (Rchb.f.) Geerinck	Eulophia menelikii Pax
Eulophia eustachya (Rchb.f.) Geerinck	Orthochilus eustachyus (Rchb.f.) Bytebier
Eulophia eustachya (Rchb.f.) Geerinck	Pteroglossaspis eustachya Rchb.f.
Eulophia herbacea Lindl.	Eulophia albiflora Edgew. ex Lindl.
Eulophia herbacea Lindl.	Eulophia brachypetala Lindl.
Eulophia herbacea Lindl.	Eulophia lachnocheila Hook.f.
Eulophia herbacea Lindl.	Eulophia vera Royle
Eulophia herbacea Lindl.	Geodorum bicolor (Roxb.) Voigt
Eulophia herbacea Lindl.	Graphorkis bicolor (Roxb.) Kuntze
Eulophia herbacea Lindl.	Graphorkis herbacea (Lindl.) Lyons
Eulophia herbacea Lindl.	Graphorkis lachnocheila (Hook.f.) Kuntze
Eulophia herbacea Lindl.	Limodorum bicolor Roxb.
Eulophia hereroensis Schltr.	Eulophia junodiana Kraenzl.
Eulophia hereroensis Schltr.	Eulophia pillansii Bolus
Eulophia hereroensis Schltr.	Eulophia undulata Rolfe





*Genoplesium archeri* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium archeri* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium archeri* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium archeri* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium filiforme* (Fitzg.) D.L.Jones & M.A.Clem  
*Genoplesium filiforme* (Fitzg.) D.L.Jones & M.A.Clem  
*Genoplesium filiforme* (Fitzg.) D.L.Jones & M.A.Clem  
*Genoplesium fimbriatum* (R.Br.) D.L.Jones & M.A.Clem  
*Genoplesium fimbriatum* (R.Br.) D.L.Jones & M.A.Clem  
*Genoplesium nudiscapum* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium nudiscapum* (Hook.f.) D.L. Jones & M.A.Clem  
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*Genoplesium nudiscapum* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium nudum* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium nudum* (Hook.f.) D.L. Jones & M.A.Clem  
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*Genoplesium nudum* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium nudum* (Hook.f.) D.L. Jones & M.A.Clem  
*Genoplesium pedersonii* D.L.Jones  
*Genoplesium rufum* (R.Br.) D.L.Jones & M.A.Clem  
*Genoplesium rufum* (R.Br.) D.L.Jones & M.A.Clem  
*Genoplesium rufum* (R.Br.) D.L.Jones & M.A.Clem  
*Genoplesium rufum* (R.Br.) D.L.Jones & M.A.Clem  
*Genoplesium rufum* (R.Br.) D.L.Jones & M.A.Clem  
*Glomera diosmoides* (Schultr.) J.J.Sm.  
*Glomera diosmoides* (Schultr.) J.J.Sm.  
*Glomera diosmoides* (Schultr.) J.J.Sm.  
*Glomera diosmoides* (Schultr.) J.J.Sm.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera oblongifolia* Raf.  
*Goodyera rubicunda* (Blume) Lindl.

*Prasophyllum ciliatum* Ewart & B.Rees  
*Prasophyllum intricatum* Cohen-Stuart ex Benth.  
*Corunastylis archeri* (Hook.f.) D.L.Jones & M.A.Clem.  
*Corunastylis ciliata* (Ewart & B.Rees) D.L.Jones & M.A.Clem.  
*Prasophyllum bracteatum* Nubling  
*Prasophyllum filiforme* Fitzg.  
*Corunastylis filiformis* (Fitzg.) D.L.Jones & M.A.Clem.  
*Prasophyllum fimbriatum* R.Br.  
*Corunastylis fimbriata* (R.Br.) D.L.Jones & M.A.Clem.  
*Corunastylis densa* (Fitzg.) D.L.Jones & M.A.Clem.  
*Corunastylis ansata* (Fitzg.) D.L.Jones & M.A.Clem.  
*Corunastylis albiglans* (Rupp) D.L.Jones & M.A.Clem.  
*Prasophyllum albiglans* Rupp  
*Prasophyllum ansatum* Fitzg.  
*Corunastylis longisepala* (Fitzg.) D.L.Jones & M.A.Clem.  
*Prasophyllum longisepalum* Fitzg.  
*Prasophyllum nudiscapum* Hook.f.  
*Corunastylis nudiscapa* (Hook.f.) D.L.Jones & M.A.Clem.  
*Prasophyllum densiflorum* Nubling  
*Prasophyllum densum* Fitzg.  
*Prasophyllum attenuatum* Fitzg.  
*Prasophyllum beaugleholei* Nicholls  
*Prasophyllum hopsonii* Rupp  
*Prasophyllum nudum* Hook.f.  
*Prasophyllum variegatum* Colenso  
*Corunastylis nuda* (Hook.f.) D.L.Jones & M.A.Clem.  
*Corunastylis pedersonii* (D.L.Jones) D.L.Jones & M.A.Clem.  
*Prasophyllum rufum* var. *intermedium* Benth.  
*Prasophyllum laminatum* Fitzg.  
*Prasophyllum rufum* R.Br.  
*Corunastylis laminata* (Fitzg.) D.L.Jones & M.A.Clem.  
*Corunastylis rufa* (R.Br.) D.L.Jones & M.A.Clem.  
*Glomera ambricaulis* (P.Royen) J.M.H.Shaw  
*Glossorhyncha ambricaulis* P.Royen  
*Glossorhyncha diosmoides* Schltr.  
*Glossorhyncha stenophylla* Gilli  
*Spiranthes decipiens* Hook.  
*Goodyera menziesii* Lindl.  
*Orchiodes decipiens* (Hook.) Kuntze  
*Peramium menziesii* (Lindl.) Morong  
*Peramium decipiens* (Hook.) Piper  
*Epipactis decipiens* (Hook.) Ames  
*Goodyera decipiens* (Hook.) F.T.Hubb.  
*Goodyera oblongifolia* var. *reticulata* B.Boivin  
*Goodyera oblongifolia* f. *reticulata* (B.Boivin) P.M.Br.  
*Epipactis grandis* A.A.Eaton







Gymnadenia orchidis Lindl.  
Gymnadenia orchidis Lindl.  
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Gymnadenia orchidis Lindl.  
Gymnadenia orchidis Lindl.  
Gymnadenia orchidis Lindl.  
Habenaria acuminata (Thwaites) Trimen  
Habenaria adolphi Schltr  
Habenaria clavata (Lindl.) Rchb. f.

Habenaria clavata (Lindl.) Rchb. f.  
Habenaria commelinifolia (Roxb.) Wall. ex Lindl.  
Habenaria commelinifolia (Roxb.) Wall. ex Lindl.  
Habenaria commelinifolia (Roxb.) Wall. ex Lindl.  
Habenaria commelinifolia (Roxb.) Wall. ex Lindl.  
Habenaria cornuta Lindl.  
Habenaria cornuta Lindl.  
Habenaria cornuta Lindl.  
Habenaria cornuta Lindl.  
Habenaria cornuta Lindl.  
Habenaria cornuta Lindl.  
Habenaria diselloides Schltr.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.  
Habenaria epipactidea Rchb.f.

Gymnadenia cylindrostachya Lindl.  
Gymnadenia delavayi Schltr.  
Gymnadenia habenarioides (King & Pantl.) Verm.  
Gymnadenia himalayica Schltr.  
Gymnadenia microgymnadenia (Kraenzl.) Schltr.  
Gymnadenia orchidis var. pantlingii Renz  
Gymnadenia souliei Schltr.  
Gymnadenia violacea Lindl.  
Habenaria microgymnadenia Kraenzl.  
Habenaria orchidis (Lindl.) Hook.f.  
Habenaria stoliczkae Kraenzl.  
Orchis cylindrostachya (Lindl.) Kraenzl.  
Orchis habenarioides King & Pantl.  
Peristylus orchidis (Lindl.) Kraenzl.  
Platanthera orchidis Lindl. ex Wall.  
Ate acuminata Thwaites  
Arachnaria adolphi (Schltr.) Szlach.  
Bonatea clavata Lindl.  
Ceratopetalorchis clavata (Lindl.) Szlach., Górnjak & Tukallo  
Orchis commelinifolia Roxb.  
Orchis stylosanthes Ham. ex Hook.f.  
Pecteilis commelinifolia (Roxb.) M.A.Clem. & D.L.Jones  
Platanthera commelinifolia Lindl. ex Wall.  
Bilabrella orthocaulis (Schltr.) Szlach. & Kras  
Ceratopetalorchis cornuta (Lindl.) Szlach., Górnjak & Tukallo  
Habenaria ceratopetala A.Rich.  
Habenaria orthocaulis Schltr.  
Habenaria pristichila Kraenzl.  
Habenaria ruwenzoriensis Rendle  
Habenaria subcornuta Schltr.  
Bilabrella diselloides (Schltr.) Szlach. & Kras-Lap.  
Habenaria foliosa var. epipactidea (Rchb.f.) Rendle  
Platantheroides epipactidea (Rchb.f.) Szlach.  
Platycorynoides epipactidea (Rchb.f.) Szlach.  
Habenella epipactidea (Rchb.f.) Szlach.  
Orchis foliosa Sw.  
Bonatea foliosa (Sw.) Lindl.  
Bonatea foliosa var. pauciflora Sond.  
Habenaria foliosa (Sw.) Rchb.f.  
Habenaria hircina Rchb.f.  
Habenaria polyphylla Kraenzl.  
Habenaria schinzii Rolfe  
Habenaria perfoliata Kraenzl.  
Habenaria rautanenii Kraenzl.  
Habenaria trachychila Kraenzl.

*Habenaria epipactidea* Rchb.f.  
*Habenaria epipactidea* Rchb.f.  
*Habenaria epipactidea* Rchb.f.  
*Habenaria epipactidea* Rchb.f.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria filicornis* Lindl.  
*Habenaria helioplectrum* Summerh.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria humilior* Rchb.f.  
*Habenaria insolita* Summerh.  
*Habenaria intermedia* D.Don  
*Habenaria intermedia* D.Don  
*Habenaria kyimbilae* Schltr.  
*Habenaria kyimbilae* Schltr.  
*Habenaria kyimbilae* Schltr.  
*Habenaria macrostele* Summerh.  
*Habenaria macrostele* Summerh.  
*Habenaria macrostele* Summerh.  
*Habenaria macrostele* Summerh.  
*Habenaria macrostele* Summerh.  
*Habenaria multipartita* Blume ex Kraenzl.  
*Habenaria multipartita* Blume ex Kraenzl.  
*Habenaria pectinata* D.Don  
*Habenaria pectinata* D.Don  
*Habenaria pectinata* D.Don  
*Habenaria praestans* Rendle  
*Habenaria praestans* Rendle

*Habenaria epipactidea* var. *schinzii* (Rolfe) Kraenzl.  
*Platycoryne rautanenii* (Kraenzl.) Szlach.  
*Platycorynoides hircina* (Rchb.f.) Szlach.  
*Platycorynoides rautanenii* (Kraenzl.) Szlach.  
*Orchis filicornis* Thonn.  
*Habenaria tridactyla* A.Rich.  
*Habenaria chlorotica* Rchb.f.  
*Habenaria spiranthes* Rchb.f.  
*Habenaria natalensis* Rchb.f.  
*Habenaria deflexa* Hochst. ex Kraenzl.  
*Habenaria erythraeae* Rolfe  
*Habenaria wilmsiana* Kraenzl.  
*Habenaria pertenuis* Kraenzl.  
*Habenaria filicornis* var. *chlorotica* (Rchb.f.) Geerinck  
*Habenaria moratii* Szlach. & Olszewski  
*Arachnaria helioplectrum* (Summerh.) Szlach.  
*Bilabrella hochstetteriana* (Kraenzl. & Schltr.) Szlach. & Kras  
*Bilabrella humilior* (Rchb.f.) Szlach. & Kras-Lap.  
*Bilabrella pseudokaessneriana* Szlach. & Kras  
*Bilabrella rehmannii* (Bolus) Szlach. & Kras  
*Bilabrella replicata* Szlach. & Kras  
*Bilabrella tetrapetaloides* (Schltr.) Szlach. & Kras  
*Habenaria culiciflora* Rendle  
*Habenaria hochstetteriana* Kraenzl.  
*Habenaria kassneriana* Kraenzl.  
*Habenaria rehmannii* Bolus  
*Habenaria replicata* Hochst. ex A.Rich.  
*Habenaria tetrapetaloides* Schltr.  
*Trachypetalum insolitum* (Summerh.) Szlach. & Sawicka  
*Kryptostoma intermedium* (D.Don) Olszewski & Szlach.  
*Ochrorchis intermedia* (D.Don) Szlach.  
*Bilabrella kyimbilae* (Schltr.) Szlach. & Kras-Lap.  
*Habenaria furcipedata* Schltr.  
*Bilabrella furcipedata* (Schltr.) Szlach. & Kras  
*Bilabrella macrostele* (Summerh.) Szlach. & Kras-Lap.  
*Bilabrella tangheana* (Geerinck) Szlach. & Kras  
*Habenaria defleurii* Geerinck  
*Habenaria tangheana* Geerinck  
*Habenaria tournayana* Geerinck  
*Kryptostoma multipartitum* (Blume ex Kraenzl.) Szlach. & Olszewski  
*Ochrorchis multipartita* (Blume ex Kraenzl.) Szlach.  
*Kryptostoma pectinatum* (D.Don) Olszewski & Szlach.  
*Ochrorchis pectinata* (D.Don) Szlach.  
*Orchis pectinata* Sm.  
*Kryptostoma praestans* (Rendle) Szlach.  
*Ochrorchis praestans* (Rendle) Szlach.

*Habenaria praestans* Rendle  
*Habenaria praestans* Rendle  
*Habenaria repens* Nutt.  
*Habenaria repens* Nutt.  
*Habenaria repens* Nutt.  
*Habenaria repens* Nutt.  
*Habenaria repens* Nutt.  
*Habenaria rumphii* (Brongn.) Lindl.  
*Habenaria rumphii* (Brongn.) Lindl.  
*Habenaria rumphii* (Brongn.) Lindl.  
*Habenaria rumphii* (Brongn.) Lindl.  
*Habenaria rumphii* (Brongn.) Lindl.  
*Habenaria rumphii* (Brongn.) Lindl.  
*Habenaria rumphii* (Brongn.) Lindl.  
*Habenaria schimperiana* Hochst. ex A.Rich.  
*Habenaria schimperiana* Hochst. ex A.Rich.  
*Habenaria schimperiana* Hochst. ex A.Rich.  
*Habenaria schimperiana* Hochst. ex A.Rich.  
*Habenaria schimperiana* Hochst. ex A.Rich.  
*Habenaria schimperiana* Hochst. ex A.Rich.  
*Habenaria socotrana* Balf.f.  
*Habenaria walleri* Rchb.f.  
*Habenaria walleri* Rchb.f.  
*Habenaria zambesina* Rchb.f.  
*Habenaria zambesina* Rchb.f.  
*Habenaria zambesina* Rchb.f.  
*Habenaria zambesina* Rchb.f.  
*Habenaria zambesina* Rchb.f.  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Herminium clavigerum* (Lindl.) X.H.Jin  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum calcaratum* subsp. *jankae* (Somlyay, Kreutz & Óvári) R.M.Bateman, Molnar & Sramkó  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum calcaratum* var. *robustissimum* (Kreutz) R.M.Bateman, Molnar & Sramkó  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum caprinum* subsp. *jankae* (Somlyay, Kreutz & Óvári) R.M.Bateman, Molnar & Sramkó  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum caprinum* subsp. *robustissimum* Kreutz  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum caprinum* subsp. *rumelicum* H.Baumann & R.Lorenz  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum jankae* Somlyay, Kreutz & Óvári  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum jankae* subsp. *robustissimum* (Kreutz) Kreutz  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum jankae* var. *rumelicum* (H.Baumann & R.Lorenz) P.Delforge  
*Himantoglossum calcaratum* subsp. *rumelicum* (H.Baumann & R.Lore) *Himantoglossum jankae* subsp. *rumelicum* (H.Baumann & R.Lorenz) J.Ponert  
*Himantoglossum caprinum* (M.Bieb.) Spreng.  
*Habenaria praestans* var. *praestans*  
*Habenaria praestans* var. *umbrosa* G.Will.  
*Habenaria repens* var. *maxillaris* (Lindl.) Garay  
*Habenaria repens* var. *repens*  
*Mesicera repens* (Nutt.) Raf.  
*Orchis repens* (Nutt.) Alph.Wood  
*Platanthera repens* (Nutt.) Alph.Wood  
*Habenaria dahliana* Kraenzl.  
*Habenaria holtzei* F.Muell.  
*Habenaria rumphii* var. *meraukensis* J.J.Sm.  
*Habenaria stauroglossa* Kraenzl.  
*Pecteilis rumphii* (Brongn.) M.A.Clem. & D.L.Jones  
*Platanthera rumphii* Brongn.  
*Satyrion dahlianum* (Kraenzl.) Kuntze  
*Bilabrella schimperiana* (Hochst. ex A.Rich.) Szlach. & Kras-Lap.  
*Habenaria peltastes* Rchb.f.  
*Habenaria involuta* Bolus  
*Habenaria anomala* Lindl. ex Kraenzl.  
*Bilabrella peltastes* (Rchb.f.) Szlach. & Kras-Lap.  
*Bilabrella involuta* (Bolus) Szlach. & Kras  
*Habenaria socotrana* Rchb.f. ex Kraenzl.  
*Macrura walleri* (Rchb.f.) Szlach. & Sawicka  
*Habenaria soyauxii* Kraenzl.  
*Platantheroides zambesina* (Rchb.f.) Szlach.,  
*Habenella zambesina* (Rchb.f.) Szlach. & Kras-Lap.  
*Habenaria haullevilleana* De Wild.  
*Habenaria myriantha* Kraenzl.  
*Habenaria baoulensis* A.Chev.  
*Habenaria clavigera* (Lindl.) Dandy  
*Habenaria densa* Wall. ex Lindl.  
*Platanthera clavigera* Lindl.  
*Platanthera densa* (Wall. ex Lindl.) Soó  
*Platantheroides clavigera* (Lindl.) Szlach.  
*Platantheroides densa* (Wall. ex Lindl.) Szlach.  
*Habenella clavigera* (Lindl.) Szlach. & Kras-Lap.  
*Habenella densa* (Wall. ex Lindl.) Szlach. & Kras-Lap.  
*Aceras affine* Boiss.



Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Himantoglossum robertianum (Loisel.) P.Delforge  
 Jumellea fragrans (Thouars.) Schltr.  
 Jumellea fragrans (Thouars.) Schltr.  
 Jumellea fragrans (Thouars.) Schltr.  
 Jumellea fragrans (Thouars.) Schltr.  
 Jumellea fragrans (Thouars.) Schltr.  
 Leptotes bicolor Lindl.  
 Leptotes bicolor Lindl.  
 Leptotes bicolor Lindl.  
 Leptotes bicolor Lindl.  
 Leptotes bicolor Lindl.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Limodorum abortivum (L.) Sw.  
 Lyperanthus suaveolens R.Br.  
 Lyperanthus suaveolens R.Br.  
 Lyperanthus suaveolens R.Br.  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Malaxis monophyllos var. monophyllos  
 Barlia robertiana (Loisel.) Greuter  
 Barlia robertiana lusus candida Soó  
 Barlia robertiana f. sicula (Lindl.) Hervás, De Bellard, Calzado, J.C.Huertas, Reyes Carr. & Ruiz Cano  
 Himantoglossum longibracteatum (Rchb.f.) Schltr.  
 Himantoglossum robertianum f. candidum (Soó) F.M.Vázquez  
 Himantoglossum robertianum f. gallicum (Lindl.) F.M.Vázquez  
 Himantoglossum robertianum f. siculum (Lindl.) F.M.Vázquez  
 Loriglossum longibracteatum (Rchb.f.) Moris ex Ardoino  
 Orchis foliosa Masson ex Ker Gawl.  
 Orchis fragrans Ten.  
 Orchis longibracteata Biv.  
 Orchis longibracteata var. gallica Lindl.  
 Orchis longibracteata var. sicula Lindl.  
 Orchis robertiana Loisel.  
 Angraecum fragrans Thouars  
 Aerobion fragrans (Thouars) Spreng.  
 Aeranthes fragrans (Thouars) Rchb.f.  
 Epidorkis fragrans (Thouars) Kuntze  
 Angorkis fragrangis Thouars  
 Tetramicra bicolor (Lindl.) Rolfe  
 Leptotes serrulata Lindl.  
 Leptotes bicolor var. glaucophylla Hook.  
 Leptotes serrulata (Lindl.) G. Nicholson  
 Leptotes bicolor var. serrulata (Lindl.) Stein  
 Centrosis abortiva (L.) Sw.  
 Epipactis abortiva (L.) All.  
 Jonorchis abortiva (L.) Beck  
 Neottia abortiva (L.) Clairv.  
 Orchis abortiva L.  
 Serapias abortiva (L.) Scop.  
 Limodorum abortivum var. abortivum  
 Limodorum abortivum var. gracile (B.Willing & E.Willing) Kreutz  
 Limodorum abortivum var. rubrum H.Sund. ex Kreutz  
 Limodorum abortivum var. viride Fateryga & Kreutz  
 Caladenia suaveolens (R.Br.) Rchb.f.  
 Caladenia sulphurea A.Cunn.  
 Leptoceras sulphurea (A.Cunn.) Lindl.  
 Dienia gmelinii Lindl.  
 Leptorkis japonica (Miq.) Kuntze  
 Liparis inconspicua Makino  
 Liparis japonica (Miq.) Maxim.  
 Malaxis arisanensis (Hayata) S.Y.Hu  
 Malaxis taiwaniana S.S.Ying  
 Malaxis yunnanensis (Schltr.) Tang & F.T.Wang  
 Microstylis arisanensis Hayata  
 Microstylis diphylla (Cham.) Lindl.

*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Malaxis monophyllos* var. *monophyllos*  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Microtis unifolia* (G.Forst.) Rchb.f.  
*Myrosmodes nervosa* (Kraenzl.) Novoa, C.A.Vargas & Cisternas  
*Myrosmodes nervosa* (Kraenzl.) Novoa, C.A.Vargas & Cisternas  
*Neobolusia stolzii* Schltr.  
*Neobolusia stolzii* Schltr.  
*Neobolusia stolzii* Schltr.  
*Neobolusia tysonii* (Bolus) Schltr.  
*Neobolusia tysonii* (Bolus) Schltr.  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Neotina maculata* (Desf.) Stearn  
*Microstylis japonica* Miq.  
*Microstylis yunnanensis* Schltr.  
*Malaxis diphyllus* Cham.  
*Malaxis muscifera* var. *stelostachya* Tang & F.T.Wang  
*Malaxis yunnanensis* var. *nematophylla* Tang & F.T.Wang  
*Malaxis monophyllos* var. *diphyllus* (Cham.) Luer  
*Microstylis muscifera* var. *stelostachya* (Tang & F.T.Wang) Marg.  
*Microstylis yunnanensis* var. *nematophylla* (Tang & F.T.Wang) Marg.  
*Achroanthes cilifolia* Raf.  
*Microstylis muscifera* var. *nematophylla* (Tang & F.T.Wang) Marg.  
*Microstylis muscifera* subsp. *stelostachya* (Tang & F.T.Wang) Marg.  
*Epipactis porrifolia* Sw.  
*Microtis aemula* Schltr.  
*Microtis banksii* A.Cunn. ex Hook.  
*Microtis benthamiana* Rchb.f.  
*Microtis bipulvinaris* Nicholls  
*Microtis formosana* Schltr. ex Masam.  
*Microtis frutetorum* Schldl.  
*Microtis holmesii* Nicholls  
*Microtis javanica* Rchb.f.  
*Microtis longifolia* Colenso  
*Microtis papillosa* Colenso  
*Microtis porrifolia* (Sw.) R.Br.  
*Microtis pulchella* Lindl.  
*Microtis viridis* F.Muell.  
*Ophrys unifolia* G.Forst.  
*Aa nervosa* (Kraenzl.) Schltr.  
*Altensteinia nervosa* Kraenzl.  
*Neobolusia stolzii* var. *bombyliiflora* P.J.Cribb  
*Neobolusia stolzii* var. *glabripetala* Summerh.  
*Neobolusia stolzii* var. *stolzii*  
*Brachycorythis tysonii* Bolus  
*Brachycorythis junodiana* Kraenzl.  
*Aceras densiflorum* (Brot.) Boiss.  
*Aceras intactum* (Link) Rchb.f.  
*Aceras maculatum* (Desf.) Gren.  
*Aceras secundiflorum* (Bertol.) Lindl.  
*Aceras vayredae* K.Richt.  
*Coeloglossum densiflorum* Hartm. ex Willk. & Lange  
*Habenaria intacta* (Link) Lindl. ex Benth.  
*Himantoglossum parviflorum* Spreng.  
*Himantoglossum secundiflorum* (Bertol.) Rchb.  
*Neotinea intacta* (Link) Rchb.f.  
*Neotinea intacta* f. *luteola* Renz  
*Neotinea maculata* f. *alba* Maire & Weiller ex F.M.Vázquez  
*Neotinea maculata* f. *luteola* (Renz) F.M.Vázquez





*Neottia nidus-avis* (L.) Rich.  
*Neottia nidus-avis* (L.) Rich.  
*Neottia nidus-avis* (L.) Rich.  
*Neottia nidus-avis* (L.) Rich.  
*Neottia nidus-avis* (L.) Rich.  
*Neottia nidus-avis* (L.) Rich.  
*Neottia nidus-avis* (L.) Rich.  
*Neottia nidus-avis* (L.) Rich.  
*Ophrys apifera* Huds.  
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*Ophrys apifera* Huds.

*Listera nidus-avis* (L.) Curtis  
*Malaxis nidus-avis* (L.) Bernh.  
*Neottia abortiva* Gray  
*Neottia macrostelis* Peterm.  
*Neottia orobanchoidea* St.-Lag.  
*Neottia squamosa* Dulac  
*Neottidium nidus-avis* (L.) Schldtl.  
*Ophrys nidus-avis* L.  
*Serapias nidus-avis* (L.) Steud.  
*Arachnites apifer* (Huds.) Hoffm.  
 × *Cephalophrys integra* (Sacc.) Cox  
*Ophrys albiflora* Spruner ex Boiss.  
*Ophrys apifera* var. *almaracensis* Pérez-Chisc., Durán Oliva & Gil Llano  
*Ophrys apifera* f. *almaracensis* (Pérez-Chisc., Durán Oliva & Gil Llano) P.Delforge  
*Ophrys apifera* var. *atrofusca* J.Dierckx, Kreutz, D.Riepe & L.Segers  
*Ophrys apifera* subsp. *austriaca* (Wiesb. ex Dichtl) K.Richt.  
*Ophrys apifera* var. *badensis* L.Lewis & Kreutz  
*Ophrys apifera* f. *badensis* (L.Lewis & Kreutz) P.Delforge  
*Ophrys apifera* var. *basiliensis* S.Schwegler & Matthies  
*Ophrys apifera* f. *basiliensis* (S.Schwegler & Matthies) P.Delforge  
*Ophrys apifera* var. *belgarum* Turner Ettl.  
*Ophrys apifera* f. *belgarum* (Turner Ettl.) P.Delforge  
*Ophrys apifera* f. *bicolor* (E.Nelson) P.D.Sell  
*Ophrys apifera* f. *botteronii* (Chodat) P.D.Sell  
*Ophrys apifera* subsp. *botteronii* (Chodat) Nägeli  
*Ophrys apifera* var. *brevilabellata* Kreutz, R.Selig & Zelesny  
*Ophrys apifera* f. *brevilabellata* (Kreutz, R.Selig & Zelesny) P.Delforge  
*Ophrys apifera* var. *cambrensis* M.J.Clark  
*Ophrys apifera* subsp. *chlorantha* (Hegetschw.) Arcang.  
*Ophrys apifera* f. *curviflora* (A.Soulié) P.Delforge  
*Ophrys apifera* var. *curviflora* A.Soulié  
*Ophrys apifera* f. *flaveola* Klaver & Kreutz  
*Ophrys apifera* f. *flavescens* (Rosbach) P.D.Sell  
*Ophrys apifera* subsp. *friburgensis* (Freyhold) P.Fourn.  
*Ophrys apifera* var. *friburgensis* Freyhold  
*Ophrys apifera* f. *fulvofusca* (M.P.Grasso & Scrugli) P.Delforge  
*Ophrys apifera* var. *fulvofusca* M.P.Grasso & Scrugli  
*Ophrys apifera* subsp. *immaculata* (Bréb.) O.Nägeli  
*Ophrys apifera* var. *jenensis* Voelckel & E.Theel  
*Ophrys apifera* subsp. *jurana* Ruppert ex Zimm.  
*Ophrys apifera* var. *laetitiae* Klaver  
*Ophrys apifera* subsp. *muteliae* (Mutel) K.Richt.  
*Ophrys apifera* subsp. *olimpiadae* Ugr. ex E.G.Camus  
*Ophrys apifera* subsp. *olympiadae* Ougrinski  
*Ophrys apifera* var. *patinata* U.Grabner & Kreutz  
*Ophrys apifera* f. *patinata* (U.Grabner & Kreutz) P.Delforge

Ophrys apifera Huds.	Ophrys apifera subsp. purpurea (Tausch) K.Richt.
Ophrys apifera Huds.	Ophrys apifera var. renatae K.Barbieri, L.Barbieri & Contorni
Ophrys apifera Huds.	Ophrys apifera var. saraepontana (Ruppert) Soó
Ophrys apifera Huds.	Ophrys apifera var. tilaventina Nonis & Liverani
Ophrys apifera Huds.	Ophrys apifera f. tilaventina (Nonis & Liverani) P.Delforge
Ophrys apifera Huds.	Ophrys apifera subsp. trollii (Hegetschw.) K.Richt.
Ophrys apifera Huds.	Ophrys apifera f. trollii (Hegetschw.) P.D.Sell
Ophrys apifera Huds.	Ophrys apifera var. urbinensis Klaver
Ophrys apifera Huds.	Ophrys aquisgranensis Kaltenb.
Ophrys apifera Huds.	Ophrys arachnites Mill.
Ophrys apifera Huds.	Ophrys asilifera Vayr.
Ophrys apifera Huds.	Ophrys austriaca Wiesb. ex Dichtl
Ophrys apifera Huds.	Ophrys bicolor O.Nägeli
Ophrys apifera Huds.	Ophrys botteronii Chodat
Ophrys apifera Huds.	Ophrys chlorantha Hegetschw.
Ophrys apifera Huds.	Ophrys epeirophora Peter
Ophrys apifera Huds.	Ophrys friburgensis (Freyhold) O.Nägeli
Ophrys apifera Huds.	Ophrys immaculata (Bréb.) O.Nägeli
Ophrys apifera Huds.	Ophrys insectifera subsp. apifera (Huds.) Moggr.
Ophrys apifera Huds.	Ophrys integra Sacc.
Ophrys apifera Huds.	Ophrys jurana (Ruppert ex Zimm.) Neuberger
Ophrys apifera Huds.	Ophrys mangini Tallon
Ophrys apifera Huds.	Ophrys purpurea Tausch
Ophrys apifera Huds.	Ophrys ripaensis Porta
Ophrys apifera Huds.	Ophrys rostrata Ten.
Ophrys apifera Huds.	Ophrys saraepontana Ruppert
Ophrys apifera Huds.	Ophrys trollii Hegetschw.
Ophrys apifera Huds.	Orchis apifera (Huds.) Salisb.
Ophrys apifera Huds.	Orchis pseudoapifera Caldesi
Ophrys argolica subsp. climacis (Heimeier & Perschke) H.A.Pederser	Ophrys climacis Heimeier & Perschke
Ophrys argolica subsp. climacis (Heimeier & Perschke) H.A.Pederser	Ophrys ferrum-equinum subsp. climacis (Heimeier & Perschke) H.Baumann & R.Lorenz
Ophrys bertolonii Moretti	Arachnites bertolonii (Moretti) Tod.
Ophrys bertolonii Moretti	Arachnites insengae Tod.
Ophrys bertolonii Moretti	Ophrys bertolonii subsp. dalmatica (Murr) Asch. & Graebn.
Ophrys bertolonii Moretti	Ophrys bertolonii subsp. insengae (Tod.) K.Richt.
Ophrys bertolonii Moretti	Ophrys bertolonii subsp. landaueri (Appel ex Schulze) Asch. & Graebn.
Ophrys bertolonii Moretti	Ophrys bertolonii subsp. romolinii (Soca) Véla & R.Martin
Ophrys bertolonii Moretti	Ophrys dalmatica (Murr) Soó
Ophrys bertolonii Moretti	Ophrys insectifera subsp. bertolonii (Moretti) Moggr.
Ophrys bertolonii Moretti	Ophrys inzengae (Tod.) Nyman
Ophrys bertolonii Moretti	Ophrys marzensis Soca
Ophrys bertolonii Moretti	Ophrys penedensis Kalkhoff
Ophrys bertolonii Moretti	Ophrys romolinii Soca
Ophrys bertolonii Moretti	Ophrys speculum Bertol.
Ophrys bombyliflora Link	Arachnites bombyliflorus (Link) Tod.
Ophrys bombyliflora Link	Ophrys bombyliflora var. bombyliflora

Ophrys bombyliflora Link	Ophrys bombyliflora var. parviflora (Mifsud) Mifsud
Ophrys bornmuelleri M.Schulze	Ophrys fuciflora subsp. bornmuelleri (M.Schulze) B.Willing & E.Willing
Ophrys bornmuelleri M.Schulze	Ophrys holosericea subsp. bornmuelleri (M.Schulze) H.Sund.
Ophrys bornmuelleri M.Schulze	Ophrys bornmuelleri subsp. bornmuelleri
Ophrys bornmuelleri M.Schulze	Ophrys bornmuelleri subsp. carduchorum Renz & Taubenheim
Ophrys bornmuelleri M.Schulze	Ophrys bornmuelleri subsp. grandiflora (H.Fleischm. & Soó) Renz & Taubenheim
Ophrys bornmuelleri M.Schulze	Ophrys bornmuelleri subsp. ziyaretiana (Kreutz & Ruedi Peter) Kreutz
Ophrys cilicica Schltr.	Ophrys kurdica D.Rückbr. & U.Rückbr.
Ophrys cilicica Schltr.	Ophrys kurdica subsp. kurdistanica (Renz) Soó
Ophrys cilicica Schltr.	Ophrys kurdistanica Renz
Ophrys ferrum-equinum Desf.	Ophrys ferrum-equinum subsp. ferrum-equinum
Ophrys ferrum-equinum Desf.	Ophrys ferrum-equinum subsp. gottfriediana (Renz) E.Nelson
Ophrys fusca Link	Arachnites fuscus (Link) Tod.
Ophrys fusca Link	Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen
Ophrys fusca Link	Ophrys fusca subsp. cinereophila (Paulus & Gack) Faurh.
Ophrys fusca Link	Ophrys fusca subsp. durieui (Rchb.f.) Soó
Ophrys fusca Link	Ophrys fusca subsp. funerea (Viv.) Arcang.
Ophrys fusca Link	Ophrys fusca subsp. fusca
Ophrys fusca Link	Ophrys fusca subsp. iricolor (Desf.) K.Richt.
Ophrys fusca Link	Ophrys fusca subsp. pallida (Raf.) E.G.Camus
Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen	Ophrys blitopertha Paulus & Gack
Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen	Ophrys fusca subsp. persephonae (Paulus) Kreutz
Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen	Ophrys persephonae Paulus
Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen	Ophrys sicula var. urteae (Paulus) Hennecke
Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen	Ophrys subfusca subsp. blitopertha (Paulus & Gack) Kreutz
Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen	Ophrys subfusca subsp. persephonsae (Paulus) Kreutz
Ophrys fusca subsp. blitopertha (Paulus & Gack) Faurh. & H.A.Pedersen	Ophrys urteae Paulus
Ophrys fusca subsp. fusca	Ophrys myodes Lapeyr.
Ophrys fusca subsp. fusca	Ophrys laetea Willk. & Lange
Ophrys fusca subsp. fusca	Ophrys lucifera Devillers-Tersch. & Devillers
Ophrys fusca subsp. fusca	Ophrys peraiolae G.Foelsche, W.Foelsche, M.Gerbaud & O.Gerbaud
Ophrys fusca subsp. fusca	Ophrys tricolor Des f. ex Nyman
Ophrys fusca subsp. fusca	Ophrys malacitana M.R.Lowe, I.Phillips & Paulus
Ophrys fusca subsp. fusca	Ophrys africana G.Foelsche & W.Foelsche
Ophrys fusca subsp. fusca	Ophrys bilunulata subsp. caesiella (P.Delforge) Paulus
Ophrys fusca subsp. fusca	Ophrys fusca subsp. clara (F.M.Vázquez & S.Ramos) F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys fusca var. distincta F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys fusca subsp. limensis F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys fusca subsp. lindleyana F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys bilunulata subsp. punctulata (Renz) Paulus
Ophrys fusca subsp. fusca	Ophrys bilunulata subsp. sancti-isidorii (A.Saliaris, Saliaris & A.Alibertis) Paulus
Ophrys fusca subsp. fusca	Ophrys fusca var. lutea F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys fusca var. lutescens F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys fusca subsp. proxima (C.E.Hermos., Benito & Soca) F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys fusca lusus ramosis F.M.Vázquez
Ophrys fusca subsp. fusca	Ophrys achillis P.Delforge

Ophrys fusca subsp. fusca	Ophrys theophrasti Devillers & Devillers-Tersch.
Ophrys fusca subsp. fusca	Ophrys luentina P.Delforge
Ophrys fusca subsp. fusca	Ophrys fabrella Paulus & Ayasse ex P.Delforge
Ophrys fusca subsp. fusca	Ophrys pallidula Paulus
Ophrys fusca subsp. fusca	Ophrys phaidra Paulus
Ophrys fusca subsp. fusca	Ophrys kedra Paulus
Ophrys fusca subsp. fusca	Ophrys clara F.M.Vázquez & S.Ramos
Ophrys fusca subsp. fusca	Ophrys maghrebiaca (Kreutz, Rebbas, Babali, Miara & Ait-Hamm.) P.Delforge
Ophrys fusca subsp. fusca	Ophrys marmorata G.Foelsche & W.Foelsche
Ophrys fusca subsp. fusca	Ophrys arnoldii P.Delforge
Ophrys fusca subsp. fusca	Ophrys attaviria D.Rückbr., U.Rückbr., Wenker & S.Wenker
Ophrys fusca subsp. fusca	Ophrys sancti-isidorii (A.Saliaris, Saliaris & A.Alibertis) P.Delforge
Ophrys fusca subsp. fusca	Ophrys bilunulata Risso
Ophrys fusca subsp. fusca	Ophrys caesiella P.Delforge
Ophrys fusca subsp. fusca	Ophrys calocaerina Devillers-Tersch. & Devillers
Ophrys fusca subsp. fusca	Ophrys fusca subsp. luentina (P.Delforge) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. lucifera (Devillers-Tersch. & Devillers) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. marmorata (G.Foelsche & W.Foelsche) Kreutz
Ophrys fusca subsp. fusca	Ophrys creberrima Paulus
Ophrys fusca subsp. fusca	Ophrys cretica Paulus
Ophrys fusca subsp. fusca	Ophrys eptapigiensis Paulus
Ophrys fusca subsp. fusca	Ophrys fenarolii Ferlan
Ophrys fusca subsp. fusca	Ophrys ficuzzana H.Baumann & Künkele
Ophrys fusca subsp. fusca	Ophrys flammeola P.Delforge
Ophrys fusca subsp. fusca	Ophrys forestieri Lojac.
Ophrys fusca subsp. fusca	Ophrys fusca subsp. akhdarensis B.Baumann & H.Baumann
Ophrys fusca subsp. fusca	Ophrys decembris S.Moingeon & J.-M.Moingeon
Ophrys fusca subsp. fusca	Ophrys fusca var. rubescens Balayer
Ophrys fusca subsp. fusca	Ophrys sicula var. flammeola (P.Delforge) Hennecke
Ophrys fusca subsp. fusca	Ophrys × gauthieri nothosubsp. fenarolii (Ferlan) H.Baumann & Künkele
Ophrys fusca subsp. fusca	Ophrys gazella Devillers-Tersch. & Devillers
Ophrys fusca subsp. fusca	Ophrys parosica var. phaseliana (D.Rückbr. & U.Rückbr.) P.Delforge
Ophrys fusca subsp. fusca	Ophrys sphegodes subsp. moesziana (Soó) Maire
Ophrys fusca subsp. fusca	Ophrys thracica (Kreutz) Devillers & Devillers-Tersch.
Ophrys fusca subsp. fusca	Ophrys pratesii Gennaio, M.Gargiulo, Chetta & Medagli
Ophrys fusca subsp. fusca	Ophrys attaviria var. cesmeensis (Kreutz) P.Delforge
Ophrys fusca subsp. fusca	Ophrys attaviria f. eptapigiensis (Paulus) P.Delforge
Ophrys fusca subsp. fusca	Ophrys fusca subsp. gackiaae (P.Delforge) Kreutz
Ophrys fusca subsp. fusca	Ophrys varinói Soca
Ophrys fusca subsp. fusca	Ophrys delforgei Devillers-Tersch. & Devillers
Ophrys fusca subsp. fusca	Ophrys fusca subsp. arnoldii (P.Delforge) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. lupercalis (Devillers-Tersch. & Devillers) Kreutz
Ophrys fusca subsp. fusca	Ophrys leucadica Renz
Ophrys fusca subsp. fusca	Ophrys dianica M.R.Lowe, J.Piera, M.B.Crespo & J.E.Arnold
Ophrys fusca subsp. fusca	Ophrys subfusca subsp. flammeola (P.Delforge) Kreutz
Ophrys fusca subsp. fusca	Ophrys subfusca subsp. luentina (P.Delforge) Kreutz

Ophrys fusca subsp. fusca	Ophrys lindia Paulus
Ophrys fusca subsp. fusca	Ophrys lindleyana H.Fleischm. ex G.Keller & Soó
Ophrys fusca subsp. fusca	Ophrys cressa Paulus
Ophrys fusca subsp. fusca	Ophrys pseudomigoutiana R.Martin, Véla & Ouni
Ophrys fusca subsp. fusca	Ophrys lojaconoi P.Delforge
Ophrys fusca subsp. fusca	Ophrys lucana P.Delforge, Devillers-Tersch. & Devillers
Ophrys fusca subsp. fusca	Ophrys lupercalis Devillers-Tersch. & Devillers
Ophrys fusca subsp. fusca	Ophrys lutea subsp. subfusca (Rchb.f.) Murb.
Ophrys fusca subsp. fusca	Ophrys lutea var. subfusca Rchb.f.
Ophrys fusca subsp. fusca	Ophrys attaviria subsp. cesmeensis Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. creberrima (Paulus) H.Kretzschmar
Ophrys fusca subsp. fusca	Ophrys fusca subsp. cressa (Paulus) H.Kretzschmar
Ophrys fusca subsp. fusca	Ophrys fusca subsp. cretica (Paulus) H.Kretzschmar
Ophrys fusca subsp. fusca	Ophrys fusca subsp. leucadica (Renz) H.Kretzschmar
Ophrys fusca subsp. fusca	Ophrys fusca subsp. thriptiensis (Paulus) H.Kretzschmar
Ophrys fusca subsp. fusca	Ophrys mesaritica Paulus, C.Alibertis & A.Alibertis
Ophrys fusca subsp. fusca	Ophrys ortuabis M.P.Grasso & Manca
Ophrys fusca subsp. fusca	Ophrys punctulata Renz
Ophrys fusca subsp. fusca	Ophrys rueckbrodtiana W.Hahn
Ophrys fusca subsp. fusca	Ophrys bilunulata subsp. kalirachiensis Paulus, M.Hirth & Dimadis
Ophrys fusca subsp. fusca	Ophrys fusca subsp. thracica Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. delforgei (Devillers-Tersch. & Devillers) Kreutz
Ophrys fusca subsp. fusca	Ophrys parosica P.Delforge
Ophrys fusca subsp. fusca	Ophrys parvula Paulus
Ophrys fusca subsp. fusca	Ophrys peraiolae var. rubra G.Foelsche, W.Foelsche, M.Gerbaud & O.Gerbaud
Ophrys fusca subsp. fusca	Ophrys phaseliana D.Rückbr. & U.Rückbr.
Ophrys fusca subsp. fusca	Ophrys proxima C.E.Hermos., Benito & Soca
Ophrys fusca subsp. fusca	Ophrys attaviria f. thracica (Kreutz) P.Delforge
Ophrys fusca subsp. fusca	Ophrys meropes P.Delforge
Ophrys fusca subsp. fusca	Ophrys aranifera subsp. moesziana Soó
Ophrys fusca subsp. fusca	Ophrys marmorata subsp. caesiella (P.Delforge) Véla & R.Martin
Ophrys fusca subsp. fusca	Ophrys akhdarensis (B.Baumann & H.Baumann) P.Delforge
Ophrys fusca subsp. fusca	Ophrys subfusca (Rchb.f.) Hausskn.
Ophrys fusca subsp. fusca	Ophrys subfusca subsp. fenarolii (Ferlan) Del Prete
Ophrys fusca subsp. fusca	Ophrys cesmeensis (Kreutz) P.Delforge
Ophrys fusca subsp. fusca	Ophrys thriptiensis Paulus
Ophrys fusca subsp. fusca	Ophrys fusca subsp. perpusilla (Devillers-Tersch. & Devillers) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. peraiolae (G.Foelsche, W.Foelsche, M.Gerbaud & O.Gerbaud) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. phaseliana (D.Rückbr. & U.Rückbr.) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. sabulosa (Paulus & Gack ex P.Delforge) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. attaviria (D.Rückbr., U.Rückbr., Wenker & S.Wenker) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. bilunulata (Risso) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. caesiella (P.Delforge) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. calocaerina (Devillers-Tersch. & Devillers) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. cesmeensis (Kreutz) Kreutz
Ophrys fusca subsp. fusca	Ophrys fusca subsp. eptapiigiensis (Paulus) Kreutz





*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys lacaena* f. *cytherea* (B.Baumann & H.Baumann) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys lacaena* f. *graeca* (B.Baumann & H.Baumann) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys minoa* (C.Alibertis & A.Alibertis) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys oxyrrhynchos* subsp. *calliantha* (Bartolo & Pulv.) Galesi, Cristaudo & Maugeri  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys calliantha* Bartolo & Pulv.  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys candica* Greuter, Matthäs & Risse  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys candica* (E.Nelson ex Soó) H.Baumann & Künkele  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys candica* subsp. *calliantha* (Bartolo & Pulv.) Kreutz  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys candica* subsp. *cytherea* B.Baumann & H.Baumann  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys candica* var. *minoa* (C.Alibertis & A.Alibertis) Paulus, Gügel, D.Rückbr. & U.Rückbr.  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys candica* subsp. *minoa* C.Alibertis & A.Alibertis  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys candica* f. *minoa* (C.Alibertis & A.Alibertis) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys cytherea* (B.Baumann & H.Baumann) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys fuciflora* subsp. *candica* E.Nelson ex Soó  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys graeca* (B.Baumann & H.Baumann) S.Hertel & H.Weyland  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys holosericea* subsp. *candica* H.A.Pedersen & Faurh.  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys holosericea* subsp. *graeca* B.Baumann & H.Baumann  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys lacaena* f. *cytherea* (B.Baumann & H.Baumann) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys lacaena* f. *graeca* (B.Baumann & H.Baumann) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys minoa* (C.Alibertis & A.Alibertis) P.Delforge  
*Ophrys holosericea* subsp. *candica* (E.Nelson ex Soó) Renz & Taube *Ophrys oxyrrhynchos* subsp. *calliantha* (Bartolo & Pulv.) Galesi, Cristaudo & Maugeri  
*Ophrys kotschyi* H.Fleischm. & Soó *Ophrys cypria* Renz  
*Ophrys kotschyi* H.Fleischm. & Soó *Ophrys sintenisii* subsp. *kotschyi* (H.Fleischm. & Soó) Soó  
*Ophrys lutea* Cav. *Arachnites luteus* (Cav.) Tod.  
*Ophrys lutea* Cav. *Ophrys lutea* subsp. *aspea* (Devillers-Tersch. & Devillers) Faurh.  
*Ophrys lutea* Cav. *Ophrys lutea* subsp. *galilaea* (H.Fleischm. & Bornm.) Soó  
*Ophrys lutea* Cav. *Ophrys lutea* subsp. *laurensis* (Geniez & Melki) Kreutz  
*Ophrys lutea* Cav. *Ophrys lutea* subsp. *lutea*  
*Ophrys lutea* Cav. *Ophrys lutea* subsp. *melena* Renz  
*Ophrys lutea* Cav. *Ophrys lutea* nothosubsp. *phryganae* (Devillers-Tersch. & Devillers) Melki  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys archimedeae* P.Delforge & M.Walravens  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys cythnia* P.Delforge & Onckelinx  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys fusca* subsp. *migoutiana* (H.Gay) Kreutz  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys galilaea* H.Fleischm. & Bornm.  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lepida* S.Moingeon & J.-M.Moingeon  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* subsp. *archimedeae* (P.Delforge & M.Walravens) Kreutz  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* var. *galilaea* (H.Fleischm. & Bornm.) Hennecke  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* var. *minor* (Tod.) Guss.  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* subsp. *minor* (Tod.) O.Danesch & E.Danesch ex Gölz & H.R.Reinhard  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* var. *minor* Lojac.  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* subsp. *numida* (Devillers-Tersch. & Devillers) Kreutz  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* var. *quarteirae* (Kreutz, M.R.Lowe & Wucherpf.) F.M.Vázquez  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* subsp. *quarteirae* Kreutz, M.R.Lowe & Wucherpf.  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys lutea* subsp. *sicula* (Tineo) Soldano  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys migoutiana* H.Gay  
*Ophrys lutea* subsp. *galilaea* (H.Fleisham. & Bornm.) Soó *Ophrys minor* subsp. *galilaea* (H.Fleischm. & Bornm.) Paulus & Gack







Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys hansreinhardii M.Hirth  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys herae M.Hirth & H.Spaeth  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys herae f. janrenzii (M.Hirth) P.Delforge  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys herae subsp. janrenzii (M.Hirth) M.Hirth  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys herae subsp. osmaniaca Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys hittitica Kreutz & Ruedi Peter  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys hystera Kreutz & Ruedi Peter  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys iceliensis Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys janrenzii M.Hirth  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys knossia (A.Alibertis) P.Delforge  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys leucophthalma Devillers-Tersch. & Devillers  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys macedonica (H.Fleischm. ex Soó) Devillers-Tersch. & Devillers  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa Desf.  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. caucasica (Woronow) Soó  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. ciliciana Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. cyclocheila (Aver.) B.Baumann, H.Baumann, R.Lorenz & Ruedi Peter  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. falsomammosa B.Baumann & H.Baumann  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa f. falsomammosa (B.Baumann & H.Baumann) P.Delforge  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. grammica B.Willing & E.Willing  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. janrenzii (M.Hirth) Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. leucophthalma (Devillers-Tersch. & Devillers) Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. macedonica (H.Fleischm. ex Soó) Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. mouterdeana B.Baumann & H.Baumann  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. parviflora Kreutz & H.Heitz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. posteria B.Baumann & H.Baumann  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. serotina B.Willing & E.Willing  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. taurica (Aggeenko) Soó  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mammosa subsp. vierhapperi (Soó) Soó  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys morio Paulus & Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys mouterdeana (B.Baumann & H.Baumann) P.Delforge  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys osmaniaca (Kreutz) P.Delforge  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys paphlagonica (Kreutz) P.Delforge  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys posteria (B.Baumann & H.Baumann) Devillers & Devillers-Tersch.  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys prespaensis M.Hirth & Paulus  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys pseudomammosa Renz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sintenisii H.Fleischm. & Bornm.  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sphegodes subsp. alasiatica (Kreutz, Segers & H.Walraven) H.Baumann & R.Lorenz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sphegodes subsp. grammica (B.Willing & E.Willing) Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sphegodes subsp. herae (M.Hirth & H.Spaeth) Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sphegodes subsp. janrenzii (M.Hirth) Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sphegodes subsp. mammosa (Desf.) Soó ex E.Nelson  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sphegodes subsp. parnassica Soó ex J.J.Wood  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys sphegodes subsp. sintenisii (H.Fleischm. & Bornm.) E.Nelson  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys taurica (Aggeenko) Nevski  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys transhyrcana subsp. morio (Paulus & Kreutz) Kreutz  
Ophrys sphegodes subsp. taurica (Aggeenko) Soó ex Niketic & Djord. Ophrys transhyrcana subsp. mouterdeana (B.Baumann & H.Baumann) Kreutz

*Ophrys sphegodes* subsp. *taurica* (Aggeenko) Soó ex Niketic & Djord  
*Ophrys sphegodes* subsp. *taurica* (Aggeenko) Soó ex Niketic & Djord  
*Ophrys sphegodes* subsp. *taurica* (Aggeenko) Soó ex Niketic & Djord  
*Ophrys tenthredinifera* Willd. *Arachnites limbatus* Link  
*Ophrys tenthredinifera* Willd. *Arachnites tenthredinifer* (Willd.) Tod.  
*Ophrys tenthredinifera* Willd. *Ophrys amphidami* P.Delforge  
*Ophrys tenthredinifera* Willd. *Ophrys aprilia* Devillers & Devillers-Tersch.  
*Ophrys tenthredinifera* Willd. *Ophrys arachnites* Link  
*Ophrys tenthredinifera* Willd. *Ophrys di-stefani* Lojac.  
*Ophrys tenthredinifera* Willd. *Ophrys dictynnae* P.Delforge  
*Ophrys tenthredinifera* Willd. *Ophrys ficalhoana* (J.A.Guim.) Wucherpf.  
*Ophrys tenthredinifera* Willd. *Ophrys fusca* Rchb.f.  
*Ophrys tenthredinifera* Willd. *Ophrys grandiflora* Ten.  
*Ophrys tenthredinifera* Willd. *Ophrys hookeri* Orph. ex Soó  
*Ophrys tenthredinifera* Willd. *Ophrys koraw* M.Hirth & Paulus  
*Ophrys tenthredinifera* Willd. *Ophrys leochroma* P.Delforge  
*Ophrys tenthredinifera* Willd. *Ophrys leochroma* var. *sanctae-marcellae* (Saliaris, A.Saliaris & A.Alibertis) P.Delforge  
*Ophrys tenthredinifera* Willd. *Ophrys limbata* Link  
*Ophrys tenthredinifera* Willd. *Ophrys lynchnitis* Paulus & M.Hirth  
*Ophrys tenthredinifera* Willd. *Ophrys lycomedis* P.Delforge  
*Ophrys tenthredinifera* Willd. *Ophrys neglecta* Parl.  
*Ophrys tenthredinifera* Willd. *Ophrys neglecta* var. *riphaea* F.M.Vázquez  
*Ophrys tenthredinifera* Willd. *Ophrys rhipaea* (F.M.Vázquez) P.Delforge  
*Ophrys tenthredinifera* Willd. *Ophrys rosea* (Desf.) Dufour  
*Ophrys tenthredinifera* Willd. *Ophrys rosea* subsp. *neglecta* (Parl.) Guadagno  
*Ophrys tenthredinifera* Willd. *Ophrys sini-leonis* Licheri & Biagioli  
*Ophrys tenthredinifera* Willd. *Ophrys spectabilis* (Kreutz & Zelesny) Paulus  
*Ophrys tenthredinifera* Willd. *Ophrys tabanifera* Sieber ex Nyman  
*Ophrys tenthredinifera* Willd. *Ophrys tenoreana* Lindl.  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *aprilica* (Devillers & Devillers-Tersch.) Kreutz  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* f. *choffatii* J.A.Guim.  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *dictynnae* (P.Delforge) Kreutz  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* var. *expansa* Lumare & Medagli  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* f. *ficalhoana* J.A.Guim  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *ficalhoana* (J.A.Guim.) M.R.Lowe & D.Tyteca  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* var. *glabrescens* F.M.Vázquez  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *grandiflora* (Ten.) Kreutz  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* var. *guimaraesii* (D.Tyteca) Kreutz  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *guimaraesii* D.Tyteca  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *leochroma* (P.Delforge) Kreutz  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* f. *lutescens* (Batt.) Raynaud  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *neglecta* (Parl.) E.G.Camus, Begon & A.Camus  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *praecox* D.Tyteca  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *sanctae-marcellae* Saliaris, A.Salisaris & A.Alibertis  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *spectabilis* Kreutz & Zelesny  
*Ophrys tenthredinifera* Willd. *Ophrys tenthredinifera* subsp. *tingurtiae* Kreutz, Miara, Ait-Hamm. & Rebbas









Orchis militaris L.	Orchis militaris subsp. militaris
Orchis militaris L.	Orchis militaris subsp. stevenii (Rchb.f.) B.Baumann, H. Baumann, R.Lorenz & Ruedi Peter
Orchis pallens L.	Androchis pallens (L.) D.Tyteca & E.Klein
Orchis pallens L.	Orchis pseudopallens K.Koch
Orchis pallens L.	Orchis sulphurea Sims
Orchis pauciflora Ten.	Androrchis pauciflora (Ten.) D.Tyteca & E.Klein
Orchis pauciflora Ten.	Orchis provincialis subsp. pauciflora (Ten.) Lindl.
Orchis provincialis Balb. ex Lam. & DC.	Androrchis provincialis (Balb. ex Lam. & DC.) D.Tyteca & E.Klein
Orchis provincialis Balb. ex Lam. & DC.	Androrchis provincialis var. rubra (Chabert) W.Foelsche & Jakely
Orchis provincialis Balb. ex Lam. & DC.	Androrchis provincialis var. variegata (Chabert) W.Foelsche & Jakely
Orchis provincialis Balb. ex Lam. & DC.	Orchis cyrilli Ten.
Orchis provincialis Balb. ex Lam. & DC.	Orchis leucostachya Griseb.
Orchis provincialis Balb. ex Lam. & DC.	Orchis mascula Alsch.
Orchis provincialis Balb. ex Lam. & DC.	Orchis olbiensis Ardoino ex Moggr.
Orchis provincialis Balb. ex Lam. & DC.	Orchis pallens Savi
Orchis provincialis Balb. ex Lam. & DC.	Orchis pallens subsp. provincialis (Balb. ex DC.) Bonnier & Layens
Orchis provincialis Balb. ex Lam. & DC.	Orchis provincialis var. rubra Chabert
Orchis provincialis Balb. ex Lam. & DC.	Orchis provincialis var. variegata Chabert
Orchis provincialis Balb. ex Lam. & DC.	Orchis pseudopallens Tod.
Orchis punctulata Steven ex Lindl.	Aceras fragrans Kotschy ex Soó
Orchis punctulata Steven ex Lindl.	Orchis punctulata subsp. schelkownikowii (Woronow) Soó
Orchis punctulata Steven ex Lindl.	Orchis punctulata subsp. sepulchralis (Rchb.f.) Soó
Orchis punctulata Steven ex Lindl.	Orchis schelkownikowii Woronow
Orchis punctulata Steven ex Lindl.	Orchis sepulchralis (Rchb.f.) Boiss. & Heldr.
Orchis punctulata Steven ex Lindl.	Orchis steveniana Compère ex Lévl.
Orchis purpurea Huds.	Orchis militaris subsp. purpurea (Huds.) Bonnier & Layens
Orchis purpurea Huds.	Orchis purpurea f. vulgaris Leimbach
Orchis purpurea Huds.	Orchis pupurea subsp. caucasica (Regal) B.Baumann, H.Baumann, R.Lorenz & Ruedi Peter
Orchis purpurea Huds.	Orchis purpurea subsp. purpurea
Orchis simia Lam.	Orchis cercopitheca (Georgi) Poir.
Orchis simia Lam.	Orchis linearis Tourlet
Orchis simia Lam.	Orchis militaris Sm.
Orchis simia Lam.	Orchis militaris subsp. simia (Lam.) Bonnier & Layens
Orchis simia Lam.	Orchis simia subsp. simia
Orchis simia Lam.	Orchis subsp. taubertiana (B.Baumann & H.Baumann) Kreutz
Orchis simia Lam.	Orchis smithii Sweet
Orchis simia Lam.	Orchis taubertiana B.Baumann & H.Baumann
Orchis simia Lam.	Orchis zoophira Thuill.
Orchis simia Lam.	Strateuma militaris Salisb.
Orchis sitiaca (Renz) P.Delforge	Androrchis sitiaca (Renz) D.Tyteca & E.Klein
Orchis sitiaca (Renz) P.Delforge	Orchis anatolica subsp. sitiaca Renz
Orchis spitzelii Saut. ex W.D.J.Koch	Androrchis spitzelii (Saut. ex W.D.J.Koch) D.Tyteca & E.Klein
Orchis spitzelii Saut. ex W.D.J.Koch	Barlia spitzelii (Saut. ex W.D.J.Koch) Szlach
Orchis spitzelii Saut. ex W.D.J.Koch	Orchis patens subsp. spitzelii (Saut. ex W.D.J.Koch) Á.Löve & Kjellq.
Orchis spitzelii Saut. ex W.D.J.Koch	Orchis spitzelii subsp. cazorlensis (Lacaita) D.Rivera & Lopez Velez
Orchis spitzelii Saut. ex W.D.J.Koch	Orchis spitzelii subsp. nitidifolia (W.P.Teschner) Soó

Orchis spitzelii Saut. ex W.D.J.Koch	Orchis spitzelii subsp. spitzelii
Orthoceras novae-zeelandiae (A.Rich.) M.A.Clem., D.L.Jones & Moll	Diuris novae-zeelandiae A.Rich.
Orthoceras novae-zeelandiae (A.Rich.) M.A.Clem., D.L.Jones & Moll	Orthoceras caput-serpentis Colenso
Orthoceras novae-zeelandiae (A.Rich.) M.A.Clem., D.L.Jones & Moll	Orthoceras rubrum Colenso
Orthoceras novae-zeelandiae (A.Rich.) M.A.Clem., D.L.Jones & Moll	Orthoceras solandri Lindl.
Peristylus constrictus (Lindl.) Lindl.	Habenaria constricta (Lindl.) Hook.f.
Peristylus constrictus (Lindl.) Lindl.	Habenaria cylindrocalyx Gagnep.
Peristylus constrictus (Lindl.) Lindl.	Herminium constrictum Lindl.
Peristylus constrictus (Lindl.) Lindl.	Orchis leucantha Ham. ex Hook.f.
Peristylus constrictus (Lindl.) Lindl.	Platanthera constricta Lindl. ex Wall.
Platanthera bifolia (L.) Rich.	Conopsidium stenanthum Wallr.
Platanthera bifolia (L.) Rich.	Gymnadenia bifolia (L.) G.Mey
Platanthera bifolia (L.) Rich.	Habenaria bifolia (L.) R.Br.
Platanthera bifolia (L.) Rich.	Lysias bifolia (L.) Salisb.
Platanthera bifolia (L.) Rich.	Orchis alba Lam.
Platanthera bifolia (L.) Rich.	Orchis bifolia L.
Platanthera bifolia (L.) Rich.	Orchis stenantha E.H.L.Krause
Platanthera bifolia (L.) Rich.	Satyrrium bifolium (L.) Wahlenb.
Platanthera bifolia (L.) Rich.	Sieberia bifolia (L.) Spreng.
Platanthera bifolia (L.) Rich.	Platanthera bifolia subsp. bifolia
Platanthera bifolia (L.) Rich.	Platanthera bifolia subsp. osca R.Lorenz, Romolini, V.A.Romano & Soca
Platanthera bifolia (L.) Rich.	Platanthera bifolia subsp. subalpina Brügger
Platanthera chlorantha (Custer) Rchb.	Gymnadenia chlorantha (Custer) Ambrosi
Platanthera chlorantha (Custer) Rchb.	Habenaria chlorantha (Custer) Bab.
Platanthera chlorantha (Custer) Rchb.	Habenaria chloroleuca Ridl.
Platanthera chlorantha (Custer) Rchb.	Habenaria montana (F.W.Schmidt) T.Durand & Schinz
Platanthera chlorantha (Custer) Rchb.	Habenaria virescens (K.Koch) Druce
Platanthera chlorantha (Custer) Rchb.	Orchis chlorantha Custer
Platanthera chlorantha (Custer) Rchb.	Orchis montana F.W.Schmidt
Platanthera chlorantha (Custer) Rchb.	Orchis virescens Zollik. ex Gaud.
Platanthera chlorantha (Custer) Rchb.	Platanthera bifolia subsp. chlorantha (Custer) Rouy
Platanthera chlorantha (Custer) Rchb.	Platanthera chlorantha var. gselliana (H.Baumann, Künkele & R.Lorenz) Perazza & R.Lorenz
Platanthera chlorantha (Custer) Rchb.	Platanthera lesbiaca Devillers-Tersch., Devillers, Dedroog, Baeten & Flausch
Platanthera chlorantha (Custer) Rchb.	Platanthera montana (F.W.Schmidt) Rchb.f.
Platanthera chlorantha (Custer) Rchb.	Platanthera montana var. gselliana H.Baumann, Künkele & R.Lorenz
Platanthera chlorantha (Custer) Rchb.	Platanthera virescens K.Koch
Platanthera chlorantha (Custer) Rchb.	x Pseudanthera breadalbanensis McKean
Platanthera dilatata (Pursh) Lindl. ex L.C.Beck	Habenaria dilatata (Pursh) Hook.
Platanthera dilatata (Pursh) Lindl. ex L.C.Beck	Orchis dilatata Pursh
Platanthera dilatata (Pursh) Lindl. ex L.C.Beck	Piperia dilatata (Pursh) Szlach. & Rutk.
Platanthera dilatata (Pursh) Lindl. ex L.C.Beck	Limnorchis dilatata (Pursh) Rydb.
Platanthera grandiflora (Bigelow) Lindl.	Blephariglottis grandiflora (Bigelow) Rydb.
Platanthera grandiflora (Bigelow) Lindl.	Blephariglottis grandiflora f. albiflora (E.L.Rand & Redfield) Baumbach & P.M.Br.
Platanthera grandiflora (Bigelow) Lindl.	Blephariglottis grandiflora f. bicolor (P.M.Br.) Baumbach & P.M.Br.
Platanthera grandiflora (Bigelow) Lindl.	Blephariglottis grandiflora f. carnea (P.M.Br.) Baumbach & P.M.Br.
Platanthera grandiflora (Bigelow) Lindl.	Blephariglottis grandiflora f. mentotonsa (Fernald) Baumbach & P.M.Br.



Prosthechea cochleata (L.) W.E.Higgins	Anacheilium cochleatum (L.) Hoffmanns.
Prosthechea cochleata (L.) W.E.Higgins	Prosthechea cochleata var. cochleata
Prosthechea cochleata (L.) W.E.Higgins	Prosthechea cochleata var. triandra (Ames) Hagsater
Prosthechea cochleata (L.) W.E.Higgins	Epidendrum cochleatum L.
Prosthechea cochleata (L.) W.E.Higgins	Anacheilium cochleatum (L.) Hoffmanns.
Prosthechea cochleata (L.) W.E.Higgins	Encyclia cochleata (L.) Dressler
Pterostylis abrupta D.L.Jones	Diplodium abruptum (D.L.Jones) D.L.Jones & M.A.Clem.
Pterostylis alata (Labill.) Rchb.f.	Arethusa alata (Labill.) Poir.
Pterostylis alata (Labill.) Rchb.f.	Diplodium australe Sw.
Pterostylis alata (Labill.) Rchb.f.	Disperis alata Labill.
Pterostylis alata (Labill.) Rchb.f.	Pterostylis reflexa var. intermedia Ewart
Pterostylis alata (Labill.) Rchb.f.	Diplodium alatum (Labill.) D.L.Jones & M.A.Clem.
Pterostylis alata (Labill.) Rchb.f.	Diplodium striatum (Fitzg.) D.L.Jones & M.A.Clem.
Pterostylis alata (Labill.) Rchb.f.	Pterostylis reflexa var. praecox (Lindl.) Ewart & Jean White
Pterostylis alata (Labill.) Rchb.f.	Pterostylis praecox Lindl.
Pterostylis alata (Labill.) Rchb.f.	Pterostylis striata Fitzg.
Pterostylis bicolor M.A.Clem & D.L.Jones	Oligochaetochilus bicolor (M.A.Clem. & D.L.Jones) Szlach.
Pterostylis bicolor M.A.Clem & D.L.Jones	Hymenochilus bicolor (M.A.Clem. & D.L.Jones) D.L.Jones & M.A.Clem.
Pterostylis boormanii Rupp	Oligochaetochilus boormanii (Rupp) Szlach.
Pterostylis chaetophora M.A.Clem & D.L.Jones	Oligochaetochilus chaetophorus (M.A.Clem. & D.L.Jones) Szlach.
Pterostylis coccina Fitzg.	Diplodium coccinum (Fitzg.) D.L.Jones & M.A.Clem.
Pterostylis curta R.Br.	Pterostylis curta var. grandiflora Benth.
Pterostylis curta R.Br.	Pterostylis neocaledonica Schltr.
Pterostylis cycnocephala Fitzg.	Oligochaetochilus cycnocephalus (Fitzg.) Szlach.
Pterostylis cycnocephala Fitzg.	Hymenochilus cycnocephalus (Fitzg.) D.L.Jones & M.A.Clem.
Pterostylis daintreana F.Muell. Ex Benth.	Pharochilum daintreanum (F.Muell. ex Benth.) D.L.Jones & M.A.Clem.
Pterostylis daintreana F.Muell. Ex Benth.	Oligochaetochilus daintreanus (F.Muell. ex Benth.) Szlach.
Pterostylis decurva R.S.Rogers	Diplodium decurvum (R.S.Rogers) D.L.Jones & M.A.Clem.
Pterostylis fischii Nicholls	Diplodium fischii (Nicholls) D.L.Jones & M.A.Clem.
Pterostylis hamata Blackmore & Clemesha	Oligochaetochilus hamatus (Blackmore & Clemesha) Szlach.
Pterostylis laxa Blackmore	Diplodium laxum (Blackmore) D.L.Jones & M.A.Clem.
Pterostylis longicurva Rupp	Diplodium longicurvum (Rupp) D.L.Jones & M.A.Clem.
Pterostylis longifolia R.Br.	Oligochaetochilus longifolius (R.Br.) Szlach.
Pterostylis longifolia R.Br.	Bunochilus longifolius (R.Br.) D.L.Jones & M.A.Clem.
Pterostylis longipetala Rupp	Diplodium longipetalum (Rupp) D.L.Jones & M.A.Clem.
Pterostylis mutica R.Br.	Oligochaetochilus muticus (R.Br.) Szlach.
Pterostylis mutica R.Br.	Hymenochilus muticus (R.Br.) D.L.Jones & M.A.Clem.
Pterostylis nutans R.Br.	Pterostylis mathewsii Cheeseman
Pterostylis obtusa R.Br.	Diplodium obtusum (R.Br.) D.L.Jones & M.A.Clem.
Pterostylis parviflora R.Br.	Pterostylis semirubra F.Muell.
Pterostylis pedunculata R.Br.	Pterostylis semirubra F.Muell.
Pterostylis praetermissa M.A.Clem & D.L.Jones	Oligochaetochilus praetermissus (M.A.Clem. & D.L.Jones) Szlach.
Pterostylis recurva Benth.	Stamnorchis recurva (Benth.) D.L.Jones & M.A.Clem.
Pterostylis reflexa R.Br.	Diplodium reflexum (R.Br.) D.L.Jones & M.A.Clem.
Pterostylis setifera M.A.Clem	Oligochaetochilus setifer (M.A.Clem., Matthias & D.L.Jones) Szlach.

*Pterostylis truncata* Fitzg.  
*Pterostylis vittata* Lindl.  
*Pterostylis vittata* Lindl.  
*Pterostylis vittata* Lindl.  
*Pterostylis vittata* Lindl.  
*Pterostylis woollsii* Fitzg.  
*Pyrorchis nigricans* (R.Br.) D.L.Jones & M.A.Clem.  
*Pyrorchis nigricans* (R.Br.) D.L.Jones & M.A.Clem.  
*Pyrorchis nigricans* (R.Br.) D.L.Jones & M.A.Clem.  
*Pyrorchis nigricans* (R.Br.) D.L.Jones & M.A.Clem.  
*Renanthera moluccana* Blume  
*Satyrium amblyosaccos* Schltr.  
*Satyrium anomalum* Schltr.  
*Satyrium buchananii* Schtr.  
*Satyrium buchananii* Schtr.  
*Satyrium buchananii* Schtr.  
*Satyrium buchananii* Schtr.  
*Satyrium carsonii* Rolfe  
*Satyrium carsonii* Rolfe  
*Satyrium chlorocorys* Rchb.f. ex Rolfe  
*Satyrium chlorocorys* Rchb.f. ex Rolfe  
*Satyrium coriophoroides* A.Rich.  
*Satyrium coriophoroides* A.Rich.  
*Satyrium coriophoroides* A.Rich.  
*Satyrium coriophoroides* A.Rich.  
*Satyrium coriophoroides* A.Rich.  
*Satyrium coriophoroides* A.Rich.  
*Satyrium coriophoroides* A.Rich.  
*Satyrium coriophoroides* A.Rich.  
*Satyrium crassicaule* Rendle  
*Satyrium crassicaule* Rendle  
*Satyrium crassicaule* Rendle  
*Satyrium crassicaule* Rendle  
*Satyrium crassicaule* Rendle  
*Satyrium crassicaule* Rendle  
*Satyrium longicauda*  
*Satyrium longicauda*  
*Satyrium macrophyllum* Lindl.  
*Satyrium macrophyllum* Lindl.  
*Satyrium macrophyllum* Lindl.  
*Satyrium macrophyllum* Lindl.  
*Satyrium macrophyllum* Lindl.  
*Satyrium neglectum* subsp. *neglectum* Schltr.  
*Satyrium neglectum* subsp. *neglectum* Schltr.  
*Satyrium nepalense* D.Don  
*Diplodidium truncatum* (Fitzg.) D.L.Jones & M.A.Clem.  
*Urochilus vittatus* (Lindl.) D.L.Jones & M.A.Clem.  
*Pterostylis vittata* var. *viridiflora* Nicholls  
*Oligochaetochilus vittatus* (Lindl.) Szlach.  
*Pterostylis praecocissima* F.Muell. ex Benth.  
*Oligochaetochilus woollsii* (Fitzg.) Szlach.  
*Caladenia nigricans* (R.Br.) Rchb.f.  
*Leptoceras pectinata* Endl.  
*Lyperanthus nigricans* R.Br.  
*Lyperanthus nigricans* f. *pumila* Domin  
*Renanthera edelfeldtii* F.Muell. & Kraenzl.  
*Satyrium papillosum* Schltr.  
*Satyrium minax* Rolfe  
*Satyrium kassnerianum* Kraenzl.  
*Satyrium longissimum* Rolfe  
*Satyrium nyassense* Kraenzl.  
*Satyrium stolzianum* Kraenzl.  
*Satyrium leucanthum* Schltr.  
*Satyrium nigericum* Hutch.  
*Satyrium fallax* Schltr.  
*Satyrium kraenzlinii* Rolfe  
*Satyrium gillettii* De Wild.  
*Satyrium macrostachyum* Hochst. ex A.Rich.  
*Satyrium sacculatum* (Rendle) Rolfe  
*Satyrium stolzii* Kraenzl.  
*Satyrium gillettii* De Wild.  
*Satyrium macrostachyum* Hochst. ex A.Rich.  
*Satyrium sacculatum* (Rendle) Rolfe  
*Satyrium stolzii* Kraenzl.  
*Satyrium fischerianum* Kraenzl.  
*Satyrium goetzenianum* Kraenzl.  
*Satyrium kirkii* Rolfe  
*Satyrium mystacinum* Kraenzl.  
*Satyrium niloticum* Rendle  
*Satyrium usambarae* Kraenzl.  
*Satyrium longicauda* var. *jacottetianum* (Kraenzl.) A.V.Hall  
*Satyrium longicauda* var. *longicauda*  
*Satyrium brachyrhynchum* Schltr.  
*Satyrium buchananii* Rolfe  
*Satyrium cheiophorum* Rolfe  
*Satyrium murrumbalaensis* De Wild.  
*Satyrium speciosum* Rolfe  
*Satyrium densum* Rolfe  
*Satyrium colliferum* Schltr.  
*Satyrium nepalense* var. *ciliatum* (Lindl.) Hook.f.



Satyrium nepalense D.Don  
 Satyrium nepalense D.Don  
 Satyrium nepalense D.Don  
 Satyrium princeae Kraenzl.  
 Satyrium sceptrum Schltr.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium trinerve Lindl.  
 Satyrium volkenskii Schltr.  
 Satyrium volkenskii Schltr.  
 Satyrium volkenskii Schltr.  
 Selenipedium chica Rchb.f.  
 Selenipedium chica Rchb.f.  
 Serapias lingua L.  
 Serapias lingua L.  
 Serapias lingua L.  
 Serapias lingua L.  
 Serapias nurrica Corrias  
 Serapias nurrica Corrias  
 Serapias nurrica Corrias  
 Serapias nurrica Corrias  
 Serapias orientalis (Greuter) H.Baumann & Künkele  
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 Serapias orientalis (Greuter) H.Baumann & Künkele  
 Satyrium nepalense var. nepalense  
 Satyrium nepalense var. ciliatum (Lindl.) Hook.f.  
 Satyrium nepalense var. nepalense  
 Satyrium unifolium Schltr.  
 Satyrium acutirostrum Summerh.  
 Satyrium atherstonei Rchb.f.  
 Satyrium leucocomos Rchb.f.  
 Satyrium longibracteatum Rolfe  
 Satyrium mechowianum Kraenzl.  
 Satyrium monopetalum Kraenzl.  
 Satyrium nuttii Rolfe  
 Satyrium occultum Rolfe  
 Satyrium proschii Briq.  
 Satyrium schinzii T.Durand & Kraenzl.  
 Satyrium triphyllum Kraenzl.  
 Satyrium zombense Rolfe  
 Satyrium dzygoceras Summerh.  
 Satyrium leptopetalum Kraenzl.  
 Satyrium trachypetalum Kraenzl.  
 Cypripedium chica (Rchb.f.) Pfitzer  
 Selenipedium chica (Rchb.f.) Pfitzer  
 Damasonium lingua (L.) L.  
 Helleborine lingua (L.) Pers.  
 Orchis lingua (L.) Scop.  
 Serapiastrum lingua (L.) A.A.Eaton  
 Serapias nurrica subsp. argensii M.Gerbaud & O.Gerbaud  
 Serapias nurrica subsp. nurrica  
 Serapias nurrica Corrias subsp. santuingensis (Senis, M.P.Grasso & Orrù) Senis, M.P.Grasso & Orrù  
 Serapias nurrica Corrias var. santuingensis Senis, M.P.Grasso & Orrù  
 Serapias apulica (H.Baumann & Künkele) P.Delforge  
 Serapias apulica subsp. brundisina Lumare & Medagli  
 Serapias apulica subsp. messapica Lumare & Medgali  
 Serapias apulica subsp. neretina Lumare & Medagli  
 Serapias apulica subsp. uxentina Gennaio  
 Serapias carica (H.Baumann & Künkele) P.Delforge  
 Serapias carica var. monantha P.Delforge  
 Serapias cordigera subsp. orientalis (Greuter) H.Sund.  
 Serapias cordigera subsp. patima (M.Hirth & H. Spaeth) Kreutz  
 Serapias cycladum H.Baumann & Künkele  
 Serapias feldwegiana H.Baumann & Künkele  
 Serapias ionica H. Baumann & Künkele  
 Serapias istriaca Perko  
 Serapias levantina H.Baumann & Künkele  
 Serapias levantina var. dafnii (B.Baumann & H.Baumann) P.Delforge  
 Serapias levantina subsp. dafnii B.Baumann & H.Baumann  
 Serapias levantina subsp. feldwegiana (H.Baumann & Künkele) H.Baumann & R.Lorenz

*Serapias orientalis* (Greuter) H.Baumann & Künkele  
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*Serapias orientalis* (Greuter) H.Baumann & Künkele  
*Serapias orientalis* (Greuter) H.Baumann & Künkele  
*Serapias vomeracea* (Burm.f.) Briq.  
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*Serapias vomeracea* (Burm.f.) Briq.  
*Serapias vomeracea* (Burm.f.) Briq.  
*Serapias vomeracea* (Burm.f.) Briq.  
*Steveniella satyrioides* (Spreng.)Schltr.  
*Steveniella satyrioides* (Spreng.)Schltr.  
*Steveniella satyrioides* (Spreng.)Schltr.  
*Steveniella satyrioides* (Spreng.)Schltr.  
*Steveniella satyrioides* (Spreng.)Schltr.

*Serapias neglecta* subsp. *ionica* (H.Baumann & Künkele) H.Baumann & R.Lorenz  
*Serapias neglecta* subsp. *ionica* E.Nelson  
*Serapias neglecta* subsp. *istriaca* (Perko) H.Baumann & R.Lorenz  
*Serapias orientalis* subsp. *apulica* H.Baumann & Künkele  
*Serapias orientalis* subsp. *carica* H.Baumann & Künkele  
*Serapias orientalis* var. *carica* (H.Baumann & Künkele) P.Delforge  
*Serapias orientalis* subsp. *cycladum* (H.Baumann & Künkele) Kreutz  
*Serapias orientalis* subsp. *dafnii* (B.Baumann & H.Baumann) Kreutz  
*Serapias orientalis* subsp. *feldwegiana* (H.Baumann & Künkele) Kreutz  
*Serapias orientalis* subsp. *levantina* (H.Baumann & Künkele) Kreutz  
*Serapias orientalis* var. *monantha* (P.Delforge) P.Delforge  
*Serapias orientalis* subsp. *moreana* H.Baumann & R.Lorenz  
*Serapias orientalis* subsp. *orientalis*  
*Serapias orientalis* var. *sennii* (Renz) P.Delforge  
*Serapias orientalis* var. *siciliensis* (Bartolo & Pulv.) P.Delforge  
*Serapias orientalis* subsp. *siciliensis* Bartolo & Pulv.  
*Serapias orientalis* var. *spaethiae* P.Delforge  
*Serapias patima* M.Hirth & H.Spaeth  
*Serapias sennii* Renz  
*Serapias vomeracea* subsp. *istriaca* (Perko) Kreutz  
*Serapias vomeracea* subsp. *levantia* (H.Baumann & Künkele) Véla & Viglione  
*Serapias vomeracea* subsp. *orientalis* Greuter  
*Helleborine longipetala* Ten.  
*Helleborine pseudocordigera* Sebast.  
*Lonchitis longipetala* Bubani  
*Orchis lingua* All.  
*Orchis vomeracea* Burm.f.  
*Serapias cordigera* subsp. *vomeracea* (Burm.f.) H.Sund  
*Serapias hirsuta* Lapeyr.  
*Serapias lancifera* St.-Amans  
*Serapias longipetala* (Ten.) Pollini  
*Serapias longipetala* subsp. *pallidiflora* (Tod. ex Lojac.) Arcang.  
*Serapias pseudocordigera* (Sebast.) Moric.  
*Serapias vomeracea* var. *cordigeroides* (E.Nelson) N.R.Campb. & A.K.Camp.  
*Serapias vomeracea* subsp. *flava* Balayer  
*Serapias vomeracea* subsp. *guadarramica* Kreutz  
*Serapias vomeracea* var. *guadarramica* (Kreutz) P.Delforge  
*Serapias vomeracea* subsp. *longipetala* (Ten.) H.Baumann & Künkele  
*Serapias vomeracea* var. *longipetala* (Ten.) Kreutz  
*Serapiastrum longipetalum* (Ten.) A.A.Eaton  
*Serapiastrum vomraceum* (Burm.f.) Schinz & Thell.  
*Coeloglossum satyrioides* (Spreng.) Nyman  
*Habenaria satrioides* (Spreng.) Benth. ex Schltr.  
*Himantoglossum satyrioides* Spreng.  
*Orchis prosteveniella* P.Delforge  
*Orchis satyrioides* Steven

*Steveniella satyrioides* (Spreng.) Schltr.  
*Steveniella satyrioides* (Spreng.) Schltr.  
*Steveniella satyrioides* (Spreng.) Schltr.  
*Steveniella satyrioides* (Spreng.) Schltr.  
*Thelymitra carnea* R.Br.  
*Thelymitra carnea* R.Br.  
*Thelymitra circumsepta* Fitzg.  
*Thelymitra cyanea* (Lindl.) Benth.  
*Thelymitra cyanea* (Lindl.) Benth.  
*Thelymitra cyanea* (Lindl.) Benth.  
*Thelymitra longifolia* J.R.Forst. & G.Forst  
*Thelymitra longifolia* J.R.Forst. & G.Forst  
*Thelymitra longifolia* J.R.Forst. & G.Forst  
*Thelymitra longifolia* J.R.Forst. & G.Forst  
*Thelymitra longifolia* J.R.Forst. & G.Forst  
*Thelymitra longifolia* J.R.Forst. & G.Forst  
*Thelymitra megacalyptra* Fitzg.  
*Thelymitra nuda* R.Br.  
*Thelymitra nuda* R.Br.  
*Thelymitra papuana* J.J.Sm.  
*Thelymitra papuana* J.J.Sm.  
*Thelymitra papuana* J.J.Sm.  
*Thelymitra papuana* J.J.Sm.  
*Thelymitra pulchella* Hook.f.  
*Thelymitra pulchella* Hook.f.  
*Thelymitra pulchella* Hook.f.  
*Thelymitra pulchella* Hook.f.  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanda tessellata* (Roxb.) Hook. ex G.Don  
*Vanilla appendiculata* Rolfe  
*Vanilla claviculata* Sw.  
*Vanilla griffithii* Rchb.f.  
*Vanilla guianensis* Splitg.  
*Vanilla guianensis* Splitg.  
*Vanilla odorata* C.Presl  
*Vanilla odorata* C.Presl  
*Vanilla odorata* C.Presl  
*Vanilla odorata* C.Presl  
*Vanilla odorata* C.Presl  
*Vanilla odorata* C.Presl  
*Vanilla odorata* C.Presl  
*Vanilla odorata* C.Presl  
*Peristylus satyrioides* (Spreng.) Rchb.f.  
*Steveniella caucasica* Garay  
*Steveniella satyrioides* var. *iranica* Kreutz  
*Stevenorchis satyrioides* (Spreng.) Wankow & Kraenzl.  
*Macdonaldia carnea* (R.Br.) Szlach.  
*Thelymitra imberbis* Hook.f.  
*Thelymitra resecta* Rupp  
*Thelymitra venosa* var. *cyanea* (Lindl.) Hatch  
*Macdonaldia cyanea* Lindl.  
*Thelymitra uniflora* Hook.f.  
*Serapias regularis* G.Forst.  
*Thelymitra alba* Colenso  
*Thelymitra cornuta* Colenso  
*Thelymitra forsteri* Sw.  
*Thelymitra nemoralis* Colenso  
*Thelymitra aristata* var. *megacalyptra* (Fitzg.) Rupp  
*Thelymitra versicolor* Lindl.  
*Thelymitra grandis* F.Muell. ex Benth.  
*Thelymitra caesia* Petrie  
*Thelymitra concinna* Colenso  
*Thelymitra fimbriata* Colenso  
*Thelymitra pachyphylla* Cheeseman  
*Thelymitra caesia* Petrie  
*Thelymitra concinna* Colenso  
*Thelymitra fimbriata* Colenso  
*Thelymitra pachyphylla* Cheeseman  
*Epidendrum tessellatum* Roxb.  
*Cymbidium tessellatum* (Roxb.) Sw.  
*Aerides tessellata* (Roxb.) Wight ex Lindl.  
*Vanda roxburghii* R.Br.  
*Cymbidium allagnata* Buch.-Ham. ex Wall.  
*Cymbidium tesselloides* Roxb.  
*Vanda tesselloides* (Roxb.) Rchb.f.  
*Vanda roxburghii* var. *wrightiana* Rchb.f.  
*Vanilla purusara* Barb.Rodr. ex Hoehne  
*Epidendrum claviculatum* Sw.  
*Vanilla tolypephora* Ridl.  
*Vanilla latisegmenta* Ames & C.Schweinf.  
*Vanilla surinamensis* Rchb.f.  
*Epidendrum vermifugum* Sessé & Moc.  
*Vanilla denticulata* Pabst  
*Vanilla ensifolia* Rolfe  
*Epidendrum vermifugum* Sessé & Moc.  
*Vanilla denticulata* Pabst  
*Vanilla ensifolia* Rolfe

Vanilla palmarum (Salzm. ex Lindl.) Lindl.	Epidendrum palmarum Salzm. ex Lindl.
Vanilla palmarum (Salzm. ex Lindl.) Lindl.	Vanilla palmarum var. grandifolia Cogn.
Vanilla palmarum (Salzm. ex Lindl.) Lindl.	Vanilla lindmaniana Kraenzl.
Vanilla phaeantha Rchb.f	Vanilla bahiana Hoehne
Vanilla phaeantha Rchb.f	Vanilla carinata Rolfe
Vanilla phaeantha Rchb.f	Vanilla gardneri Rolfe
Vanilla phaeantha Rchb.f	Vanilla planifolia var. macrantha Griseb.
Vanilla planifolia Andrews	Vanilla aromatica var. planifolia (Andrews) F.Buys.
Vanilla planifolia Andrews	Notylia planifolia (Andrews) Conz.
Vanilla planifolia Andrews	Epidendrum rubrum Lam.
Vanilla planifolia Andrews	Vanilla aromatica Willd.
Vanilla planifolia Andrews	Myrobroma fragrans Salisb.
Vanilla planifolia Andrews	Vanilla viridiflora Blume
Vanilla planifolia Andrews	Vanilla sativa Schiede
Vanilla planifolia Andrews	Vanilla sylvestris Schiede
Vanilla planifolia Andrews	Vanilla aromatica var. bicolor F.Buys.
Vanilla planifolia Andrews	Vanilla aromatica var. claviculata F.Buys.
Vanilla planifolia Andrews	Vanilla aromatica var. discolor F.Buys.
Vanilla planifolia Andrews	Vanilla aromatica var. lutescens F.Buys.
Vanilla planifolia Andrews	Vanilla duckeri Huber
Vanilla planifolia Andrews	Vanilla rubra (Lam.) Urb.
Vanilla planifolia Andrews	Vanilla fragrans Ames
Vanilla planifolia Andrews	Vanilla planifolia var. angusta Costantin & Poiss. ex C.Henry
Vanilla planifolia Andrews	Vanilla schwackeana Hoehne
Vanilla planifolia Andrews	Notylia sativa (Schiede) Conz.
Vanilla planifolia Andrews	Notylia sylvestris (Schiede) Conz.
Vanilla planifolia Andrews	Vanilla bampsiana Geerink
Vanilla planifolia Andrews	Vanilla sotoarenasii M.Pignal
Vanilla pompona Schiede	Notylia pompona (Schiede) Conz.
Vanilla pompona Schiede	Vanilla cochlearilabia Archila, Chiron & Menchaca
Vanilla pompona Schiede	Vanilla grandiflora Lindl.
Vanilla pompona Schiede	Vanilla hamata Klotzsch
Vanilla pompona Schiede	Vanilla lutescens Moq. ex Dupuis
Vanilla pompona Schiede	Vanilla pittieri Schltr.
Vanilla pompona Schiede	Vanilla planifolia var. gigantea Hoehne
Vanilla pompona Schiede	Vanilla pleei Portères
Vanilla pompona Schiede	Vanilla pompona subsp. grandiflora (Lindl.) Soto Arenas
Vanilla pompona Schiede	Vanilla pompona subsp. pittieri (Schltr.) Dressler
Vanilla pompona Schiede	Vanilla pompona subsp. pompona
Vanilla x tahitensis J.W.Moore	Vanilla × hirsuta M.A.Clem. & D.L.Jones
Vanilla x tahitensis J.W.Moore	Vanilla × tiarei Costantin & Bois
Zeuxine strateumatica (L.) Schltr	Adenostylis emarginata Blume
Zeuxine strateumatica (L.) Schltr	Adenostylis integerrima Blume
Zeuxine strateumatica (L.) Schltr	Adenostylis strateumatica (L.) Ames
Zeuxine strateumatica (L.) Schltr	Adenostylis sulcata (Roxb.) Hayata

Zeuxine strateumatica (L.) Schltr  
Zeuxine strateumatica (L.) Schltr  
Zeuxine strateumatica (L.) Schltr  
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Zeuxine strateumatica (L.) Schltr  
Zeuxine strateumatica (L.) Schltr  
Zeuxine strateumatica (L.) Schltr

Neottia strateumatica (L.) R.Br.  
Orchis strateumatica L.  
Pterygodium salcata Roxb.  
Spiranthes strateumatica (L.) Lindl.  
Strateuma zeylanica Raf.  
Zeuxine bonii Gagnep.  
Zeuxine bracteata Wight  
Zeuxine brevifolia Wight  
Zeuxine emarginata (Blume) Lindl.  
Zeuxine integerrima (Blume) Lindl.  
Zeuxine procumbens Blume  
Zeuxine robusta Wight  
Zeuxine rupicola Fukuy.  
Zeuxine stenochila Schltr.  
Zeuxine strateumatica var. laxiflora I.Barua  
Zeuxine strateumatica var. rupicola (Fukuy.) S.S.Ying  
Zeuxine strateumatica f. rupicola (Fukuy.) T.Hashim  
Zeuxine sulcata (Roxb.) Lindl. ex Wight  
Zeuxine waryana Schltr.

DRAFT TERMS OF REFERENCE:  
OVERVIEW OF APPENDIX-II ORCHID TAXA  
PARTICULARLY AFFECTED BY WILD HARVEST FOR INTERNATIONAL TRADE

**Terms of reference**

**Activities:**

- 1) *Analysis of trade data* - Analyse the CITES Trade database for wild harvested and artificially propagated specimen of Appendix-II orchid taxa to identify:
  - a. levels and trends in trade in wild harvested and artificially propagated specimens in trade;
  - b. any potential fluctuations / shifts in trade patterns; and
  - c. potential implementation challenges that could be reflected in trade data.
- 2) *Assessment of conservation status and trends* - Assess and summarize available information with a focus on taxa identified under 1) supra as of potential concern, and on those not covered in the study submitted in Annex 1 of the present document, on:
  - a. the conservation status of and trends in Appendix-II orchid taxa;
  - b. conservation efforts to ensure sustainable trade; and
  - c. the impact of artificial propagation on wild populations of Appendix-II orchid taxa.
- 3) Engage range States and Parties trading in artificially propagated specimen of Appendix-II orchid taxa as well as relevant experts and organizations to determine:
  - a. the identification challenges and look-alike issues Parties experienced in implementing the annotations (P3 and #4); and
  - b. The challenges associated with the implementation of annotation #4.
- 4) *Assess, based on the overview in activity 1) and 2) and the engagements in activity 3) the conservation impacts of:*
  - a. exempting artificially propagated Appendix-II listed orchid taxa from CITES regulations, including as articulated in footnote annotation 10 (after CoP19, footnote annotation P3) of the CITES Appendices, including identification challenges and look-alike issues; and
  - b. exempting derivatives and/or finished products of certain Appendix-II listed orchid taxa from CITES regulations through amendments to annotation #4.