

Revision of *Hermannia* subgenus *Hermannia* in southern Africa

I. C. VERDOORN*

ABSTRACT

Observations on the genus as a whole are made and the subgenus *Hermannia* is defined. Species in southern Africa which fall in this subgenus are revised in detail. A key is provided to these 93 species and several line drawings illustrate some of the diagnostic features used in the key.

RÉSUMÉ

REVISION DU HERMANNIA SOUS-GENRE HERMANNIA EN AFRIQUE AUSTRALE

A des observations sur le genre dans son ensemble, cet article joint une définition du sous-genre *Hermannia*. Les espèces d'Afrique australe qui appartiennent à ce sous-genre sont révisées en détail. Il y en a 93, pour lesquelles on fournit une clé d'identification et plusieurs dessins au trait qui illustrent certains des caractères diagnostiques utilisés dans la clé.

INTRODUCTION

This revision is a contribution towards a treatment of the genus *Hermannia* for the Flora of Southern Africa. The format followed is that formerly used for the F.S.A., which differs in several respects from that generally employed in *Bothalia*.

In the course of the work thousands of herbarium specimens, both in the National Herbarium, Pretoria, and on loan from overseas herbaria, such as Leningrad, Vienna, Stockholm and Zürich, were studied.

The genus, like so many others, presents great difficulties to the taxonomist in his attempt to define satisfactorily the sub-genera and some of the species. Intermediates, aberrants and putative hybrids abound. Before *Mahernia* L. was put into synonymy under *Hermannia* L., Bentham & Hooker in their *Genera Plantarum* (1862), separated these genera on the shape of the filaments. Those of *Hermannia* were described as "oblong or dilated at the apex" and of *Mahernia* as "dilated in the middle", the latter termed "cruciform" by subsequent authors. In 1895 K. Schumann (*Natürl. PflFam.* 3, 6: 80) placed *Mahernia* L. as section *Mahernia* in the genus *Hermannia* remarking that, since the main distinguishing feature, namely cruci-

form filaments, did not hold among species subsequently put in *Mahernia*, it could not be upheld as a genus. Later, in Engl., *Monogr. Afr. Pfl.* 5, 49 (1900), K. Schumann raised the section to subgeneric rank as subgenus *Mahernia* (L.) K. Schum. This has been supported in the present study, for not only has "cruciform" been variously interpreted but it occurs in groups that are not otherwise related.

Just as it has been found impracticable to separate these two genera, so the genus *Hermannia*, in the broad sense, is not readily grouped into subgenera. Exploring several features which might be diagnostic, such as inflated calyces, horned capsules, deeply divided leaves and different forms of pubescence, it was found that these characters can only be used to separate species which occur in a number of small subdivisions.

Forced back to a consideration of the shape of the filaments, it was found that the species reviewed here all agreed in having obovate, obtrullate, linear or narrowly oblong filaments in which the anther bases overlap the expanded portion of the filaments (Fig. 1.1-1.4). On these grounds the genus could be separated into two subgenera as keyed out below.

Key to subgenera

- Filaments obovate, obtrullate, linear or narrowly oblong, with the anther base overlapping the expanded portion of the filaments.....subgenus **Hermannia**
- Filaments abruptly dilated in the upper half or at the apex (more or less cruciform), rarely linear or narrowly obovate-oblong but then the anther base not overlapping the expanded portion of the filaments (Fig. 1.5-1.9).....subgenus **Mahernia**

HERMANNIA SUBGEN. HERMANNIA

Hermannia L. subgen. *Hermannia*

Subgen. *Euhermannia* Harv. in *F.C.* 1: 180 (1860); K. Schum. in Engl., *Monogr. Afr. Pfl.* 5, 49 (1900).

Subgen. *Acicarpus* Harv. in *l.c.* (1860); K. Schum., *l.c.* (1900).

Type species: *H. hyssopifolia* L.

Herbs, undershrubs or rarely small shrubs, procumbent or erect, generally stellate-pubescent often with

glandular or simple hairs intermixed. *Leaves* alternate, entire, lobed or incised; stipules sometimes foliaceous. *Inflorescence* of simple or compound 1 to several-flowered cymes, axillary or leaf-opposed. *Calyx* 5-lobed, tube campanulate to globose. *Petals* 5, obovate to oblong, often narrowed into a claw at the base, slightly to very strongly spirally twisted. *Stamens* 5, filaments expanded, obovate, obtrullate, linear or narrowly oblong, the expanded portion overlapped by the anther base, anthers acuminate, ciliate. *Ovary* 5-loculed, styles 5, cohering. *Capsule* loculicidally dehiscent, 5-loculed; locules with rounded apices or with short to long horn-like appendages.

* Botanical Research Institute, Department of Agricultural Technical Services, Private Bag X101, Pretoria, 0001.

FIG. 1.—Stamen types in *Hermannia*. 1–4, filaments as in *Hermannia* subgen. *Hermannia*, all with the anther base overlapping the dilated portion: 1, filament obovate-cuneate, *H. althaeifolia* (De Winter & Verdoorn 9063); 2, filament more or less linear-oblong, *H. filifolia* (Taylor 6494); 3, filament narrowly oblong-obovate to obtusulate, *H. angularis* (De Winter & Verdoorn 9097); 4, filament narrowly obovate, dilated at the apex, *H. cristata* Compton 30024). 5–9, filaments as in *Hermannia* subgen. *Mahernia*, variously shaped but the anther base not overlapping the dilated portion: 5, filament abruptly dilated in the upper half (cruciform), *H. aurocoma* (Acocks 12314); 6, filament abruptly dilated at the apex (subcruciform), *H. argillicola* (Dinter 8041); 7, filament broadly dilated at the apex, *H. grossularifolia* (Marloth 5300); 8, filament more or less linear, *H. oligospermum*, (Esterhuysen 15496); 9, filament obovate-cuneate *H. stricta* (Rösch & Le Roux 549).

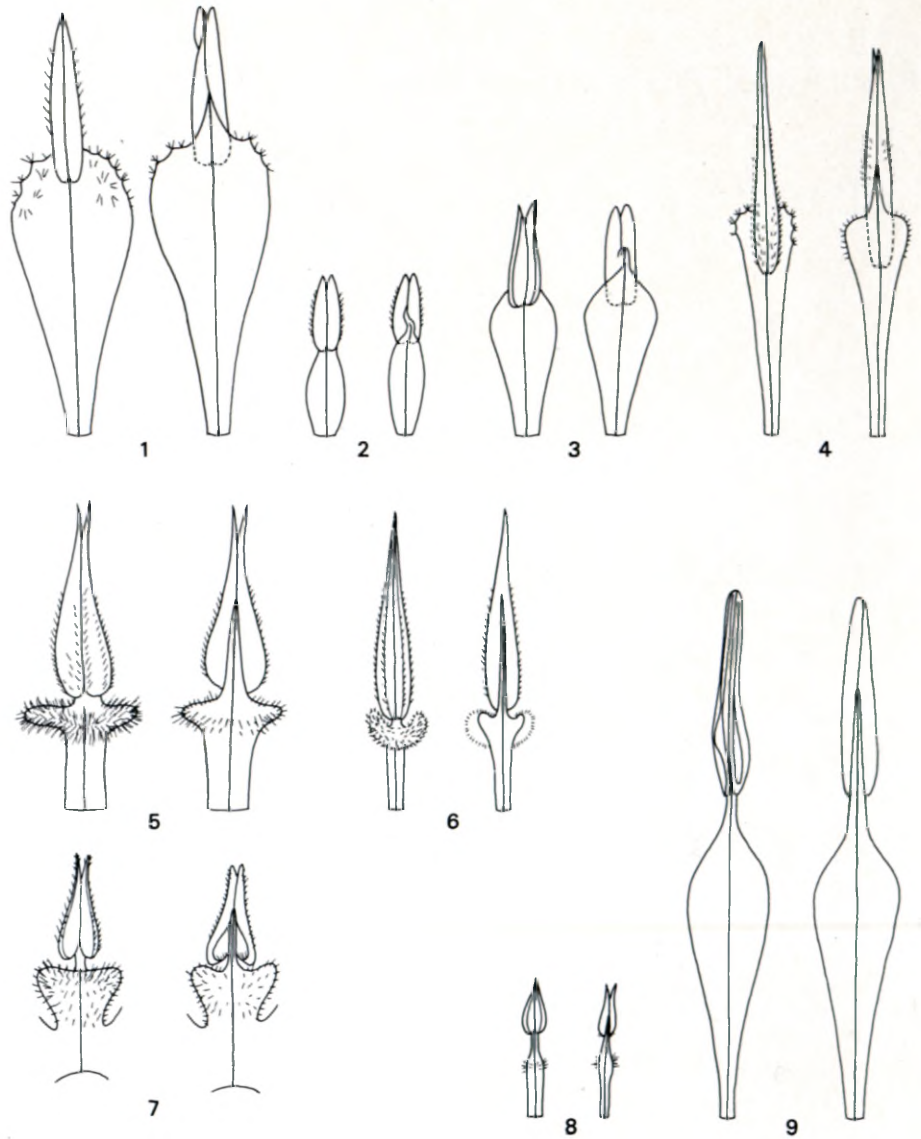
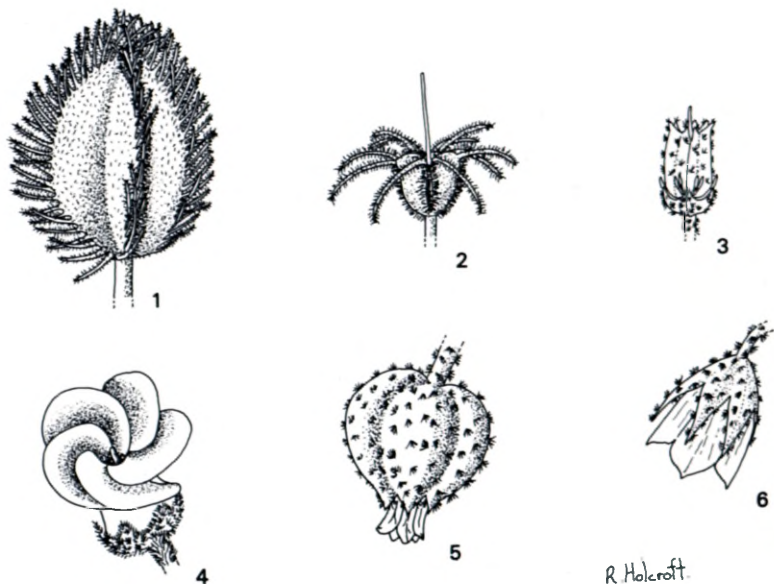


FIG. 2.—Some diagnostic characters relating to capsules and flowers in the subgen. *Hermannia*. 1, capsule 5-angled, fringed on the angles, *H. cristata* (I. Thörnroft 3937); 2, capsule with a pair of horns (developing with age) at the apex of each angle, *H. spinosa* (Coetzee & Werger 1739); 3, capsule not fringed on the angles and not horned at the apex, *H. prismatocarpa* (De Winter & Verdoorn 9067); 4, flower with strongly twisted petals (dolls roses) and calyx not inflated, *H. prismatocarpa* (after Flower. Pl. Afr. t. 1625); 5, calyx inflated, *H. comosa* (De Winter 9107); 6, flowers with petals not strongly twisted, more or less bell-shaped, *H. spinosa* (Schlieben 8841).



R. Holcroft.

KEY TO THE SPECIES

- 1a Capsules fringed on angles with crowded tentacle-like or filiform processes (Fig. 2.1):
- 2a Low suffrutex, several stems from a stout rootstock, leaves narrowly elliptic-oblong to lanceolate; fringe of capsule of fairly stout 7 mm long processes; Eastern Escarpment and Soutpansberg.1. *H. cristata*
- 2b Suffrutex up to 2 m tall, leaves large, suborbicular; fringe of capsule of long, filiform processes; S.W.A.2. *H. merxmuelleri*
- 1b Capsules not fringed as above:
- 3a Stems erect, many from a woody rootstock, short, under 30 cm long, more or less leafless in lower half with a few large leaves and yellow flowers borne in upper half.3. *H. sandersonii*
- 3b Habit not as above:
- 4a Inflorescence of simple 1-flowered cymes solitary in axils of leaves on branches of indeterminate growth, sometimes appearing racemose when upper leaves are much reduced; petals not strongly contorted, open flowers bell-shaped (Fig. 2.6):
- 5a Petals shorter than calyx, rarely about as long but then shorter than stamens:
- 6a Plants with at least outer branches long and trailing; leaves more or less secund:
- 7a Leaf-margins conspicuously and densely fringed with hoary-pilose hairs.4. *H. seineri*
- 7b Leaf-margins not as above:
- 8a Leaves finely and densely stellate-tomentose at least when young, hairs under 0,5 mm long.5. *H. tomentosa*
- 8b Leaves densely or sparsely coarsely stellate, hairs comparatively long.6. *H. eenii*
- 6b Plants bushy, erect or suberect:
- 9a Branchlets predominantly glandular-pubescent at least in upper half (rarely in *H. boraginiflora*, e.g. *Gilliland 746*, not conspicuous or absent):
- 10a Leaves sparsely to fairly densely stellate-pubescent:
- 11a Capsule densely stellate-pubescent all over; in addition to glandular hairs, branchlets mainly appressed stellate-pubescent.7. *H. boraginiflora*
- 11b Capsule glandular-pubescent between the sutures, glabrescent:
- 12a Branchlets with many patent, gland-tipped hairs intermixed with long, pointed, patent hairs.8. *H. glanduligera*
- 12b Branchlets densely pubescent with short (under 2,5 mm), glandular hairs not obviously gland-tipped.9. *H. viscosa*
- 10b Leaves finely stellate-tomentose on both surfaces:
- 13a Leaves small, mostly under 1,5 cm long; glandular hairs conspicuous on most parts of plant; S.W.A.10. *H. glandulosissima*
- 13b Leaves up to 4,5 cm long; glandular hairs conspicuous only in upper portion of branchlets; Transvaal.11. *H. grisea*
- 9b Branchlets not predominantly glandular-pubescent:
- 14a Low plant with a few slender branches, calyx-lobes long, subulate; capsule with long, slender horns.12. *H. solaniflora*
- 14b Suffrutices, capsules not or shortly horned:
- 15a Leaves stellate-tomentose:
- 16a Leaves very small, mostly under 4 mm long, often recurved, lateral branches subspreading, slender, rigid.13. *H. minimifolia*
- 16b Leaves mostly over 5 mm long and up to 22 mm long; lateral branchlets not as above:
- 17a Bush, branched at base, branches long and slender, forming a rounded bush about 1 m in diameter; leaves drying a light colour; anthers obvious, usually drying a dark violet; occurs in south-western areas of S.W.A.14. *H. engleri*
- 17b Suffrutex, stems erect, branchlets arcuate-ascending or suberect; leaves drying a darker colour; anthers sometimes dark violet; occurs in the northern areas of S.W.A. around the Etosha Pan.15. *H. guerkeana*
- 15b Leaves stellate-pubescent but not tomentose; found only along east coast of Zululand and Mozambique.16. *H. micropetala*
- 5b Petals as long as or longer than calyx:
- 18a Gland-tipped hairs obvious, especially on branchlets and petioles:
- 19a Flowers in long, distinct pseudoracemes; petals usually over 1,5 cm long and with a dark blotch near base showing even on dried specimens; capsule blunt.17. *H. amabilis*
- 19b Flowers axillary or in short, not very distinct pseudoracemes; petals usually under 1 cm long, without a dark spot near base; capsule apiculate or shortly horned at apex of sutures.18. *H. modesta*
- 18b Gland-tipped hairs not obvious on branchlets and petioles:
- 20a Annuals, sometimes biennial or triennial:
- 21a Weak annual with small flowers usually under 5 mm long; leaves broadly to narrowly ovate-acuminate.19. *H. tigrensis*
- 21b Bi- or triennial; flowers 5 mm or longer; leaves variable.18. *H. modesta*
- 20b Suffrutices, perennial, flowers usually over 5 mm long:
- 22a Leaves very narrow, under 2 mm wide, appearing ericoid, clustered.20. *H. linearifolia*
- 22b Leaves not as above:
- 23a Capsule shortly horned; leaves and branches stellate-tomentose, not laxly stellate-pubescent:
- 24a Flowers in pseudoracemes on long, slender branches.21. *H. helianthemum*
- 24b Flowers axillary:
- 25a Calyx 5-ribbed, lobed to less than halfway; pubescence same on calyx and leaves.22. *H. damarana*
- 25b Calyx not distinctly 5-ribbed, lobed to beyond middle; pubescence on calyx longer and coarser than on leaves.23. *H. gariiepina*

- 23b Capsule with long, spreading, pilose horns; leaves and branchlets stellate-pubescent or stellate-tomentose (Fig. 2.2):
- 26a Leaves and branchlets stellate-tomentose, at least when young:
- 27a A small, many-stemmed leafy bush; confined to edge of Namib... 24. *H. complicata*
- 27b Suffrutex, divaricately branched, branchlets becoming leafless and indurated:
- 28a Flowers many, secund, in pseudoracemes; western Cape to S.W.A... 25. *H. trifurca*
- 28b Flowers in axils of upper leaves; Kalahari and S.W.A... 26. *H. affinis*
- 26b Leaves and branchlets stellate-pubescent, not tomentose, or glabrous and minutely papillose:
- 29a Virgate, erect suffrutex, leaves and branches appearing glabrous but glutinous... 27. *H. fruticulosa*
- 29b Rounded bush with wiry stems; leaves and branchlets stellate-pubescent, glabrescent; peduncles persisting, spreading, indurated, giving spiny appearance to bush... 28. *H. spinosa*
- 4b Inflorescence of simple or compound, 1-several-flowered cymes on same plant, arranged in axils of upper leaves and at apices of branchlets forming leafy or leafless, racemose or paniculate cymes, if all cymes 1-flowered, then in sparse terminal racemose cymes; petals strongly contorted ("doll's roses"; Fig. 2.4), open flowers not bell-shaped:
- 30a Leaves entire or shallowly crenate or toothed on the margins, if somewhat deeply lobed then not halfway to midrib:
- 31a Plants with long, decumbent branches, inflorescence and secund branchlets ascending, all terminating in a leafless inflorescence:
- 32a Leaves long and narrow 1-3 mm broad in middle, appearing linear but tapering slightly towards base into an obscure petiole... 29. *H. linifolia*
- 32b Leaves distinctly petioled, blade oblong to ovate, 5-30 mm broad in middle:
- 33a Flowers 1 cm long or longer, clustered at ends of branchlets on short pedicels, shorter than flowers:
- 34a Pubescence sparse, stellate hairs short and appressed (see also under 30b)... 89. *H. procumbens* subsp. *procumbens*
- 34b Pubescence conspicuous, hairs in part long, grey and matted... 30. *H. decumbens*
- 33b Flowers under 1 cm long, not markedly clustered on short pedicels at ends of branchlets:
- 35a Branches fairly densely stellate-pubescent, often with long stiff hairs intermingled; capsule elongating to over 1 cm long (Fig. 2.3)... 31. *H. prismatocarpa*
- 35b Branches appear glabrous, sometimes sparsely and inconspicuously stellate-pubescent, hairs few, short or some slightly longer; capsule short, broad, usually under 1 cm long... 32. *H. scordifolia*
- 31b Plants not as above but erect suffrutices, sometimes bushy with ascending branches, or low, woody and sprawling; inflorescences various:
- 36a Leaves and stipules imbricate, leaves usually longer than internodes, about 12 mm long or less (see also *H. stipulacea* under 36b):
- 37a Calyx and leaves densely and coarsely pubescent with stellate and tufted golden brown hairs (see also under 36b)... 75. *H. decipiens*
- 37b Calyx not densely and coarsely pubescent as above:
- 38a Leaves finely tomentose or tomentellose; calyx lobed to about one third of its length:
- 39a Leaves distinctly petioled; mature flowers 10 mm long or more; calyx inflated... 33. *H. ternifolia*
- 39b Leaves sessile or subsessile; open flowers less than 10 mm long; calyx subinflated... 34. *H. trifoliata*
- 38b Leaves rough with minute fringed scales or hirsute; calyx lobed halfway or beyond:
- 40a Leaves broadest at apex, rough with minute fringed scales... 35. *H. concinnifolia*
- 40b Leaves narrowly oblong, sparsely hirsute with long, bulbous-based hairs... 36. *H. muirii*
- 36b Leaves and stipules not obviously imbricate as above:
- 41a Leaves generally broadest in lower half or oblong-elliptic to broadly oblong:
- 42a Pubescence mainly rough, especially on branchlets, mostly of dense or sparse, stiffly stellate or bulbous-based hairs:
- 43a Calyx inflated, narrow at mouth, sinuses narrow (Fig. 2.5):
- 44a Calyx narrowly urceolate, lobes deltoid; leaves coarsely and densely pubescent with tufted or stellate hairs from a scaly base (see also under 41b)... 54. *H. salviifolia*
- 44b Calyx globose; leaves mostly basal (also under 42b)... 46. *H. comosa*
- 43b Calyx not inflated or if subinflated then campanulate to salver-shaped:
- 45a Leaves mainly basal or in lower half of plant, sometimes some leaves deeply lobed or pinnatisect; flowers in long racemose or paniculate cymes comprising the upper half to two-thirds of plant (see also under 30b):
- 46a Flowers usually small, up to about 6 mm long on dried specimens; leaves narrowly to broadly oblong or ovate-oblong, coarsely and evenly lobed, 15-20 cm long... 91. *H. macra*
- 46b Flowers over 6 mm long and up to 10 mm long:
- 47a Leaves oblong-lanceolate to narrowly lanceolate, dentate to deeply dentate... 92. *H. juttae*
- 47b Leaves ovate, coarsely crenate to palmatisect... 93. *H. paucifolia*
- 45b Leaves cauline:
- 48a Flowers small, up to 6 mm long on dried specimens, numerous and short-stalked in each inflorescence:
- 49a Calyx subinflated, about 4 mm long on dried specimens... 37. *H. floribunda*

- 49b Calyx not subinflated, under 4 mm long on dried specimens:
- 50a Leaves distichous, pubescence harsh, mainly of 2 mm long hairs . . . 74. *H. disticha*
 50b Leaves not distichous, mainly under 15 mm long; hairs shorter than 2 mm:
- 51a Leaves white-tomentose on lower surface (see also under 41b) . . . 66. *H. alnifolia*
 51b Leaves not white-tomentose on lower surface, pubescence harsh . . .
 38. *H. bryoniifolia*
- 48b Flowers over 6 mm long on dried specimens:
- 52a Stipules leaf-like (see also under 42b) 44. *H. althaeifolia*
 52b Stipules not leaf-like:
- 53a Leaves thick-textured, densely pubescent, large, up to 4,5 × 3 cm; flowers large, congested in short inflorescences 39. *H. cordifolia*
 53b Leaves and flowers not as above:
- 54a Pubescence mainly hispid, calyx sparsely so to glabrous; leaves mucronate 40. *H. hispidula*
 54b Pubescence mainly of stellate or grouped hairs, calyx subdensely to densely stellate-pubescent:
- 55a Leaves strongly crisped as well as crenate on margin; calyx densely stellate with hairs rather long (see also under 41b); Western Province 41. *H. rugosa*
 55b Leaves shallowly crenate, not strongly crisped as well, stellate pubescence sometimes dense on calyx but hairs not long; Eastern Province 42. *H. althaeoides*
- 42b Pubescence mainly tomentose, especially on branchlets which are tomentose to smoothly canescent-tomentose or silvery with fringed, pitted scales:
- 56a Branches silvery with fringed pitted scales (see also under 30b) 88. *H. pulverata*
 56b Branches canescent-tomentose:
- 57a Flowers mostly under 6 mm long on dried specimens:
- 58a Leaves tomentose on both surfaces; branchlets always canescent . . . 43. *H. minutiflora*
 58b Leaves white-tomentose on lower surface only; branchlets not canescent (see also under 41b) 66. *H. alnifolia*
- 57b Flowers mostly over 6 mm long on dried specimens:
- 59a Stipules leaf-like; calyx hirsute, not narrowed at mouth 44. *H. althaeifolia*
 59b Stipules not large and leaf-like, calyx not hirsute if hairs long then grouped on stalks:
- 60a Calyx inflated, narrowed at mouth:
- 61a Flowers secund; leaves shortly petioled 45. *H. johanssenii*
 61b Flowers not secund; leaves, especially the lower, long-petioled . . . 46. *H. comosa*
- 60b Calyx not inflated or subinflated:
- 62a Leaves not normally crisped as well as crenate on margins:
- 63a Inflorescence of 2-flowered cymes in axils of leaves 47. *H. incana*
 63b Inflorescence of long, terminal, leafless, compound cymes . . . 42. *H. althaeoides*
- 62b Leaves normally crisped as well as crenate on margins:
- 64a Leaves broadly ovate to sub-orbicular 48. *H. vestita*
 64b Leaves narrowly ovate to ovate-oblong:
- 65a Calyx subinflated; branches of inflorescence glabrescent, dark and slender 49. *H. amoena*
 65b Calyx not subinflated; branches of inflorescence not glabrescent . . .
 50. *H. disermifolia*
- 41b Leaves broadest at apex or generally broadest in upper half but varying in shape from filiform, narrowly oblong, oblanceolate and broadly oblong-rectangular to subglobose:
- 66a Calyx inflated, narrowly urceolate to subglobose, narrowed at mouth:
- 67a Leaves softly tomentose on both surfaces:
- 68a Tomentum smoothly uniform; plants up to 1 m tall or taller, calyx subglobose 51. *H. mucronulata*
 68b Tomentum intermixed with long, villose hairs; low plant ± 30 cm high; calyx more or less urceolate 52. *H. suavis*
- 67b Leaves not, or not normally, softly tomentose on both surfaces:
- 69a Leaves usually toothed at apex and in upper half, stellate-pubescent with short hairs, glabrescent; calyx subglobose 53. *H. hyssopifolia*
 69b Leaves entire or occasionally obscurely lobed at truncate apex or in upper third; stellate pubescence rough, usually of thick and tufted hairs from a glandular or tubercled base; calyx urceolate (see also under 41a) 54. *H. salviifolia*
- 66b Calyx not inflated:
- 70a Leaves velvety tomentose on both surfaces, entire or very shallowly crenate in upper half:
- 71a Stipules not leaf-like:
- 72a Flowers small, 3–4,5 mm long on dried specimens, crowded in compound cymes, terminal on lateral branchlets; leaves fairly broad, often suborbicular, crenate at least at broad apex 55. *H. holosericea*
 72b Flowers normally 5 mm long or longer; leaves mostly narrow, usually entire and mucronate:
- 73a Weak twiggy plants; calyx wide, lobed to middle and beyond, scaly, hairs inconspicuous 56. *H. lavandulifolia*
 73b Virgate shrubs up to 1 m tall or taller; calyx strongly 5–10-ribbed, lobed in upper half, densely pubescent, hairs conspicuous and foxy-coloured
 57. *H. odorata*

- 71b Stipules leaf-like:
- 74a Leaves petioled, petiole not completely hidden by sessile stipules; flowers yellow:
- 75a Calyx narrowly obconic, strongly 5–10-ribbed; flowers appear narrow-waisted.....58. *H. sulcata*
- 75b Calyx not narrowly obconic:
- 76a Calyx broadly campanulate; flowers in terminal, leafy, paniculate cymes.....59. *H. velutina*
- 76b Calyx tubular-campanulate, lobed in upper half; cymes 1–2-flowered in lax, terminal, leafless, racemose inflorescences.....60. *H. gracilis*
- 74b Leaves sessile, short petiole hidden by broad, sessile stipules; flowers usually garnet-red.....61. *H. diversistipula*
- 70b Leaves not velvety tomentose on both surfaces, pubescence rough, or smooth and white only on lower surface, if appearing silvery pubescent on both surfaces then calyx and leaves covered by pitted, fringed scales:
- 77a Leaves on both surfaces, and calyx covered by pitted, fringed scales giving plants a silvery grey appearance:
- 78a Calyx deeply to narrowly campanulate, lobed in upper third; leaves cuneate; frequent in eastern and western Cape and O.F.S.....62. *H. cuneifolia*
- 78b Calyx shallowly campanulate to saucer-shaped, lobed almost to middle:
- 79a Leaves usually deeply divided, if not, then longer than broad, oblong and only slightly narrowed towards base (see also under 30b).....88. *H. pulverata*
- 79b Leaves never deeply lobed, subglobose to obovate-cuneate:
- 80a Flowers small, up to 5 mm long on dried specimens; leaves suborbicular, distinctly crenate.....63. *H. desertorum*
- 80b Flowers over 5 mm long on dried specimens; leaves obovate-cuneate, obscurely 3- or more-lobed at broad apex; west coast of Namaqualand and Namib in S.W.A.....64. *H. pfeilii*
- 77b Leaves and calyx not silvery grey from the covering of fringed pitted scales:
- 81a Leaves with a white, stellate or cobwebby, appressed tomentum on lower surface only:
- 82a Calyx densely fawn to brown-tomentose with lepidote stellate pubescence, hairs obvious and straw-coloured.....65. *H. multiflora*
- 82b Calyx thinly stellate-pubescent, the hairs very short or hispid, not densely brown-tomentose:
- 83a Flowers small, under 5 mm long on dried specimens, short-stalked, numerous in short, terminal, compound cymes.....66. *H. alnifolia*
- 83b Flowers usually over 5 mm long; inflorescence not as above:
- 84a Flowers in long, terminal, leafless, racemose or paniculate cymes:
- 85a Plants much branched from base, branches arcuate-ascending.....67. *H. muricata*
- 85b Tall, virgate shrubs:
- 86a Inflorescence of lax, paniculate cymes; peduncles and pedicels well developed.....68. *H. repetenda*
- 86b Inflorescence of racemose cymes, 1–3-flowered and 1–3 at a node, peduncle usually aborted.....69. *H. rigida*
- 84b Flowers in short, few-flowered cymes, terminal on short lateral branchlets or leaf-opposed along the leafy branches:
- 87a Leaves petioled; cymes very slender, many, axillary or leaf-opposed along leafy branches, curved downwards in helicoid fashion.....70. *H. helicoidea*
- 87b Leaves sessile or subsessile, cymes terminal on short lateral branchlets:
- 88a Leaves fascicled, strongly crisped, mostly narrowly oblong-cuneate.....71. *H. aspera*
- 88b Leaves single at a node, distichous, broadly obovate-oblong to ovate-oblong, broadly cuneate or rounded at base; only sometimes white-tomentose on lower surface.....74. *H. disticha*
- 81b Leaves variously pubescent but not with a white, stellate or cobwebby tomentum on lower surface only:
- 89a Leaves suborbicular or broadly oblong to oblong-obovate, only slightly longer than broad:
- 90a Flowers crowded in dense heads, densely hispid from long, tubercle-based hairs of calyx.....72. *H. conglomerata*
- 90b Flowers in lax terminal cymes:
- 91a Small plant with slender intricate branches and small leaves..73. *H. micrantha*
- 91b Shrublet 50–90 cm tall with distichous leaves with an average size of 20 × 16 mm (leaves rarely white-tomentose dorsally).....74. *H. disticha*
- 89b Leaves distinctly longer than broad:
- 92a Pubescence on calyx dense, golden brown coloured:
- 93a Bracteoles long, subulate, conspicuous at base of flowers:
- 94a Leaves small, about 12 mm long, often subimbricate; bracteoles reaching lower third of calyx.....75. *H. decipiens*
- 94b Leaves variable, usually over 15 mm long; bracteoles often reaching to top of calyx.....76. *H. involucrata*
- 93b Bracteoles not long and subulate:
- 95a Leaves densely and persistently pubescent on both surfaces..77. *H. pillansii*
- 95b Leaves laxly to subdensely stellate-pubescent, hairs long from a scaly base.....78. *H. stipulacea*

- 92b Pubescence on calyx not dense and golden brown:
- 96a Branches glabrous or pubescent to scaly-pubescent, at least on new growth:
- 97a Calyx parchment-like, angled at the sinuses, broad-based with broad, ovate lobes; south western Cape (see also under 96b)...85. *H. angularis*
- 97b Calyx not as above:
- 98a Leaves filiform, ericoid, acute, glabrous and clustered; Great and Little Karoo.....79. *H. filifolia*
- 98b Leaves not as above, if some appear filiform (conduplicate) then not completely glabrous or plants restricted to Coastal Fynbos:
- 99a Branches, leaves and calyx glabrous; Western Cape.....80a. *H. denudata* var. *denudata*
- 99b Branches, leaves and calyx not totally glabrous:
- 100a Leaves mostly acute and dentate in upper half; Transvaal.....80b. *H. denudata* var. *erecta*
- 100b Leaves broadest at or near apex which is rounded, mucronate or lobed:
- 101a Calyx half or more than half as long as petals, sinuses V-shaped:
- 102a Leaves glabrescent at least on upper surface, often flat and up to 12 mm broad at apex.....81. *H. flammea*
- 102b Leaves persistently stellate-pubescent on both surfaces, folded, at most 5 mm broad at apex.....82. *H. flammula*
- 101b Calyx usually less than half as long as petals, wide and shallow at maturity, sinuses wide.....83. *H. joubertiana*
- 96b Branches very rough with prominent scattered tubercle-bases or harsh stellate pubescence, rarely glabrescent but rudimentary tubercle-bases can be seen:
- 103a Inflorescence of long, terminal, leafless, racemose or paniculate cymes; petals exerted from calyx-tube by about half....84. *H. scabra*
- 103b Inflorescence terminal on leafy branches and on very short, leafy lateral branchlets; petals shortly exerted from conspicuous calices:
- 104a Calyx glabrous except for small stellate hairs along margins of lobes.....85. *H. angularis*
- 104b Calyx rough with tubercle-bases of stellate or grouped hairs....86. *H. rudis*
- 30b Leaves all, or at least some, deeply toothed or lobed to about halfway to midrib or pinnately or palmately divided:
- 105a Branchlets or branches of inflorescence canescent with silvery-fringed or stellate scales:
- 106a Calyx large, inflated, subglobose, up to 10 mm diameter; cauline leaves well developed.....87. *H. abrotanoides*
- 106b Calyx small, not inflated, about 5 mm long; leaves mainly basal (see also under 30a)....88. *H. pulverata*
- 105b Branchlets and branches of inflorescence not canescent, usually laxly and roughly stellate-pubescent:
- 107a Stems decumbent with only apical portion ascending; leaves cauline and usually secund, erect from trailing stem (see also under 30a).....89. *H. procumbens* subsp. *myrrhifolia*
- 107b Stems not decumbent; leaves not as above:
- 108a Suffrutex, up to 60 cm tall, much branched above, branches slender; leaves basal and cauline deeply and finely pinnately divided up to 25 mm long; inflorescence of terminal, leafless, racemose cymes.....90. *H. confusa*
- 108b Low plants with many stems from a woody base; leaves mainly basal; inflorescence of long, terminal, leaf-less, paniculate cymes:
- 109a Flowers small, up to 6 mm long on dried specimens; leaves more or less oblong, about 15–20 mm long, broadly and unevenly lobed, sometimes deeply so but not to midrib (see also under 30a).....91. *H. macra*
- 109b Flowers over 6 mm long:
- 110a Leaves oblong-lanceolate to narrowly lanceolate, 20–60 mm long, coarsely crenate or toothed, not palmatisect (see also under 30a).....92. *H. juttae*
- 110b Leaves ovate in outline, 15–30 mm long, usually palmatisect with segments irregularly twice-lobed (see also under 30a).....93. *H. paucifolia*

1. *Hermannia cristata* H. Bol. in J. Linn. Soc., Bot. 25: 156 (1889); Hook. f. in Curtis's bot. Mag. t.7173 (1891); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 53 (1900); R. A. Dyer in Flower. Pl. Afr. 30, t.1169 (1954). Type: Transkei, Kokstad, Tyson 1689 (BOL, lecto!; Z!; SAM!); Orange Free State, Cooper 900; Lesotho, Cooper 2001; Natal, Fannin 9.

H. cristata var. *geoides* Beauv. in Bull. Soc. bot. Geneva 2,3: 133 (1911). Type: Transvaal, foothills of the Drakensberg near Shilovane, Junod 2856.

Suffrutex with several stems from a stout, woody rootstock; stems usually less than 30 cm tall, simple to laxly branched in second year, fairly laxly stellate-pubescent and with minute glands or minute gland-tipped hairs intermingled. *Stipules* linear-filiform or

linear-lanceolate, about 5 mm long and less than, or up to 1 mm broad, sparsely stellate-pubescent. *Leaves* shortly petiolate; blade elliptic, elliptic-oblong, ovate-elliptic or lanceolate, 2–6,5 cm long, 0,3–2,2 cm broad, crenate-dentate, crenations sometimes small and distant, concolorous, upper surface with impressed veins, fairly densely to sparsely pubescent with simple or 2- or more-rayed, bulbous-based hairs, lower surface with prominent veins and sparsely stellate-pubescent with hairs usually shorter than on upper surface; petiole 1,5–6 mm long. *Inflorescence* axillary and terminal, flowers usually solitary on long peduncles up to 5 cm long; pedicels short, about 3 mm long; bracts linear-filiform, 1–2 on peduncle and 2 at base of pedicel, about 1–3 mm long. Calyx 8–14 mm long,

lobed to midway or just beyond, stellate-pubescent without and usually intermingled with minute gland-tipped hairs. *Petals* 1, 1–1,9 cm long, “crimson”, “red-orange”, “orange”, “red”, upper third suborbicular, slightly broader than long, narrowing into a claw with infolded margins. *Stamens* united at base to a long stipe, free part of filaments hyaline, narrowly obovate, broader at apex, about 1 cm long, obscurely stellate on shoulders; anthers about 1 cm long, ciliate with basal portion overlapping dilated filaments. *Ovary* stipitate, 5-angled, densely stellate-pubescent, stellate pubescence on keel of angles shortly stalked; styles 6 mm long, minutely and sparsely hairy with short patent hairs. *Capsule* oblong-orbicular in outline, deeply 5-angled, roughly pubescent with short-rayed, stellate hairs and fringed on keel of angles with crowded, tentacle-like processes up to 7 mm long (developed from stalks of stellate hairs), calyx subpersistent at base, ultimately reflexed and withered to expose a 4 mm long stipe; seeds reniform-orbicular, plicate. Figs 1.4 & 2.1.

Found in grassveld on rocky slopes, in gorges and along rivers. Recorded from mountain grassland following the line of the Drakensberg from Mt Currie District in the Transkei northwards through Natal and the eastern Orange Free State, Piet Retief and Swaziland to the Soutpansberg in northern Transvaal.

CAPE.—Mt Currie: near Kokstad, *Haggarth* s.n.; *Tyson* 1689 (BOL); Mt Currie, *Goossens* 354.

O.F.S.—Vrede: 10 km S. of P.O. Vrede, *Acocks* 21947.

NATAL.—Lion's River: Zwarthof location, *Moll* 1143. Newcastle: Normandien, *Sim* 2884. Nkandhla: Nsuzi, *Gerstner* 603. Underberg: Springvale farm, *Strey* 7697. Utrecht: 6 km S.E. of P.O. Groenvlei. *Codd & Dyer* 6280.

SWAZILAND.—Hhohho: Miller's Falls, *Compton* 26193; Pigg's Peak, *Wells* 2023.

TRANSVAAL.—Barberton: Saddleback Mtn, *Galpin* 434. Belfast: Dullstroom, *Noome* in TRV 20783. Carolina: Carolina, *Leipoldt* in TRV 18627. Ermelo: Athole Pasture Station, *Norval* 38. Groblersdal: 1,6 km S. of Nebo, *Acocks* 20859. Letaba: east slope Piesangskop, *Scheepers* 1013. Lydenburg: 12 km N. of Lydenburg, *Codd & De Winter* 3274. Middelburg: Tautenberg, *Young* 4189. Nelspruit: Schagen, *Liebenberg* 3335. Pietersburg: Haenertsburg, *Potts* 4696. Piet Retief: Piet Retief, *Galpin* 9633. Pilgrim's Rest: between Pilgrim's Rest and Sabie, *Rogers* 23216. Soutpansberg: Louis Trichardt, *Breyer* 24366; Downs; *Junod* 4237. Wakkerstroom: North Hill, *Galpin* 9809.

Until recently this species was unique in Southern Africa on account of the fringe of long processes on the angles of the capsule. In 1958 a new species was found on the Brandberg in South West Africa with similarly fringed capsule-angles. It was published as *H. merxmulleri* in 1961. The processes on this new species are longer and more hair-like than those on *H. cristata* and in many other respects these two species differ appreciably. For instance, the leaves of *H. merxmulleri* are suborbicular and the petioles usually well over 10 mm long, while in *H. cristata* the leaves are usually elliptic-oblong and the petioles 1, 5–6 mm long.

From description there are 2 species in America that resemble ours in having fringed capsules.

2. *Hermannia merxmulleri* *M. Friedrich* in Mitt. Bot. StSamml., Münch. 4: 167 (1961); *M. Friedrich* et al. in F.S.W.A. 84: 16 (1969). Type: South West Africa, Brandberg, Zisabschlucht, *Merxmüller & Giess* 1664 (M, holo.; PRE!).

Shrub about 2 m high, branches stellate-tomentose with long, patent, minutely gland-tipped hairs intermingled. *Stipules* subulate, 2–6 mm long, stellate-pubescent. *Leaves* petiolate; blade broadly ovate-

orbicular, 1–3, 5 cm long, 1, 2–3, 5 cm broad, crenate-dentate except at the subcordate base, apex rounded, truncate or emarginate, concolourous, densely stellate on both surfaces with short hairs, veins impressed above, prominent beneath; petiole 10–30 mm long, stellate-pubescent, often with patent gland-tipped hairs intermingled. *Inflorescence* of 1- to few-flowered cymes, axillary and terminal; peduncle 5–12 mm long, pubescent as on petiole. *Calyx* about 14 mm long, lobed to just beyond middle, roughly pubescent with small, stellate hairs, rays mostly short, some longer, from a minutely bulbous base. *Petals* glabrous, grey-green and purplish blue at the apex on inner face, 17–20 mm long, upper third suborbicular, narrowed into a long claw with infolded margins. *Stamens* with hyaline, narrowly obovate-cuneate, apparently glabrous filaments which are attached to the long stipe at base, free portion about 6 mm long; anther 8 mm long ciliate, pointed, overlapping filament at base. *Ovary* about 5 mm long, densely hairy with long-stalked, long-rayed, stellate hairs, stalks subulate or filiform; stipe about 6 mm long; styles 7, 5 mm long. *Capsule* about 1, 5 cm long, deeply 5-angled, crest of angles furnished with 2 to 3 series of long, filiform processes (elongated stalks of stellate hairs?), rest of capsule shortly stellate-pubescent; stipe partly hidden at base by persistent calyx and reflexed petals.

Found “among rocks on hillsides”. Recorded from the slopes and gorges of the Brandberg, South West Africa.

S.W.A.—Omaruru: Brandberg, Zisabschlucht, *Merxmüller & Giess* 1664; White Lady Valley, *Macdonald* 588 (BM).

To date this remarkable species is known only from the Brandberg in South West Africa. It is the tallest known *Hermannia* in southern Africa, being 2 m tall. In the fringed angles of the capsule it resembles only one other species on the subcontinent, namely *H. cristata*, in which, however, the processes of the fringe are slightly stouter. In habit these two species differ widely, for in *H. cristata* the stems are under 30 cm tall and subherbaceous. For further differences see under *H. cristata* (p. 7).

3. *Hermannia sandersonii* *Harv.* in F.C. 1: 200 (1860); *Wood & Evans*, Natal Plants 1: 19, t.20 (1893); *K. Schum.* in Engl., Monogr. Afr. Pfl. 5: 60 (1900). Type: Natal, “Port Natal”, *Sanderson* s.n. (TCD, holo.; PRE, photo.!; K!; S!; PRE!).

Low suffrutex; stems many from a thick, woody rootstock, simple or laxly branched, more or less leafless in lower half, subdensely and coarsely hairy with bulbous-based stellate hairs, rays about 1 mm long, acute. *Stipules* ovate, ovate-lanceolate or linear-lanceolate, about 7 mm long, 1–3, 5 mm broad at base, rather thick-textured (oily?), laxly stellate-pubescent dorsally. *Leaves* shortly petiolate; blade from fairly narrowly to broadly oblong-elliptic, or some leaves obovate to suborbicular, 2–5 cm long, 0, 7–3, 5 cm broad, discolorous, upper surface with impressed veins, subdensely to laxly stellate-pubescent, hairs few, long, acute and from a bulbous base, undersurface with prominent veins densely whitish to yellowish tomentose, tomentum of matted stellate hairs, margins crenate-dentate; petiole 2–6 mm long, stellate-pubescent. *Inflorescence* of a few 1–3-flowered cymes borne in the upper half; peduncles 2–10 mm long, shaggily stellate-pubescent; pedicels not readily distinguishable from peduncles, 3–10 mm long, pubescence as on peduncle; bracts linear-lanceolate to subulate, 2–5 mm long. *Calyx* about 7 mm long, lobed almost to middle, stellate-pubescent on the

strong, prominent ribs and margins, lobes deltoid. *Petals* yellow, recurved in upper half, about 9 mm long, about 6,5 mm broad in the broadly rounded upper third, narrowing to a 2 mm waist and produced into a claw with infolded margins of which the edges are membranous and obscurely hairy. *Stamens* about 6,5 mm long; filaments joined at base, hyaline, narrowly obovate, about 3 mm long with 1 or 2 stellate hairs on shoulders; anthers about 4,5 mm long, overlapping filaments for 1 mm. *Ovary* 2,5 mm long, 2 mm diam., 5-angled, densely hairy with sessile and stalked stellate hairs, stipe 5 mm long. *Capsule* about 9 mm long, 7 mm diam., 5-lobed and bluntly 5-umbonate at apex, pubescent with sessile and stalked hairs, shortly stipitate, with the persistent calyx like a disc at base. *Seeds* reniform-orbicular, black, plicate.

Found on grassy hills and in grassy gorges. Recorded from the Camperdown, New Hanover, Pietermaritzburg and Durban Districts of Natal.

NATAL.—Camperdown: Inchanga, *Marloth* 4090; *Medley Wood* 4654; 6536; Umlaas, *Maurice Evans* 548A (NH); Shongweni Dam, *Ross* 1292; 413 (NH). Durban: "Port Natal", *Sanderson* 9244; without exact locality, *Gerrard* 1117 (W). New Hanover: King's Hill Halt, *Gordon-Gray* 6320. Pietermaritzburg: in valley 5 km from Table Mtn, *Stirton* 1024.

This species is readily distinguished by its general appearance. The many, short, subherbaceous stems from a woody rootstock are more or less leafless in the lower half and bear comparatively large discolorous leaves and a few yellow flowers in the upper half. A collector records that the flowers develop in advance of the leaves.

H. sandersonii is poorly represented in herbaria and most of the specimens seen were collected in the last century.

4. *Hermannia seineri* *Engl.* in *Bot. Jb.* 55: 371 (1919). Syntypes: South West Africa, Otjitjika, *Dinter* 2871 (B†; SAM!); Epata, *Trotha* s.n.; *Seiner* 284; 390.

Stems procumbent, slender, long, wiry, laxly branched near base, obviously hoary-pilose intermixed with appressed stellate pubescence. *Stipules* narrowly linear-lanceolate, about 4 mm long, hoary-pilose. *Leaves* petiolate; blade narrowly ovate- to obovate oblong, 2–3,5 cm long, up to 9 mm wide, usually folded, subrotund at apex, broadly cuneate at base, upper surface roughly stellate-pubescent, lower surface stellate-pilose with long hoary hairs; margins obscurely serrate and densely hoary-pilose; petiole about 1 cm long. *Inflorescence* of simple 1-flowered cymes solitary in axils of leaves; peduncle slender, straight, 2–2,5 cm long, hoary-pilose; pedicels cernuous, slender, about 2–3 mm long; bracts about 3 mm long, narrowly linear to subulate. *Calyx* hoary-pilose outside and on margins, lobed to beyond middle, about 7 mm long, lobes 5 mm long. *Petals* "orange", "cream", about 5 mm long, broadly oblong to subglobose, narrowed at base into a short claw, margins inrolled on claw and basal portion of blade. *Stamens* with filaments broadly obovate, narrowing at apex to an acute connective, 2,5 mm long, sparsely pilose on shoulders; anthers erect, about 5,5 mm long, basal portion overlapping expanded filaments, sparsely pilose. *Ovary* about 2 mm long, sparsely minutely stellate with simple hairs intermixed; styles about 5 mm long, sparsely pilose. *Capsule* 6 mm long, hoary-pilose, 5-umbonate or shortly horned at apex. *Seeds* reniform, dark brown, several in a locule.

Found on level, well-drained sand in grassland and on loose sand dunes in north-eastern South West Africa and in Botswana.

S.W.A.—Otjitjika: *Dinter* 2871 (SAM); Omaramba Omatako, *Schoenfelder* 5190.

BOTSWANA.—Ngamiland: Pandamatanga road, c. 100 km S. of Kazungula on road to Nata, *Verhagen & Barnard* 162.

Before 1977 only two specimens had been seen of this species, *Dinter* 2871 (SAM) and *Schoenfelder* 190 (PRE), both with a hoary pubescence unusual for the genus. Not only did these specimens answer well to the description of *H. seineri*, but *Dinter* 2871 is a syntype of the species and *Schoenfelder* 190 had been matched with *Dinter* 2871 in B (now destroyed). Good material (*Verhagen & Barnard* 162) collected in Botswana during 1977 matched these specimens in detail and confirmed that *H. seineri* evidently is a good, well-defined species.

For *H. seineri* var. *latifolia* *Engl.* see under *H. eenii* (p. 10).

5. *Hermannia tomentosa* (*Turcz.*) *Schinz ex Engl.* in *Bot. Jb.* 55: 371 (1919); *Burt Davy*, *Fl. Transv.* 1: 267 (1926) partly, excluding the synonym *H. johannisburgiana*; *Wild* in *F.Z.* 1: 542 (1960); *M. Friedrich et al.* in *F.S.W.A.* 84: 22 (1969), partly. Type: Transvaal, Magaliesberg, *Zeyher* 137 (LE!; PRE!; SAM!; W!; Z!).

Mahernia tomentosa *Turcz.* in *Byull. mosk. Obshch.* 31: 218 (1858); *Harv.* in *F.C.* 1: 219 (1860), excluding the description and the specimen cited (see note). Type: as above.

Hermannia brachypetala *Harv.* in *F.C.* 1: 202 (1860); *K. Schum.* in *Bot. Jb.* 10: 42 (1889); in *Engl., Monogr. Afr. Pfl.* 5: 86 (1900). Syntypes: Transvaal, Magaliesberg, *Burke & Zeyher* s.n. (S; PRE, photo.); Cape, "Zooloo Country" (sic), but should be Kuruman area, *Miss Owen* s.n. (PRE, photo.).

H. tomentosa var. *brevifolia* *Engl.* in *Bot. Jb.* 55: 371 (1919). Syntypes: several, including *Dinter* 277 (Z!; SAM!) and *Range* 1026 (SAM!).

Perennial, branches long, at least the outer decumbent and trailing, young branchlets stellate-tomentose, hairs mostly short, interspersed with longer, tufted bristles and rarely with short, gland-tipped hairs, tomentum sometimes disappearing leaving only tufted bristles. *Stipules* linear-acuminate to subulate, 2–5 mm long, tomentose. *Leaves* petiolate; blade ± oblong to narrowly oblong-elliptic, 8–50 mm long, 5–15 mm (rarely 18 mm) broad, rounded or subtruncate at apex, rounded to somewhat cuneate at base, margin obscurely to distinctly toothed except in lower third, stellate-tomentose on both surfaces, hairs very short, tomentum persisting at least on undersurface; petiole 3–15 mm long. *Inflorescence* of simple 1-flowered cymes, solitary in axils of leaves on branches of indeterminate growth; peduncle straight, 10–15 mm long, tomentose; pedicels cernuous, about 2,5–4 mm long, bracteate at base; bracts 2 or 3, sometimes 1 of these on peduncle, about 3 mm long, narrowly lanceolate-acuminate. *Calyx* lobed almost to base; tube about 2 mm long, lobes 4,5–6 mm long, reflexed in fresh flower, tomentose on outside and on upper portion of lobes within. *Petals* pink, mauve, off-white with deep pink base, or "yellow and red", shorter than calyx, more or less oblong-globose, narrowing at base into a claw, margins involute on claw and sometimes narrowly so on blade also, only obscurely lobed at base of blade, lobes not thickened but sometimes darker in colour, with short, appressed hairs within upper part of claw or base of blade; blade about 3 mm long, 2 mm broad with the margins sometimes partly inrolled; claw 1 mm long. *Stamens* with filaments broadly obovate, narrowing at apex to

an acute connective, 2,5 mm long, sparsely hairy on shoulders; anther erect, about 5,5 mm long, 1 mm broad near base, narrowing to an acute apex, basal portion overlapping filament for 2 mm, shortly and sparsely hairy. *Ovary* obovate or suborbicular, about 2,5 mm long, 1,75 mm broad near apex, densely tomentose in upper portion not covered by filaments; styles very slender, straight, more or less cohering to each other, up to 5 mm long, sparsely and shortly hairy in lower half. *Capsule* shortly and densely tomentose (off-white tomentum), about 5,5–7 mm long, 5 mm broad, obovate-oblong, more or less truncate or crowned with 5 short, rounded processes, rarely up to 2 mm long. *Seeds* (on dried specimens) reniform, brown, corrugated, usually under 2 mm long, about 3 maturing in a cell.

Found on grassy plains and on slopes of mountains and hills. Recorded from Transvaal, Orange Free State, northern Cape and from South West Africa, especially in southern and central areas; also in Botswana and Rhodesia.

CAPE.—Barkly West: near railway station, *Smith* 2328. Gordonia: Gembok Park, Mata Mata, *Wenger* 1493; *Story* 5482. Hay: Wolhaarkop, *Esterhuysen* 2350. Hopetown: Hopetown, *H. Bolus* 1833 (Z). Kimberley: Kimberley, *Acocks* 43. Kuruman: Wonderwerk, *Esterhuysen* 2247. Mafeking: Mafeking, *Brueckner* 518. Prieska: Prieska, *Bryant* 281. Vryburg: Palmyra, *Rodin* 3517.

O.F.S.—Boshof: Boshof, *Schweickerdt* 1106. Fauresmith: near Petrusburg, *Codd* 3401.

TRANSVAAL.—Without locality, *Holub* s.n. Bloemhof: Christiana, *Burt Davy* in Govt. Herb. 12786. Marico: Zeerust, *Leendertz* in TRV 11270. Middelburg: Loskopdam reserve, *Theron* 1585. Potchefstroom: Boskop, *Louw* 736. Pretoria: Magaliesberg, *Zeyher* 137; *Schlechter* 3593; Wonderboom Reserve, *Repton* 2887. Rustenburg: Rustenburg, *Meeuse* 10489. Schweizer Reneke: Schweizer Reneke, *Burt Davy* 12786; 1687. Soutpansberg: Waterpoort, *Moss* 4599. Waterberg: Warmbaths, *Collett* 515. Naboomspruit: Naboomspruit, *Galpin* M. 36.

S.W.A.—Gibeon: *Codd* 5868. Karibib: Karibib, *De Winter* 2445 A. Okahandja: Okahandja, *Dinter* 277 (Z). Okavango: Between Katwitwi & Makambo Camp, *De Winter* 3862. Rehoboth: Rehoboth, *Basson* 6. Warmbad: Ariamsvlei, *Ortendahl* 650. Windhoek: Auasberge, *Merxmüller & Giess* 786.

This species is characterized by the long trailing branches with second leaves and a strong taproot with long secondary roots spreading horizontally. The young branches and leaves are stellate-tomentose, the short fine tomentum usually persisting at least on the lower surface of the leaves.

Throughout the wide area of distribution, and especially where it overlaps with that of other species, occasional specimens are found that appear to be forms or hybrids of the species, for instance a small-leaved form occurs fairly frequently. Until a more in-depth study is possible these are here included under *H. tomentosa*. One such specimen is *De Winter* 3378, mentioned under *H. engleri* Schinz in F.S.W.A. 84: 14. *Dinter* 5164, also mentioned in F.S.W.A. l.c., approaches *H. minimifolia* form or hybrid of that species.

In the past this species has been confused with *H. lancifolia* Szyszyl. This is mainly due to Harvey, who in F.C. 1: 219 cites an unnumbered specimen of Burke & Zeyher from the Magaliesberg under *H. tomentosa* although it is obviously *H. lancifolia*. It has been established that *H. lancifolia* does not occur on the Magaliesberg and the locality description of the species must thus be considered to be incorrect. Burke & Zeyher did collect both these species. *H. tomentosa*, which grows on the Magaliesberg, is represented in their collections by Burke 314 and Zeyher 137, while *H. lancifolia*, which they collected before they reached the mountain, is represented by Burke 255 and Zeyher 107.

6. *Hermannia eenii* Bak. f. in J. Bot., Lond. 39: 126 (1901). Type: South West Africa, Damaraland, *Een* s.n. (BM, holo.; PRE, photo!).

H. angolensis K. Schum. in Warb. Kunene-Samb. Exped. 302 (1903); Excell & Mendonca in C.F.A. 1,2: 195 (1951); Wild in F.Z. 1: 543 (1960). Type: Angola, between Kubango and Kuito, *Baum* 514 (Z, holo!; PRE, photo!; K; S; W!).

H. longiramosa Engl. in Bot. Jb. 55: 365 (1919). Type: South West Africa, Grootfontein, *Engler* 6240.

H. seineri var. *latifolia* Engl., l.c. 55: 371 (1919). Syntypes: South West Africa, Otjosondjou, *Seiner* 459; Aris Aukas, *Dinter* 725 (SAM!).*

H. brandtii Engl. ex Dinter in Reprim nov. Spec. Regni veg. 18: 25, (1922). Based on *Dinter* 725 from Otavi,* nom subnud. *H. karakowisensis* ined., name on *Dinter* 7315 (PRE!; Z!).

Perennial, prostrate with long slender runners, coarsely stellate-pubescent, often intermixed with bristle-like, \pm patent setae from a bulbous base, 1–2 to several in a cluster, especially obvious in young growth, hairs straw-coloured to bright yellow. *Stipules* linear- to narrowly ovate-acuminate, about 3 mm long, sparsely setose, setae up to 1 mm long from a bulbous base. *Leaves* petiolate; blade linear-oblong, lanceolate-elliptic to ovate-elliptic or oblong-elliptic, varying in size, sometimes on same plant (leaves on ultimate branchlets much smaller), 1–6,5 cm long, 0,4–2,5 cm broad, coarsely stellate-pubescent, from densely to sparsely so, more or less rounded at base, rounded, subtruncate or acute at apex, obscurely to distinctly crenate at least in upper half; petiole 2–20 mm long, coarsely, stellate or with tufts of setae (few hairs in a tuft). *Inflorescence* of 1-flowered cymes, axillary on long branches and crowded at apices of ultimate branchlets; peduncles slender, up to 3 cm long; pedicels short, up to 3 mm long; bracts 2–3 at apex of peduncle, linear-lanceolate, 2,5–4 mm long, 0,5–1 mm broad near base, setose or stellate. *Calyx* lobed almost to base, coarsely stellate outside and on upper portion of lobes within, tube about 2 mm long, lobes about 6 mm long. *Petals* usually pink, sometimes white or white with a dark patch near base, 3–6 mm long, shorter than calyx, oblong or oblong-obovate, obscurely clawed, about 4 mm long and 2 mm broad, margins slightly to clearly inrolled on both blade and claw, shallowly lobed at base of blade, inner surface of petals with minute appressed hairs about midway between marginal lobes, apex rounded to subtruncate. *Stamens* with obovate, hyaline filaments which are setose on shoulders, 2 mm long, 2 mm broad at apex with a short apicule, joined to anther near its base; anthers erect, about 6 mm long, basal portion overlapping expanded portion of filament for 1 mm, thence narrowing to an acute apex, minutely hairy. *Ovary* stellate-pubescent with bristle-like hairs which are sometimes golden-yellow and often concentrated at apex, minutely papillose under stellate pubescence; styles very slender, erect, about 6 mm long, with short, spreading hairs in lower half. *Capsule* coarsely stellate-pubescent and with bristle-like hairs especially at apex, about 5,5 mm long, 5 mm diam., obscurely 5-lobed, lobes with blunt apices, not produced into horns. *Seeds* brown, reniform, corrugated.

Found in sandy parklands, on dunes or in savanna. Recorded from the northern and eastern regions of South West Africa and the northern Cape where it

* *Dinter* 725, collected at Aris Aukas, and the same number collected at Otavi are represented in SAM. They are obviously not the same gathering, the former dated 1918-12-29 and the latter 1908-11-29, but they both fall within the range of *H. eenii* Bak. f.

borders on South West Africa and Botswana. Also in Botswana, Rhodesia, Zambia and Angola.

CAPE.—Gordonia: Kalahari Gemsbok National Park, Mata Mata, *Werger* 1824.

S.W.A.—Grootfontein: Auros, *Dinter* 5455; Simkue, *Story* 6151; Tsumeb, *Dinter* 7464; Oliewenhof, *Merxmüller & Giess* 30141. Okahandja: Hochfeld, *Boss* in TRV 32832. Okavango: Makambo Camp, *De Winter* 3863; Kake Camp, *De Winter & Wiss* 4384. Otjiwarongo: N.E. of Otjiwarongo, *De Winter* 2845.

This species is distinguished from *H. tomentosa* by the leaves, even the young ones, being coarsely stellate-pubescent, often intermixed with bristle-like setae, and not finely stellate-tomentose as in *H. tomentosa*. The general colour of the plants is very variable; some appear grey, others golden yellow. In fresh specimens the leaves are crystalline. The setae, which are found in most parts of the plant, and especially on very young leaves, vary from whitish to golden yellow.

Forms or hybrids appear to occur in *H. eenii*, as in many other species of *Hermannia*. For example *Hanekom* 2230 from Barkly West District appears to be a hybrid between *H. tomentosa* and *H. eenii*.

7. *Hermannia boraginiflora* Hook., Ic. Pl. t. 597 (1843); Harv. in F.C. 1: 201 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 1: 267 (1926); Wild in F.Z. 1: 543 (1961). Type: Transvaal, Magaliesberg, *Burke* 293 (K, holo.; PRE, photo!; SAM!).

H. tephrocarpa K. Schum. in Notizbl. bot. Gart. Mus. Berl. 2: 304 (1899). Type: Transvaal, Lydenburg, *Wilms* 68 (K; PRE, photo!; Z!).

Suffrutex, bushy, much branched from base; branches and branchlets suberect or ascending, stellate-pubescent or pubescent with short, patent, gland-tipped hairs, sometimes with stellate hairs intermixed, rarely with a few simple patent hairs as well. *Stipules* from under 1 mm to 4 mm long, up to 1,5 mm broad, subulate to deltoid-oblong. *Leaves* petiolate, blade elliptic, oblong or obovate-oblong, acute or more often broad at the apex and 3-toothed, up to 27×14 mm, upper leaves sometimes narrowly elliptic, entire and acute, 6–20 mm long, 3–4 mm broad, stellate-pubescent on both surfaces, more densely so on the lower, sometimes some gland-tipped hairs present and very minute scales; margins usually crenate-dentate at least in upper portion, upper leaves often entire; petiole 1,2–10 mm long. *Inflorescence* axillary, 1-flowered; peduncle stellate-pubescent or with usually gland-tipped, patent hairs, about 6–22 mm long, 2–3-bracteate at apex, sometimes with a fourth lower down on peduncle; bracts 1–2 mm long; pedicels 3–7 mm long, pubescent like the peduncles. *Calyx* lobed to beyond the middle, stellate-pubescent without, often intermingled with gland-tipped hairs, especially on margins of lobes; tube about 2 mm long; lobes deltoid-acuminate, about 5,5 mm long. *Petals* pink or off-white with a pair of oblong, deep pink patches on lower half of inner face, oblong-cuneate, about 6 mm long, lobed about midway, lobes ciliate and some pubescent on inner face of petal, lower half with inrolled margins. *Stamens* with hyaline, obovate-elliptic filaments, about 4 mm long, ciliate on the shoulders; anthers acute, about 5 mm long, ciliate, overlapping the filament for 1,5 mm. *Ovary* stipitate, stellate-pubescent, stipe 1–2 mm long; styles about 6 mm long. *Capsules* densely stellate-pubescent, about 6 mm long, 5 mm diam., truncate at apex with 5 pairs of horns about 1,5–2 mm long) at apex of sutures.

Occurs on rocky hillsides, on mountain slopes, in red loamy soils and on old lands. Found in the northern Cape, Natal, Swaziland and Transvaal. Also recorded from Rhodesia, Botswana and Mozambique.

CAPE.—Barkly West: Barkly West, *Acocks* 462. Hay: Hay, Griquatown, *Drège* in SAM 29814. Mafeking: Mafeking, *Bruce* 265. Vryburg: Vryburg, *Rodin* 3496; *Codd* 1304.

NATAL.—Ubombo: coastal belt on margins of pans, *Tosh* 52 (NH).

SWAZILAND.—Lubombo: Stegi, Blue Jay Ranch, *Compton* 29561 (NBG).

TRANSVAAL.—Groblersdal: Marble Hall, *Codd & Verdoorn* 10372. Letaba: Merensky Nature Reserve, *Gilliland* 784. Lydenburg: West of Blyde River Canyon, *Leistner* 3264. Messina: Dongola, *Verdoorn* 2101. Middelburg: Loskopdam Reserve, *Theron* 1800. Pietersburg: Pietersburg, *Rogers* in TRV 15490. Potgietersrus: Potgietersrus, *Galpin* 8926. Pretoria: Magaliesberg, *Schlechter* 3656. Rustenburg: Rustenburg, *Story* 6054. Soutpansberg: Soutpan, *Obermeyer, Schweickerdt & Verdoorn*, 142. Waterberg: Naboomspruit, *Galpin* M 35.

Characterized by the roughly stellate-pubescent calyx and capsule.

In *Gilliland* 746 from Letaba, gland-tipped hairs are inconspicuous or absent. This may be an aberrant form. It approaches the east coast species *H. micropetala*, but its petals are rather long. It falls within the distribution area of *H. glanduligera* but has the stellate pubescence of *H. boraginiflora*.

8. *Hermannia glanduligera* K. Schum. in Verh. bot. Ver. Prov. Brandenb. 30: 232 (1888); in Engl., Monogr. Afr. Pfl. 5: 57 (1900); Wild in F.Z. 1: 545 (1961); M. Friedrich et al. in F.S.W.A. 84: 15 (1969). Type: South West Africa, Amboland, Olukonda, *Schinz* s.n. (Z, holo!; PRE, photo.; LE!; BOL!; GRA!).

H. viscosa sensu Burt Davy, Fl. Transv. 1: 267 (1926).

Perennial, bushy, much branched from base, 30–60 cm tall; branches and branchlets pubescent with 1- to several-celled glandular hairs and many gland-tipped hairs intermixed with some long, patent, pointed hairs. *Stipules* 0,75–2 mm long, up to 1 mm broad. *Leaves* petiolate; blade on upper branches more or less narrowly oblong, very variable in size and on some branches much reduced, ranging from about 6 mm×1,5 mm to 30×14 mm, rounded or shortly cuneate at base, usually broadly acuminate towards apex, margins serrate, coarsely and usually sparsely stellate-pubescent on both surfaces, with some glandular hairs intermixed and sometimes gland-tipped hairs present as well, especially along margins and with numerous, minute papillae on the surfaces, petiole 1,5–15 mm long, the lower longer. *Inflorescence* of 1-flowered cymes in axils of leaves, solitary but appearing racemose in specimens where leaves on ultimate branches are much reduced; peduncle usually short, 5–14 mm long, occasionally (as in the type) up to 25 mm long, persistent, 2–3-bracteate at apex (bracts under 1 mm long), pubescent with glandular or gland-tipped hairs and sometimes with long, pointed, patent hairs intermixed; pedicels 2–4 mm long, pubescence like that on peduncles. *Calyx* about 7 mm long, lobed to beyond middle, pubescent on outside mainly with glandular hairs, but sometimes stellate hairs present and long non-glandular pointed hairs as well; lobes pubescent inside with appressed, non-glandular hairs. *Petals* pale pink to pale violet, sometimes with a red base, narrowly oblong-cuneate or suborbicular-cuneate, 2–6 mm long, 1–2,5 mm broad in upper half, margins inrolled in lower half only, auricles thickened and infolded

with a thickened ridge between them, auricles and ridge densely to laxly setose. *Stamens* from about 6 to 10 mm long; filaments up to 4 mm long, hyaline, obovate, setose on shoulders; anthers up to 8 mm long, erect, pointed, overlapping filaments at base, sparsely patently pubescent (on a few specimens anthers aborted, blunt, about 1,5 mm long). *Ovary* stipitate at base (stipe up to 1,5 mm long), pubescent with short glandular hairs and with pointed setae along the sutures. *Capsule* up to 7 mm long and about as wide, glandular-hairy on surface between sutures, setae along sutures, blunt or with horns eventually up to 2 mm long; seeds more or less reniform, corrugated, granular and with minute papillae.

Found in sandy to semi-sandy bushveld of the warmer regions, usually in dry riverbeds, along streams or rivers, sometimes as a weed in lands or broken ground. Recorded from the drainage basin of the Okavango and Etosha Pan in northern South West Africa, through the northern and eastern Transvaal and Swaziland to Zululand. Also occurs in Botswana, Zambia and eastwards through Rhodesia and Malawi to Mozambique.

NATAL.—Umfolozi: Umfolozi River, *Wager* in TRV 22384; between Black Umfolozi and Nongoma, *Acocks* 11671.

SWAZILAND.—Hlatikulu: Usutu Poort, *Compton* 30099.

TRANSVAAL.—Barberton: Komatipoort, *Marloth* 5452; Kaapmuiden, *Rogers* 25064; *Galpin* 745; Crocodile River Drift, *Bolus* 7685. Letaba: Kruger National Park, Letaba-laagwaterbrug, *Van der Schijff* 543; 2782; Mamaranda, *Breyer* in TRV 17607. Lydenburg: Driekop, *Meeuse* 9297; Burgersfort, *Meeuse* 9293. Messina: Messina, *Pole Evans* in Govt. Herb. 2940; 1703. Nelspruit: Research Station, *Liebenberg* 2725; Pretoriuskop, *Codd & De Winter* 4941. Pilgrims Rest: Pilgrims Rest *Rauh & Schlieben* 9705. Potgietersrus: Maastroom, *Strey & Schlieben* 8661. Sibasa: Punda Milia, *Codd* 4234. Soutpansberg: Soutpan, *Obermeyer, Schweickerdt & Verdoorn* 142; Mara, *Schlechter* 4616.*

S.W.A.—Okavango: between Shamvura and Kangongo, *De Winter* 4210. Ovamboland: Oshigambo, *Sylvi Soini* s.n.

The isotype gathering represented in the Leningrad Herbarium is not typical of the species. It must have been collected in optimum conditions. The leaves are all well developed, the branchlets straight and the peduncles much longer than usual.

K. Schumann includes this species under those with carpels not horned but they are sometimes shortly horned.

Giess 3178 from Kaokoland may belong here, but the specimen is incomplete and cannot be identified with certainty.

The species is characterized by glandular and gland-tipped hairs intermingled with long, pointed hairs on the branches, a lax, coarse, stellate pubescence on the leaves and the capsule with glandular setae only along the sutures. Noteworthy, too, are the short horns on the capsule and the thick auricles on the petals.

9. *Hermannia viscosa* *Hiern*, Cat. Afr. Pl. Welw. 1: 89 (1896); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 87 (1900), as *viscida*; M. Friedrich et al. in F.S.W.A. 84: 22 (1969). Syntypes: Angola, *Welwitsch* 4709; 4710 (BM; PRE, photos!); 4704.

Suffrutex, intricately branched; branches predominantly glandular-pubescent, hairs short, spreading and only slightly swollen at apex, occasionally with stellate hairs intermixed. *Stipules* subulate, glandular-

pubescent, 2–3 mm long. *Leaves* petiolate; blade 10–25 mm long, oblong-obovate, usually broad at apex, narrowing slightly towards rounded base, serrate-dentate except near base, fairly densely pubescent with stellate and glandular hairs, stellate hairs few-rayed from a minute central scale, glandular hairs short, usually slightly longer and more conspicuous on margins and prominent veins; petiole glandular-pubescent, 5–20 mm long. *Inflorescence* of 1-flowered cymes, solitary in axils of upper leaves; peduncles about 10 mm long; pedicels up to 5 mm long; bracts small, subulate, about 1,5 mm long. *Calyx* 6–10 mm long, lobed to beyond middle, glandular and stellate-pubescent without. *Petals* “scarlet”, or “violet-rose turning almost purple”, about 6–8 mm long, shorter or about as long as calyx, more or less oblong, narrowed in lower third into a claw with infolded margins apparently glabrous, with 2-coloured ridges above claw on inner face. *Stamens* 6–7 mm long, filaments hyaline, broadly obovate-cuneate, ciliate on shoulders; anthers longer than filaments and overlapping them at base. *Ovary* densely pubescent, styles about 3 mm long. *Capsule* somewhat glabrescent, about 8 mm long, with 5 pairs of short horns.

Recorded from Kaokoland in South West Africa and northwards in Angola.

S.W.A.—Kaokoland: west of Otjihu, *De Winter & Leistner* 5691.

Differs from the related *H. glandulosissima* principally in the habit, being a low shrublet with intricate branches, not erect, with fairly short, slender lateral branches as in *H. glandulosissima*. Furthermore, the leaves of *H. viscosa* are larger, the petioles longer and the petals glabrous.

The description is based on the one specimen seen, *De Winter & Leistner* 5691. It answers well to the original description of the species and is cited in F.S.W.A. under *H. viscosa* together with *Merxmüller & Giess* 1432 and 1461.

10. *Hermannia glandulosissima* *Engl.* in Bot. Jb. 55: 370 (1919); M. Friedrich et al. in F.S.W.A. 84: 15 (1969). Type: South West Africa, Namib, Pforte, *Dinter* 182 (not traced).

Suffrutex, erect, over 30 cm tall, much branched, ultimate branchlets short, slender; branches and branchlets fairly densely pubescent with short, patent, glandular hairs, some of them gland-tipped, very rarely a few long, pointed hairs occur. *Stipules* narrowly deltoid to subulate, \pm 1 mm long, stellate-pubescent and usually with one long, pointed hair at apex. *Leaves* petiolate; blade narrowly to broadly oblong-obovate, 2,5–12 mm long, 1–6 mm broad, toothed in upper portion, densely stellate-pubescent, hairs short, spreading or suberect (tufted), especially on veins beneath; petiole 1–4 mm long, pubescent. *Inflorescence* axillary, solitary, 1-flowered; peduncle 5–9 mm long, 2–3-bracteate at apex; bracts about 1,5 mm long, more or less subulate, stellate-pubescent and with a few long, pointed hairs; pedicels 2–4 mm long, almost straight to cernuous, pubescent like the peduncle. *Calyx* about 7,5 mm long, tube about 1,5 mm long, lobes 6 mm long, outside stellate-pubescent over glandular papillae, inside the lobes are pubescent with appressed hairs. *Petals* narrowly to broadly oblong-spathulate, 3–4,5 mm long, up to 2 mm wide, margins inrolled on claw only, auricles at centre infolded, fairly thinly fringed with whitish, diaphanous setae. *Stamens* about 7 mm long; filament hyaline, obovate, 2,5 mm long, pubescent on shoulders;

* *Schlechter* 4616 (quoted by Engler as a syntype of *H. modesta* var. *elatii* K. Schum. subvar. *macropetala* Engl.) in Herb. Z is *H. modesta* sensu lat., while the specimens of this number in SAM and PRE are *H. glanduligera*.

anthers about 6 mm long, overlapping filaments for about 1 mm. *Capsule* 3–5 mm long, shallowly 5-lobed, mucronate at apex of lobes, glandular-papillate on surface, stellate or with clustered rather short setae on sutures; stipitate.

Recorded from Swakopmund District (eastern border) and Karibib northwards to the borders of Etosha and the eastern border of Kaokoland.

S.W.A.—Kaokoland: west of Otjitjekua, *Giess* 3178. Karibib: "Pforte", *Dinter* 181 (SAM), Sphinx, *Dinter* 8449. Kavango: Katuitui, *Giess* 9496. Omaruru: Hunabschlucht, *Boss* A47. Swakopmund: Arandis, *Boss* 2197.

Close to *H. glanduligera* and *H. viscosa* but differs from both mainly in the finer and denser pubescence on the leaves.

In the original description the locality of the type of *H. glandulosissima*, *Dinter* 182, is given as "Damaraland, Namib, bei Pforte, Kilom 82". This means it cannot be from Pforte in the Outjo district. This is confirmed by a specimen in SAM, *Dinter* 181, also from "Pforte, Kilom 82", but on this label is the information that it was collected on the "Reise Okahandja-Swakopmund". This places it, presumably, in the district Karibib.

Dinter 8449 was labelled *H. rotundifolia* Pillans sp. nov., by N. S. Pillans but this name was never published.

11. *Hermannia grisea* Schinz in Vjschr. naturf. Ges. Zurich 62: 676 (1917); Burt Davy, Fl. Transv. 1: 267 (1926). Type: Transvaal, Manaka, Brakrivier, *Schlechter* 4631 (Z, holo.!, PRE, photo.!, K, photo.!, BOL.!, PRE.!, SAM.!, GRA.!).

H. sideritifolia Engl. in Bot. Jb. 55: 369 (1919), nom. illegit. Type: as above.

Suffrutex, about 60 cm tall, branched in lower half, stems reddish brown but covered with grey-stellate tomentum; branches virgate, finely grey stellate-tomentose and leafy in lower half, in upper half leaves much reduced, and pubescence reduced mainly to short simple, patent, gland-tipped hairs, some stellate hairs present. *Stipules* subulate, under 1 mm long. *Leaves* petiolate; blade narrowly oblong-elliptic, 1,5–4,5 cm long, 0,2–1 cm broad, densely and finely stellate-tomentose on both sides, margin sometimes with short gland-tipped hairs, entire or dentate except in the lower portion; petiole 1–6 mm long. *Inflorescence* axillary, solitary, 1-flowered, in axils of upper, much reduced, leaves and so appearing racemose; peduncles with short, patent, gland-tipped hairs, 15–21 mm long, minutely bracteate at apex; pedicels 2–6,5 mm long, pubescence same as on peduncles, but with stellate hairs as well. *Calyx* up to 9 mm long, densely and finely stellate-tomentose, glandular hairs obscured, lobes up to 6,5 mm long, inner face lined with appressed hairs. *Petals* 3–6 mm long, 2–3 mm broad in upper portion, ± obovate-spathulate, margin inrolled on claw only, auricles not thickened but with pointed, diaphanous setae along the inner edge, inner central face minutely brown-papillate. *Stamens* with hyaline, obovate (kite-shaped) filaments, ciliate in upper portion, ± 3 mm long; anthers about 7 mm long, with the basal portion overlapping the filaments, sparsely patently pubescent. *Ovary* shortly (0,5 mm) stipitate, 2,5 mm long, 1 mm diam., finely stellate-pubescent and glandular with tufted setae at the apex; styles ± 5,5 mm long, sparsely pubescent in basal portion. *Capsule* 6–8 mm long, about 6 mm diam., densely and finely

stellate-tomentose (glandular hairs or papillae obscured), stipe short, short horns ultimately produced to about 1,5 mm long; seeds subreniform, corrugated and minutely granular to tuberculate.

Found on sandy ridges and flats and in brackish ground. Recorded from Waterberg and Soutpansberg Districts; also in Botswana.

TRANSVAAL.—Pretoria: Pienaars River, near Makapan's Stad, *Verdoorn* 2510. Soutpansberg: near Salt Pan, *Schweickerdt & Verdoorn* 553. Waterberg: Ons Hoop, *Codd* 8469; Ellisras, *Acocks* 8812.

Characterized by the finely stellate-tomentose stems and branches of which the upper portions become pubescent with short, gland-tipped hairs, the densely stellate-tomentose leaves which become reduced to bracts in the upper half giving the appearance of a raceme to the axillary 1-flowered inflorescences and the capsule which is finely stellate-tomentose.

12. *Hermannia solaniflora*, K. Schum. in Bot. Jb. 10: 43 (1888); in Engl., Monogr. Afr. Pfl. 5: 58 (1900); M. Friedrich et al. in F.S.W.A. 84: 21 (1969). Type: South West Africa, Hykamchab, *Marloth* 1200 (holo., not traced; PRE!).

Low, frutescent plant, 10–40 cm high with a few slender branches from or from near base; branches simple, densely to subdensely appressed stellate-pubescent. *Stipules* small, up to 1 mm long, subulate to oblong, acuminate, often obscured by the pubescence. *Leaves* all, or those in upper portion, often reducing markedly in size, petiolate; blade elliptic, narrowing slightly to base and apex or apex truncate or rounded and crenate, about 8 × 4 mm, lower leaves usually broadly elliptic to oblong, crenate in upper half, often up to 12 × 9 mm; stellate-pubescent on both surfaces, densely so beneath; petiole 1–3 mm long. *Inflorescence* of simple, 1-flowered cymes solitary in axils of leaves and appearing racemose towards ends of the branches because of reduced leaves; peduncles slender 10–15 mm long, persistent stellate-pubescent; pedicels cernuous, 1–3 mm long, usually more densely stellate-pubescent than peduncles. *Calyx* lobed to beyond middle, stellate-pubescent; lobes long, attenuate, 5–8 mm long, reflexed at one stage in open flower; tube about 2,5 mm long. *Petals* red, spatulate, about 6 mm long, 2,5–3,5 mm broad in upper half, margins inrolled on the claw, at one stage in open flower reflexed from the middle. *Stamens* with dark purple, erect anthers about 6–10 mm long, pubescent; filament obovate, hyaline, no pubescence seen, about 3 mm long, overlapped by anther base for about 1 mm. *Ovary* about 3 mm long, and 2 mm broad, pubescent with short, stellate or simple bulbous-based or gland-tipped hairs and at apex with long, acute hairs; cells 2-horned. *Capsule* with short, stellate and glandular hairs, with long, acute hairs at apex, horns 1–2,5 mm long.

Found in sandy beds of watercourses or ravines from Swakopmund to Kaokoland in South West Africa.

S.W.A.—Damaraland: Welwitschia, *Galpin & Pearson* 7469. Hereroland: Hereroland, *Dinter* 1495 (Z); *Dinter* 16 (Z). Kaokoland: Anabib, *Story* 5742. Karibib: Between Okahandja and Swakopmund, *Dinter* 180 (SAM). Omaruru: Numas Ravine, Brandberg, *De Winter & Hardy* 8219; *Giess* 3610; 9150. Outjo: Outjo, *Giess, Volk & Bleissner* 6279. Swakopmund: Swakopmund, *De Winter & Hardy* 8028. Windhoek: between Windhoek and Walvis Bay, *Esdale* sub *Rogers* 15331.

Characterized by short petals which reflex, stellate-pubescent branches, shortly stellate-glandular and setose capsules with short horns and stipe, and long attenuate calyx-lobes.

13. *Hermannia minimifolia* M. Holzhammer in Mitt. bot. StSamml. Münch., 1: 349 (1953); M. Friedrich et al. in F.S.W.A. 84: 17 (1969). Type: South West Africa, Swakopmund, south of Kuiseb, *Strey* 2442 (M, holo.; PRE!).

Suffrutex, erect, up to 60 cm tall, ultimate branchlets short, slender, rigid, and divaricate, stellate-tomentose. *Stipules* about 1 mm long, stout, tomentose. *Leaves* not, or very shortly, petiolate; blade densely stellate-tomentose, on average about 2,5 mm long and 1 mm broad, usually shorter than 5 mm, broadly elliptic or obovate-cuneate, recurved, apex acute or truncate and 2–3-lobed, margins entire or very sparsely toothed in upper half; petiole very short or absent. *Inflorescence* axillary, 1-flowered; peduncle about 2 mm long, stellate-tomentose; pedicel about 3 mm long, roughly stellate-tomentose; bracts caducous. *Calyx* roughly stellate-tomentose without, lobed almost to base, tube about 2 mm long, lobes about 5 mm long, long-acuminate appressed hairy in upper portion within. *Petals* "dark brownish purple", about 4,5 mm long; limb oblong, margins somewhat incurved, lobed at the base; claw with involute margins, ridge on inner face of petal between lobes minutely setose. *Stamens* with broadly obovate, hyaline filaments, hairy on shoulders, about 2,5 mm long, 2 mm broad; anthers about 6 mm long, ciliate. *Capsule* about 5 mm long, subglobose, roughly stellate-tomentose, not horned; styles about 6 mm long, minutely hairy. *Seeds* 1–2 in a cell, reniform, about 2 mm wide.

Recorded from the dunes south of Kuiseb, South West Africa.

S.W.A.—Swakopmund: south of Kuiseb, *Strey* 2442.

Characterized by the very small, sessile, or almost sessile, leaves and the short, rigid, ultimate branches which become indurated.

Dinter 5164 approaches this species and may fall within the variation when more material is seen. The stipules, however, differ in not being stout. *Dinter* 5164 is mentioned in F.S.W.A. as an atypical representative of *H. engleri*. *Giess* 13426 also approaches *H. minimifolia* having the rather fleshy or stout stipules but the leaves are longer. Both *Dinter* 5164 and *Giess* 13426 differ from *H. engleri* mainly in the habit, the latter being a rounded bush, much branched from the base with long, slender branches.

14. *Hermannia engleri* Schinz in Vjschr. naturf. Ges. Zurich 55: 243 (1910), nom. nov.; M. Friedrich et al. in F.S.W.A. 84: 14 (1969). Type: South West Africa, Lüderitz, Awichab, *Dinter* 1085 (Z!; PRE, photo!).

H. dinteri Engl. in Bot. Jb. 38: 591 (1907), non Schinz. Type: as above. *H. seitziana* Engl. in Bot. Jb. 55: 370 (1919). Syntypes: South West Africa, Sandverhaar, *Dinter* 1178 (SAM!); *Schaefer* 285.

Suffrutex, branched at base, forming a rounded bush 30–90 cm tall and about 1 m in diam.; branchlets many, slender, long, ascending, the outer decumbent, stellate-tomentose with short and long intermixed hairs. *Stipules* 1,5–3 mm long, linear or linear-subulate, tomentose, hairs erect at apex. *Leaves* petiolate; blade linear to narrowly oblong, 7–22 mm long, 1,5–7 mm broad, apex broadly

acuminate, rounded or truncate and lobed, base rounded or broadly cuneate, both surfaces finely stellate-tomentose with hairs appressed to subspreading (mostly under 0,5 mm long), veins usually strongly impressed above and prominent beneath; petiole 1,5–5 mm long, stellate-tomentose with hairs mostly over 0,5 mm long. *Inflorescence* consisting of 1-flowered, axillary cymes, solitary in axils of leaves; peduncle 2–7 mm long, stellate-tomentose with short hairs; pedicels 2–4 mm long, stellate-tomentose with hairs slightly longer than on peduncle; bractoles 0 or minute, up to 0,5 mm long. *Calyx* tube about 1,5 mm long, lobes 5–7 mm long, stellate-tomentose without with hairs both short and long, some being up to 0,5 mm long, obscurely appressed hairy in upper part within. *Petals* mauve, pink, oblong-cuneate, about 4 mm long, 2 mm broad, claw about 1,5 mm long, margin inrolled on claw and base of blade, lobed at apex of claw, lobes almost meeting on the ventral surface which bears a ridge (sometimes obscure) between the lobes and is glabrous or microscopically hairy on the ridge. *Stamens* with broadly obovate, hyaline filaments, about 2 mm long, 2 mm broad near apex, with hairs on shoulders, apical connective short; anthers about 5 mm long, overlapping filaments at base, ciliate. *Ovary* densely stellate-tomentose (with rays sometimes over 0,5 mm long), 4 mm long, 4 mm broad near apex, with 5 blunt horns at apex; ovules probably 6 in a cell. *Capsule* densely stellate-pubescent with 5 short, blunt horns about 1 mm long.

Found in sand in the dry southern areas of South West Africa.

S.W.A.—Bethanien: Sandverhaar, *Dinter* 1178 (SAM); 4220; *Pearson* 4660 (SAM; BOL). Keetmanshoop: Gründorn, *Dinter* 5054. Lüderitzbucht: Awichab, *Dinter* 1085 (Z). Warmbad: Swarkop-Noachabeb, *Ortendahl* 391.

This species is described as forming a low bush up to 1 m in diameter, a feature which cannot very well be judged from herbarium specimens. Authentic specimens in herbaria show many slender branches from the base and this may help to identify the species. To date it has been recorded only from the dry southern areas of South West Africa. Closely related species are *H. tomentosa* (see notes under that species) and *H. guerkeana*. *H. guerkeana* is recorded from the higher rainfall areas further north and does not show many slender branches from the base.

In the F.S.W.A. two specimens, *De Winter* 3378 and *Dinter* 5164, are mentioned under *H. engleri* as differing somewhat from the typical. *De Winter* 3378 could rather be a form of *H. tomentosa*, while *Dinter* 5164 is nearest *H. minimifolia* (see note under that species).

15. *Hermannia guerkeana* K. Schum. in Verh. bot. Ver. Prov. Brandenb. 30: 231 (1888); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 57 (1900); Wild in F.Z. 1: 542 (1961); M. Friedrich et al. in F.S.W.A. 84: 15 (1969). Type: South West Africa, Omadongo, Amboland, *Schinz* 601 (Z!; PRE, photo!).

H. hereroensis Schinz in Vjschr. naturf. Ges. Zürich 55: 242 (1910). Type: South West Africa, Waterberg, *Dinter* 355 (Z!; PRE, photo!).

Suffrutex, erect, up to 60 cm tall, with outer branches sprawling in sand, branches with a fairly smooth, stellate tomentum, rarely with a few longer bristle-like hairs intermixed. *Stipules* linear-subulate, 1–3 mm long, tomentose. *Leaves* petiolate; blade linear-elliptic to narrowly oblong or oblong-elliptic, acute, rounded or truncate at apex, somewhat

cuneate to rounded at base, finely and thinly stellate-tomentose on both surfaces, entire or toothed in upper half, often folded, 10–25 mm long, 3–8 mm broad; petiole 1,5–4 mm long. *Inflorescence* of 1-flowered cymes solitary in the axils of the leaves; peduncles 9–20 mm long; pedicels 1–2 mm long, cernuous; bracts 2–5, about 1 mm long, narrowly deltoid-subulate. *Calyx* about 7 mm long, divided to below middle, densely stellate-pubescent, hairs short from a scaly base. *Petals* "pink", "reddish" or "plum-coloured", oblong-cuneate, 3 mm long, 1,75 mm broad, margins inrolled in lower, claw-like half with thickened auricles or horns about midway which almost meet on inner face of petal, inner face slightly ridged where blade and claw meet, minutely setose on the ridge, midrib distinct. *Stamens* with membranous, broadly obovate filaments which are setose on shoulders, about 2 mm long, 1,75 mm broad; anthers about 4–6 mm long, sparsely patently pubescent, overlapping filaments at base. *Ovary* densely stellate-pubescent (hairs short), 5-lobed, lobes rounded at apex; styles 5, stiff, thread-like, cohering, about 5 mm long. *Capsule* densely stellate-tomentose, 3–5 mm long, 5-umbonate at apex.

Recorded from Kaokoland, Outjo, Otjiwarongo and Grootfontein in South West Africa, as well as the northern regions of Botswana. Found on sandy ground.

S.W.A.—Grootfontein: Karakowisa, *Dinter* 7301; Tsumkwe, *Giess, Watt & Snyman* 11033. Kaokoland: Andana Karvapa, *Merxmüller & Giess* 1358A. Otjiwarongo: near Otjiwarongo, *Rodin* 2719; S. of Okaputa, *Tölken & Hardy* 957; Waterberg, *Dinter* 355 (Z). Outjo: Etosha Pan, *Walter* 423 (WIND); Etosha National Park, *Le Roux* 1109; Namutoni, *Le Roux* 458.

BOTSWANA.—Maun, *Erens* 330; *Story* 4641.

H. guerkeana is near to and may be confused with *H. engleri* and *H. tomentosa*. It occurs in the northern, slightly moister, regions of South West Africa as compared with *H. engleri* which is found in the dry south, while *H. tomentosa* occurs in the northern Cape, the Transvaal, Orange Free State and central South West Africa.

16. *Hermannia micropetala* Harv. in F.C. 1: 201 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 58 (1900); Wild in F.Z. 1: 543 (1961). Type: Mozambique, Delagoa Bay, *Forbes* s.n. (K, holo.; PRE!).

H. phaulochroa K. Schum. in Notizbl. bot. Gart. Mus. Berl. 2: 303 (1899). Syntypes: Mozambique, *Schlechter* 11576 (PRE!; LE!; Z!; BOL!; W!); *Junod* 29.

Suffrutex about 60 cm tall, with slender, terete, woody stem; branches terete, densely stellate-pubescent. *Stipules* small, about 1–3 mm long, stellate-pubescent. *Leaves* petiolate; blade elliptic-oblong to obovate-oblong, narrowing slightly to base, somewhat acuminate to apex or broad and rounded or subtruncate at apex, sometimes toothed in upper portion, stellate-pubescent on both surfaces, sometimes glabrescent at least in part on upper surface; petiole 2–6 mm long, stellate-pubescent. *Inflorescence* of 1-flowered cymes, solitary in axils of leaves; peduncle 7–14 mm long, usually persistent, stellate-pubescent, minutely bi-bracteate at apex; pedicels 2–6 mm long, pubescent with stellate or tufted hairs. *Calyx* about 6,5 mm long, lobed to about 1,5 mm from base, densely stellate-pubescent on outside. *Petals* pink to reddish, about 4 mm long, rounded at top and narrowing into a claw in lower half, blade with margins not inrolled, claw with margins inrolled and the two lobes at apex somewhat thickened. *Stamens* about 7 mm long; filaments hyaline, obovate, broadly acuminate at apex into the connective, bearing a few \pm obscure hairs

on shoulders; anthers acuminate to an acute apex, brown-pubescent along margins besides bearing a few, scattered, patent hairs, overlapping filaments at base. *Ovary* very shortly stipitate at the base, stellate-pubescent, without horns; styles about 9 mm long, thread-like, cohering in a straight, erect column. *Capsule* densely stellate-pubescent with a pair of short, blunt horns at apices of sutures.

In sandy patches on flats in the Ingwavuma District of Natal. Also found in the Maputo area and on Inhaca, Mozambique.

NATAL.—Ingwavuma: Ndumu Game Reserve, *Ward* 1992; at the pont on Pongola River, *Vahrmeijer & Tölken* 976; Ndumu Hill, *Pooley* 498.

Characterized by the fairly rough stellate pubescence without obvious gland-tipped hairs, the small petals with thickened lobes at the apex of the claw, and the short blunt horns on the capsule which is stellate-pubescent. It is close to *H. boraginiflora* from which it differs mainly in the absence of obvious gland-tipped hairs.

17. *Hermannia amabilis* Marloth ex K. Schum. in Bot. Jb. 10: 42 (1888); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 54 (1900); M. Friedrich et al. in F.S.W.A. 84: 12 (1969). Type: South West Africa, Hykamkab, *Marloth* 1213 (PRE!; BOL!).

H. tenuipes Engl. in Bot. Jb. 55: 363 (1919). Type: South West Africa, Hoabes, *Dinter* 1439 (Z!).

Suffrutex, lax to bushy, up to 75 cm tall, leafy in lower half, in upper half leaves much reduced; branches subclaxly pubescent with gland-tipped, usually short hairs. *Stipules* 1,5–5 mm long, on upper bract-like leaves down to 1 mm long. *Leaves* petiolate; blade narrowly oblong to oblong or ovate-acuminate, 1–6 cm long, 1,5–10 mm broad or in ovate leaves up to 18 mm broad near base, upper bract-like leaves 2–10 mm long, 0,5 mm broad, subulate, stellate-tomentellous on both surfaces, sometimes intermixed with longer, gland-tipped hairs especially along margins, rarely subclaxly stellate-pubescent on both surfaces, petiole 1,5–25 mm long, in upper bract-like leaves about 10 mm long, glandular-pubescent. *Inflorescence* of 1-flowered, axillary cymes, apparently in long, terminal racemes owing to the marked reduction of upper leaves; peduncle very slender, straight, patent to subpatent, 2–3,5 cm long, glabrous; pedicel cernuous, sometimes finely pubescent, about 5 mm long. *Calyx* about 7,5 mm long, obscurely pubescent without, lobed to midway or just beyond. *Petals* longer than calyx, white to pale pink with a coloured patch ("pink", "red" or "mauve") just below middle, about 17 mm long, 5 mm broad in apical portion and from there narrowing to base, claw about 4 mm long, margins inrolled. *Filaments* obovate, long-cuneate, mucronate, about 5,5 mm long; anthers about 4,5 mm long, overlapping filament for almost 1 mm. *Ovary* stipitate, oblong-obovate; stipe 1,5 mm; styles filiform, about 5–10 mm long, straight. *Capsule* about 5 mm long and 6 mm diam. near apex, oblong or narrowing slightly towards the stipitate base, pilose along sutures, not horned.

Found in gorges and dry riverbeds in South West Africa.

S.W.A.—Kaokoland: Otjihu, *De Winter & Leistner* 5680; Okawerowe, *Merxmüller & Giess* 1426; Anabib, *Story* 5755; Otjinungua, *De Winter & Leistner* 5772; Sesfontein, *De Winter & Leistner* 5872. Karasburg: Karasburg, *Dinter* 2802 (SAM). Omaruru: near Welwitschia, *Hardy & De Winter* 1452; Brandberg, *Strey* 2650. Outjo: Outjo, *Giess* 3928. Swakopmund: Welwitsch, *Galpin* 7600.

18. *Hermannia modesta* (Ehrenb.) Mast. in F.T.A. 1: 232 (1868); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 83 (1900); Burt Davy, Fl. Transv. 1: 268 (1926); Wild in F.Z. 1: 548 (1961); M. Friedrich et al. in F.S.W.A. 84: 17 (1969). Type: Saudi Arabia, near Djeddah (or Dschidda) towards Mecca, Ehrenberg s.n.

Tricanthera modesta Ehrenb. in Linnaea 4: 402 (1829). Type: as above.

Hermannia arabica Hochst. & Steud. ex Fisch. in A. B. Mey. & Ave'-Lall., Ind. Sem. Petrop. 6, Animadv. Bot. 9 (1840); Hiern, Cat. Afr. Pl. Welw. 1: 89 (1896). Syntypes: Saudi Arabia, Dschidda, Ehrenberg s.n.; Schimper 928 (K; PRE, photo!; LE!).

H. filipes Harv. in F.C. 1: 206 (1860). Type: Cape, "Zulu Country" (sic), in fact Kuruman area, "Miss Owen" s.n. (TCD, holo.).—var. *elatiior* K. Schum. in Verh. bot. Ver. Prov. Brandenb. 30: 235 (1888). Type: South West Africa, Amboland, Olukonda, Schinz s.n. (not traced but Schinz 585 from Olukonda is in BOL! & Z!).

H. modesta var. *elatiior* (K. Schum.) K. Schum. in Engl., Monogr. Afr. Pfl. 5: 84 (1900). Type: as for *H. filipes* var. *elatiior*.—subvar. *virgatissima* Engl. in Bot. Jb. 55: 367 (1919). Syntypes: South West Africa, Damaraland, Tsub, Dinter 2038 (SAM!); Okahandja, Dinter 431 (SAM!; Z!).—subvar. *brevicornis* Engl., l.c. (1919). Syntypes: Transvaal, Mara, Schlechter 4613 (K; PRE, photo!; BOL!; Z!); Nazareth, Schlechter 4479 (Z!; BOL!).—subvar. *macropetala* Engl., l.c. (1919). Syntypes: South West Africa, Okahandja, Schlechter 4616 (BOL!; Z!*); Engler 6189 (K; PRE, photo!); Otavi, Dinter 902 (SAM!).—subvar. *mediipetala* Engl., l.c. 368 (1919). Syntypes: South West Africa, Windhoek, Dinter 1254 (Z!); Okaputa, Engler 6207 (not seen).—var. *tsumebensis* Engl., l.c. 368 (1919). Type: South West Africa, Tsumeb, Dinter 3008 (SAM!).

H. kirkii Mast. in F.T.A. 1: 233 (1868); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 84 (1900); Wild in F.Z. 1: 547 (1961). Syntypes: Mozambique, Peters s.n.; Lupata, Senna, Kirk s.n. (K; PRE, photo!); S. Central Afr., Baines s.n.

H. lugardii N.E. Br. in Kew Bull. 1909: 94 (1909); Burt Davy, Fl. Transv. 1: 268 (1926); Wild in F.Z. 1: 547 (1961), in syn. Syntypes: Botswana, Kwebe Hills, Lugard 142; Mrs. Lugard 125 (K; PRE, photo!).

H. atrosanguinea Dinter in Reprim nov. Spec. Regni veg. 18: 251 (1922). Syntypes: Waldau, Dinter 551a (SAM!; Z!); Otjihua, Dinter 551 (SAM!; Z!); Kuibis, Dinter 1182 (SAM!); Büllsporter Fläche, Dinter s.n.

H. holubii Burt Davy, Fl. Transv. 1: 42, 268 (1926). Type: Transvaal, Mara, Schlechter 4613 (K; PRE, photo!; BOL!; Z!) which is one of the syntypes of subvar. *brevicornis*.

Suffrutex, appearing annual but often persisting for a few years, flowering early in first year, stems erect, branching from near base, branches ascending or spreading-ascending; stems, branches, petioles and peduncles usually pubescent with short, patent, gland-tipped hairs, sometimes intermixed with distinct stellate hairs or stellate only and occasionally long, pointed, spreading hairs present as well, rarely some branchlets glabrescent. *Stipules* from about 1 mm to 2,5 mm long, linear-acute to subulate, sparsely stellate-pubescent. *Leaves* petiolate; blade variable, from more or less linear, narrowing slightly to base and apex, to oblong-elliptic, 6–40 mm long, 1–12 mm broad, usually sparsely stellate-pubescent, glabrescent, or gland-tipped hairs and bulbous-based hairs present, margins entire or distinctly toothed, apex acute or broad and rounded; petiole 1–12 mm long. *Inflorescence* of 1-flowered cymes, solitary in axils of leaves; peduncle 10–35 mm long, hardly distinguishable from the pedicels; pedicels 3,7 mm long, becoming cernuous; bracteoles aborted. *Calyx* persistent, stellate-pubescent, becoming translucent with age, sparsely pubescent with gland-tipped hairs, lobed to about, or just below midway, about 4,5 mm long. *Petals* "blood-red", "pale red", "pink", "deep orange", "crimson", "purple", mostly appearing deep violet in

pressed specimens, about 5–12 mm long, margin slightly inrolled on claw only, 4–6 mm broad near apex, narrowing slightly to the base. *Stamens* with obovate, hyaline filaments, pubescence obscure on shoulders; anthers erect, 4–8 mm long, overlapping the filament for about 1 mm, acute, sparsely ciliate. *Ovary* stipitate (stipe about 1,5 mm long), sparsely pubescent with gland-tipped hairs and longer hairs along the sutures and a few stellate hairs inter-mixed or stellate-pubescent with a few gland-tipped hairs intermixed, very shortly horned. *Capsules* 5–12 mm long, 4–7 mm broad, pubescent with short gland-tipped hairs and longer acute hairs on the sutures and a few stellate hairs present or predominantly stellate-pubescent with a few gland-tipped hairs present; horns usually under 2 mm long, spreading, stipe about 2 mm long. *Seeds* reniform, corrugated and finely granular with tubercles developing.

Found in dry, warm, sandy regions, mostly in open, sparse vegetation, often along roads in dry riverbeds and on old lands. Recorded from Beaufort West in the Cape northwards through the northern Cape, parts of the Orange Free State, Natal and Transvaal and into South West Africa. Also found in Botswana and northwards to Egypt and Arabia.

CAPE.—Beaufort West: Beaufort West, Brueckner 234. Gordononia: Gordononia, Leistner 1831. Hay: Hay, Acocks 2067; 17675; Upington, Schlieben, 10432. Kenhardt: Kenhardt, Wasserfall 1138. Kimberley: Kimberley, Leistner 2273. Kuruman: Kuruman, Leistner 2214. Prieska: Prieska, Acocks 12641. Vryburg: Vryburg, Burt Davy 13675; 13776. Warrenton: Warrenton, Leistner 1261.

O.F.S.—Bloemfontein: Bloemfontein, Potts 7550. Boshof: Boshof, Burt Davy 12893.

NATAL.—Lower Umfolozi: Umfolozi Game Reserve, Ross 2026.

TRANSVAAL.—Bloemhof: Bloemhof, Theron s/669. Letaba: Shilovane, Junod 6220. Lydenburg: Lydenburg, Barnard 488. Pietersburg: Pietersburg, Schlechter 4479. Pilgrims Rest: Pilgrims Rest, Acocks 16760. Potgietersrus: Potgietersrus, Meuse, 9569. Soutpansberg: Mara, Schlechter 4613; Messina, Mauve 4415; Salt Pan, Schweickerdt & Verdoorn 486; 652.

S.W.A.—Gibeon: Gibeon, Basson 172; 161; Van Vuuren & Giess 1073. Gobabis: Gobabis, Wilman 402. Grootfontein: Grootfontein, Merxmüller & Giess 1799; De Winter & Giess 6783; Dinter 5319; Tsumeb, Naegelsbach in TRV 36298; Dinter 7450. Karibib: Karibib, De Winter & Hardy 7968; Marloth 1309. Kaokoland: Kaokoland, Story 5867; De Winter & Leistner 5374; 5166. Keetmanshoop: Keetmanshoop, De Winter 3253; Dinter 4863. Lüderitz: Lüderitz, Kinges 2146. Okahandja: Okahandja, De Winter 2703, Otjiwarongo, Bradfield 171; 419. Okavango: Okavango, De Winter & Marais 4962. Ovambo: Ovambo, De Winter & Giess 6844. Rehoboth: Rehoboth, De Winter 3499; Acocks 18159. Swakopmund: Swakopmund, Giess 3005; Codd 10581. Windhoek: Windhoek, Dinter 4411; Wilman 427; Merxmüller 859.

From the long list of synonyms and the several varieties and subvarieties described, it is obvious that attempts to circumscribe discrete taxa in this complex have failed. It is noteworthy, for instance, that the type of *H. holubii* Burt Davy, Schlechter 4613, is also a syntype of *H. modesta* var. *elatiior* subvar. *brevicornis* Engl. (Schlechter 4613 in BOL differs from a specimen with the same number in K in having broader leaves). Much of the variation may be ascribed to hybridization.

A Venda name "Ishitoni sha" is noted on one of the specimens.

19. *Hermannia tigrensis* Hochst. ex A. Rich., Tent. Fl. Abyss. 1: 74 t. 17 (1847); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 85 (1843); Mast. in F.T.A. 1: 233 (1868); Wild in F.Z. 1: 546 (1960), as *tigreensis*. Type: Ethiopia, dist. Tigre, Schimper 812 (K; PRE, photo!; LE!).

* Schlechter 4616 in PRE is *H. glanduligera* K. Schum., but in Z it is *H. modesta*.

H. mildbraedii Dinter & Engl. in Bot. Jb. 39: 590 (1907); M. Friedrich et al. in F.S.W.A. 84: 16 (1969). Type: South West Africa, Okahandja, *Dinter* s.n. (Z!; PRE, photo.!; K (as No. 487).

H. tenella Dinter & Schinz in Vjschr. naturf. Ges. Zürich 55: 241 (1910). Type: South West Africa, Waterberg, *Dinter* 354 (Z!; PRE, photo.!).

H. pseudo-mildbraedii Dinter & Engl. in Bot. Jb. 55: 369 (1919). Syntypes: South West Africa, Okahandja, *Dinter* 2566 (SAM!); Waldau, *Dinter* 522 (SAM!).

Annual, very slender, branched from near base; branches slender, spreading-ascending to arcuate-ascending, subdensely stellate-pubescent, hairs few in a group and of different lengths ($\pm 0,5$ mm long). *Stipules* subulate to linear, acuminate, 1,5–2,5 mm long, rarely up to 5 mm long (often on same plant). *Leaves* petiolate; blade narrowly to broadly ovate-acuminate, varying much in size on same plant, 10–35 mm long, 3–15 mm broad, rounded, and usually broadest, at base, broadly acuminate to an acute apex, obscurely to clearly serrate, sparsely to subdensely stellate-pubescent on both surfaces, hairs few in a group (sometimes reduced to 2) and of different lengths; petioles 1–4 (–12) mm long. *Flowers* axillary, solitary, yellow-orange, dull red, brick-red or cream with a dark centre, borne on thread-like peduncles; peduncle about 20 mm long, glabrous or pubescent in upper portion; pedicel usually short, from under 1 mm to 2 mm long, rarely up to 5 mm long, stellate-pubescent; bracts none or very small and early caducous. *Calyx* lobed to beyond middle, translucent, stellate-pubescent without; tube 1–1,5 mm long; lobes deltoid-acuminate, 2–2,5 mm long. *Petals* oblong to narrowly oblong, narrowing at base into a claw, 3,5–5,5 mm long, 1,5–2 mm broad, margins not inrolled or obscurely to clearly so on claw. *Filaments* obtrullate, about 2 mm long, pubescent on shoulders, translucent; anthers erect, about 2 mm long, acute at apex, rounded at base, very shortly overlapping filament at base (sometimes coloured). *Ovary* stipitate, minutely stellate-pubescent, about 1 mm long and almost 1 mm broad, lobes with 2 acute apices; styles very slender, erect, cohering, apices recurved; stipe about 0,5 mm long, distinct. *Capsule* about 5 mm long, 4 mm diam., shallowly 5-lobed at the apex, lobes 2-horned; horns 1,5–3,5 mm long.

Found in pockets of soil between rocks on koppies and mountains. Recorded from the northern half of South West Africa. Also in Angola and northwards to Ethiopia and Eritrea.

S.W.A.—Kaokoland: near Ohopoho, *De Winter & Leistner* 5346. Karibib: Ameib, *De Winter & Hardy* 8086; 8087; Klein Ameib, *Dinter* 7076. Okahandja: Okahandja, *Dinter* 4614; Waldau, *Dinter* 522 (SAM). Omaruru: Brandberg, *De Winter & Hardy* 8218. Outjo: Paresis Mountain, *Barnard* 175.

A range of material from South West Africa has shown that the length of the horns on the capsules may vary considerably, namely from 1,5–3,5 mm. *H. mildbraedii*, which has been distinguished from *H. tigrensis* by its longer horns, is therefore not upheld. A Rich. in Tent. Fl. Abyss uses the spelling *tigrensis*, while Hochstetter's list, Masters in F.T.A. and Kew Index give *tigrensis*. F.Z. retains the original spelling, i.e. *tigreensis*, as does F.S.W.A. in the note under *H. mildbraedii*. It appears that, according to Article 73 G (b) of the Code, it should be *H. tigrensis*. In *Z Dinter* 457 is indicated as the type of *H. mildbraedii* but there is no evidence to support it.

20. *Hermannia linearifolia* Harv. in F.C. 1: 205 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 79 (1900); Burt Davy, Fl. Transv. 1: 268 (1926). Syn-

types: Cape, Winterveld, between Nuwejaarsfontein and Ezelsfontein, *Drège* s.n. (K; PRE, photo.!; S); Orange River, *Burke & Zeyher* s.n. (TCD; PRE, photo.!); Somerset, *Barber* s.n. (PRE!).

H. fasciculata Bak. in Refug. Bot. 5, t. 289 (1873). Type: Cult., originally collected by Cooper in the Cape.

Bushy suffrutex, 15–60 (–100) cm high, usually heavily browsed; stems minutely and densely grey scaly, new growth viscid with minute papillae and occasional stalked glands, otherwise glabrous. *Stipules* subulate, 0,5–1 mm long, deciduous. *Leaves* clustered on short, abbreviated shoots, sessile or shortly petiolate; blade varying in length in each cluster, 5 mm to about 12 mm long, very narrowly obovate, plicate, giving the appearance of being linear, microscopically pitted and with minute viscid papillae, otherwise glabrous; petiole 0 or up to 3 mm long. *Inflorescence* of 1-flowered cymes in pseudo-racemes at the ends of the slender, ultimate branchlets; peduncles aborted or 1–3 mm long, viscid and with a few glands; bracteoles minute, about 0,5 mm long; pedicels usually glabrous, 2–4 mm long. *Calyx* about 6 mm long, lobed to middle or just beyond; glabrous and somewhat viscid with minute papillae, lobes deltoid-acuminate with the finely and densely ciliate margins incurved in upper portion. *Petals* about 1 cm long, “deep wine-red”, “red”, “brick-red”, “mauve” or occasionally clear yellow, oblong-obovate in upper two-thirds, produced into a claw with incurved margins in lower third, glabrous. *Stamens* adhering to stipe at base, free portion about 7 mm long; filaments hyaline, narrowly obovate, overlapped by anther base about as long as anthers. *Ovary* minutely papillate, about 1,5 mm long, stipitate; stipe about 1,5 mm long; styles 2,5 mm long. *Capsule* oblong-globose, about 6 mm long, 5 mm broad, with a 4 mm long stipe at base surrounded by the persistent calyx-tube, 5 pairs of spreading horns at apex, horns glabrous, 1–5 mm long.

Found among dolerite rocks, on hill slopes in calcareous sandy country and near pans. Recorded from Oudtshoorn and Uitenhage northwards through Cradock and Middelburg to the south-western Orange Free State, Christiana in the Transvaal, Kuruman in the northern Cape and in Botswana.

CAPE.—Barkly West: Holpan, *Acocks* 108; Danielskuil, *Acocks* 251. Cradock: near Rayners Koppie, *Acocks* 11920; Zebra Nat. Park, *Muller* 571; *Brynard* 28; *Liebenberg* 7238. Gordonia: Kakaup Pan, *Leistner* 2047. Herbert: Ramah, *Wenger* 1300. Kimberley: Merbou Siding, *Moran* s.n.; Warren-ton, *Adams* in PRE 48804; 48806. Kuruman: Kuruman, *Marloth* 1129. Middelburg: near town, *Gill* 127; *Flanagan* 1378; Grootfontein Agric. College, *Verdoorn* 1459; Rosemead Junction, *Sim* sub *Galpin* 5636. Oudtshoorn: near de Rust, *Dahlstrand* 1209. Richmond: Vlakplaat, *H. Bolus* 13772. Somerset East: Somerset East, *Barber* s.n. Uitenhage: Winterhoeksbergen, *Ecklon & Zeyher* 109. Victoria West: Melton Wold Estate, *Smith* 2438.

O.F.S.—Boshof: Boshof, *Leistner & Joynt* 2664; *Burt Davy* in Govt. Herb. 10822. Fauresmith: Fauresmith, *Pole Evans* 1616; Koffiefontein, *Codd* 3421. Jacobsdal: Honeynestkloof, *Schweickerdt* 1154.

TRANSVAAL.—Christiana: Bloemheuwel, *Burt Davy* in Govt. Herb. 11273.

BOTSWANA.—Without exact locality, *Holub*, s.n. (BOL).

This species is characterized by its clustered, almost needle-like leaves, and by the more usual stellate-pubescent being almost entirely replaced by glutinous scales and papillae which glisten in sunlight and cause the plant to be sticky when crushed. A paste made of the crushed parts is said to be used to close wounds and relieve pain and this accounts for the common name “Pleisterbos”. This species is usually referred to as “Rooi Pleisterbos”, but since the flower colour varies in the species and can be pure

yellow occasionally, it is not very apt. *H. linearifolia* belongs to the group in which the petals are not strongly twisted.

21. *Hermannia helianthemum* K. Schum. in Bot. Jb. 10: 44 (1889); in Engl., Monogr. Afr. Pfl. 5: 83 (1900); Burt Davy, Fl. Transv. 1: 267 (1926), partly excluding *Holub* s.n.; M. Friedrich et al. F.S.W.A. 84: 15 (1969). Type: South West Africa, Usakos, *Marloth* 1237 (PRE, lecto!; SAM!; BOL!).

Suffrutex 30–60 cm high, virgately branched, branches slender, woody at base, stellate-tomentose. *Stipules* subulate or conduplicate, stellate-tomentose, 1,5–5 mm long. *Leaves* petiolate; blade linear-elliptic to narrowly ovate-oblong, densely stellate-tomentose on both surfaces, 16–34 mm long, 4–11 mm broad, usually broadly acuminate at apex, sometimes rounded and occasionally, on same plant, dentate at broad apex, usually rounded at base, margins entire or obscurely dentate, nerves prominent beneath, 3 basal nerves of which the two lateral ones (i.e. on each side of midrib) run only to about halfway up leaf, leaves reduced to bracts in upper portion of the ultimate flowering branches; petiole 5–11 mm long. *Inflorescence* of 1-flowered cymes in the axils of upper, reduced leaves, appearing racemose, the only distinction between peduncle and pedicel being that the latter is more densely stellate-tomentose; peduncle about 5–7 mm long; pedicel 1,5–3,5 mm long. *Calyx* about 6 or 7 mm long, lobed to about middle, stellate-tomentose outside, lobes appressed pubescent within. *Petals* "pale" to "deep pink", about 6–8,5 mm long and 2,5–4,5 mm broad, \pm oblong-cuneate, the margin inrolled only along the short, 1,5–2,5 mm long, claw which is glabrous. *Stamens* with obtrullate, very thin, hyaline filaments, with a few hairs on the shoulders, 2,5–4,5 mm long, 1,25–3 mm broad in upper half; anthers about 5 mm long, ciliate. *Ovary* densely stellate-tomentose with longer hairs at the apex, or subglabrescent in lower portion, about 3,5 mm long. *stipe* 1 mm long, with anther bases cohering to form a ring around it; style filiform. *Capsule* shortly horned;

Found on sandy flats near Garies and on granite slopes in the Omaruru, Karibib and Okahandja, districts of South West Africa, and in Namaqualand, Cape.

CAPE.—Namaqualand: Garies, *Esterhuysen* 1297.

S.W.A.—Karibib: Anschluss, *De Winter & Hardy* 7985. Okahandja: Usakos, *Marloth* 1237; Okagava, *Dinter* 6937. Omaruru: near Uis mine, *De Winter* 3165. Swakopmund: Wildreservat, *Jensen* 202 (WIND).

Characterized by the raceme-like inflorescence, the stellate tomentum on all parts, short horns to the capsule, pink, often pale pink, petals drying parchment colour, sometimes with violet patches.

The epithet *helianthemum* ending in "-um" is correct, because it is called after the genus *Helianthemum*.

In the original description K. Schumann cites only two specimens, *Marloth* 1237 and 1238. In Engl., Monogr. Afr. Pfl. 5: 83 these two numbers are cited and indicated as being in the Berlin Herbarium. Specimens of *Marloth* 1238 in SAM and BOL are *H. comosa*, which could never be confused with *H. helianthemum*. It must be assumed that the specimen of *Marloth* 1238 in B, which was destroyed during the war, represented *H. helianthemum*.

22. *Hermannia damarana* Bak. f. in J. Bot., Lond. 39: 127 (1901); M. Friedrich et al. in F.S.W.A. 84: 13 (1969). Type: South West African, Damaraland, 1879, *T. G. Een* s.n. (BM, holo.; PRE, photo.!).

H. lindequistii Engl. in Bot. Jb. 39: 589 (1907). Type: South West Africa, between Okahandja and Otzisasu, *Dinter* s.n. (not traced).

Suffrutex 30–40 cm tall, stems woody, much branched, with grey bark; branchlets finely stellate-tomentose, hairs short, glutinous. *Stipules* up to 6 mm long, linear-subulate. *Leaves* shortly petiolate; blade narrowly to broadly oblong-obovate, about 3,5 \times 0,7 mm to 30 \times 9 mm, finely, densely and shortly stellate-tomentose (hairs somewhat glutinous), rounded or acute at apex, narrowing slightly to a rounded or cuneate base, margin usually entire, midrib and veins prominent beneath, usually 2 arising from base, one on each side of the midrib; petiole 1–4 mm long. *Inflorescence* of 1-flowered, axillary cymes; peduncle up to 15 mm long, shortly stellate-tomentose, 2–4-bracteate at apex; pedicels 2–3 mm long, stellate-tomentose with slightly longer hairs than on the peduncle. *Calyx* about 6 mm long, tube \pm 3,5 mm, lobes \pm 2,5 mm long, shortly stellate-tomentose without, and lobes with appressed hairs on the inner face, usually with five prominent nerves running from apex of lobes to base. *Petals* orange-red, oblong to narrowly oblong-spathulate, 7–10 mm long, some narrowly inrolled only on claw, others in same flower with somewhat infolded margins all the way, no auricles at apex of claw, glabrous on inner face. *Stamens* with oblanceolate-linear filaments \pm 4 mm long, glabrous; anthers \pm 4 mm long, overlapping filament for about 1 mm, ciliate. *Ovary* very shortly stipitate, \pm 2,5 mm long, shortly stellate-tomentose, hairs rather longer at apex; styles about 5 mm long. *Capsule* about 6 mm long, 3 mm diam., shortly and densely stellate-tomentose, eventually shortly horned at sutures, horns about 1,5 mm long.

Found in limy soils. Recorded from the Omaruru, Okahandja and Gobabis districts of South West Africa and eastwards into Botswana.

S.W.A.—Damaraland: *Een* s.n. (BM). Gobabis: Gobabis, *De Winter* 2508; Steinhausen, *Dinter* 2784 (SAM). Okahandja: Springbokvlakte, *Giess, Volk & Bleissner* 6322a. Okahandja: Okomita, *Dinter* 508 (Z). Omaruru: Omaruru, *Dinter* 7494. Without precise locality, *Bradfield* 428.

BOTSWANA.—60 km N.W. of Serowe, *Wild & Drummond* 7293.

Characterized by the short calyx lobes, the 5 prominent ribs on the calyx (outside), the fine, short, stellate tomentum, the three prominent basal nerves on the undersurface of the leaves and the stellate-tomentose capsule with very short horns.

23. *Hermannia garipeina* Eckl. & Zeyh., Enum. 49 (1834); Harv. in F.C. 1: 202 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 80 (1900); F.S.W.A. 84: 14 (1969). Type: Cape, Boschmansland, near Orange River, *Ecklon & Zeyher* 384 (SAM!; S!; PRE!).

H. racemosa E. Mey. in Drège, *Zwei Pfl. Doc.* 192 (1843), nom. nud. based on *Drège* 3279 (PRE!; LE!; Z!).

H. exstipulata E. Mey. ex Harv. in F.C. 1: 202 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 59 (1900). Type: Cape, Namaqualand, Orange River Mouth, *Drège* s.n. (TCD, holo.; PRE, photo.!).

H. truncata Schinz in Vjschr. naturf. Ges. Zürich 55: 241 (1910). Type: South West Africa, Graspoort, *Dinter* 1087 (Z!).

H. garipeina Eckl. & Zeyh. var. *dentata* Engl. in Bot. Jb. 55: 364 (1919). Type: Silverfontein, *Drège* 3279 (PRE!; LE!; Z!).—var. *integrifolia* Engl. in Bot. Jb. 55: 364 (1919). Syntypes: South West Africa, *Range* 177; 882 (SAM!); *Dinter* 1124; 1079 (Z!); *Engler* 6696.

H. nivea Schinz in Vjschr. naturf. Ges. Zürich 70: 218 (1925). Type: South West Africa, Kleinfonteiner Fläche, *Dinter* 3734 (PRE!; Z!).

Shrublet 22–75 cm tall, much branched, branches ascending or divaricate, densely and finely stellate-

tomentose with short, greyish white hairs. *Stipules* 0,75–2 mm long, thick in texture and densely stellate-tomentose with short greyish white hairs, sometimes caducous. *Leaves* shortly petiolate; blade rather thick in texture and densely stellate-tomentose with short, grey hairs, variable in shape and size, elliptic-cuneate to obovate—or oblong-cuneate, broadest just above middle or at the apex, about 7 to 20 mm long, margin entire or crenate at the apex, base cruneate or sub- rounded, apex broadly acuminate or truncate and often shallowly 3-lobed; petiole often folded trough-shaped, 1–5 mm long, rather thick in texture and densely stellate-tomentose with short hairs. *Inflorescence* of 1-flowered cymes, solitary in axils of leaves, upper subtending leaves sometimes much reduced in size giving the appearance of racemes; peduncles 2,5–6 mm long, densely stellate-tomentose with short hairs; pedicels 3–5 mm long, distinguishable from the peduncle by the coarser stellate pubescence, hairs over 0,5 mm long; bracts minute or wanting. *Calyx* lobed almost to base, stellate-pubescent with hairs rather long (0,5–1 mm), tube 1,5–3 mm long, lobes 4,5–7 mm long. *Petals* pink, “purplish” or “violet”, 6,5–9 mm long, 2,5–6 mm broad; blade narrowly oblong to suborbicular, narrowing slightly into a claw in lower third, margins sometimes minutely ciliate, glabrous within, claw with slightly inrolled margins. *Stamens* with hyaline, obovate filaments which either narrow gradually or abruptly to apex and base and are glabrous or setose on shoulders; anthers 3,5–5 mm long, ciliate with sparse, short hairs, overlapping filament for 1,5 mm. *Ovary* about 2,5 mm long, 2 mm diam. with short papillose hairs on surfaces and setose or stellate along sutures and at apex; stipe 1,5 mm long; styles 5 mm long, slender, erect, exerted from the closed mature flower for about 2 mm. *Capsule* about 5 mm long, usually hidden in the persistent calyx and petals, obscurely 5-angled, surface papillose, sutures setose and stellate with a blunt lobe or short horn at apex, up to 2 mm long; stipe 1,5 mm long. *Seeds* brown, reniform, corrugated (and sometimes scaly?).

Found in sandy semi-desert areas. Recorded from the Kenhardt District and northern Namaqualand in the Cape northwards to Warmbad, Lüderitz and Kaokoland in South West Africa.

CAPE.—Kenhardt: Kakamas Veld Reserve, *Acocks* 16360; near Pofadder *Esterhuysen* 1250. Namaqualand: Springbok, *Dumoulin* 4; Silverfontein, *Drège* 3279; Schakalswater, *M. Schlechter* 3; Orange River Mouth, *Drège* s.n.

S.W.A.—Kaokoland: Cape Frio, *Giess* 9079; south of Möwebucht, *Merxmüller & Giess* 30662. Lüderitz: Haalenberg, *De Winter & Giess* 6161; Klinghardtgebirge, *Dinter* 3948; Aus, *Dinter* 6039. Warmbad: Vioolsdrift, *Merxmüller & Giess* 3671.

Characterized by the dense, fine, whitish, stellate pubescence of the branches, leaves and peduncles contrasting with the coarse stellate pubescence of the pedicels and calyx. The length of the hairs on the calyx varies considerably being long and shaggy on some specimens and not so long on others. The leaf, shape and margin varies from elliptic-cuneate with entire margins to oblong-cuneate with a truncate and 3-lobed apex. Two forms of petals and filaments are found. The petals have either a narrow, oblong blade or a semi-orbicular blade with or without a ciliate margin, while the filaments which are broadest near the apex, either narrow gradually to base and apex or narrow abruptly and so may be taken to be somewhat cruciform.

Drège 3279, the type of var. *dentata*, is also the type of the nomen nudum *H. racemosa* E. Mey. in

Drège, Zwei Pfl. Doc. 192 (1843). Specimens of *M. Schlechter* s.n. from Schakalwater in Z and LE bear the name *H. maximiliana* Schltr. n. sp. In Z and PRE there are specimens of *Dinter* 6039 named *H. kurtiana* Schinz. This name was never published. The specimen is *H. gariepina*. Specimens of *Schlechter* 11374 in LE and Z bear the name *H. conaclada* K. Schum. which was evidently also not published. It too, is *H. gariepina*. The common name “Koerkassie” is recorded by Dumoulin.

24. *Hermannia complicata* Engl. in Bot. Jb. 39: 588 (1907). Type: South West Africa, Jakalswater, *Dinter* 1460 (Z, holo.!, PRE, photo.!).

Suffrutescent, leafy, dwarf bush, many-stemmed, about 20 cm tall, much branched from base, the whole plant grey stellate-tomentose, part of branchlets obscurely lineate. *Stipules* 1–2,5 mm long, rather thick and persistent, stellate-tomentose and with a few long hairs at apex. *Leaves* petiolate; blade narrowly to broadly oblong-cuneate, sometimes broadest at apex, from about 5×2 mm to 20×10 mm, stellate-tomentose on both surfaces; coarsely crenate in upper half or at apex only, cuneate portion entire; petiole 2–10 mm long, grey stellate-tomentose. *Inflorescence* of 1-flowered, axillary cymes, usually for whole length of the branchlet; peduncle 2–5 mm long, persistent but not indurated and spine-like; pedicels about 3 mm long, curled, slightly thicker and with denser tomentum than on peduncle. *Calyx* lobed to just beyond middle, stellate-pubescent to stellate-tomentose outside, lobes sparsely appressed pubescent within, tube 2–3 mm long, lobes 2,5–3,5 mm long. *Petals* “pink”, about 8 mm long, narrowly oblong, somewhat cuneate at base, margin narrowly inrolled in cuneate basal part, thin-textured, not thickened in centre, glabrous in specimens dissected. *Stamens* united at base around stipe; filaments narrowly obovate, hyaline, pubescent on shoulders, about 3 mm long; anthers 4 mm long, pointed, ciliate. *Ovary* with a 1,5 mm long stipe, subglobose, about 1,5 mm long, with 10 erect setose horns, papillose and stellate on surface, setose along sutures; ovules about 14. *Capsule* about 3 mm long, 3 mm broad, stipitate, papillose and stellate-pubescent on surface, setose along sutures, with 10 long, spreading to recurved setose or pilose horns 4–10 mm long.

Found on the edge of the Namib in semi-desert conditions. Recorded from Lüderitz District northwards to Welwitschia in South West Africa.

S.W.A.—Lüderitz: Between Helmeringhausen and Aus, *Kinges* 2223. Omaruru: Welwitschia, *Boss* 2183; *Galpin & Pearson* 7575; Brandberg, *Giess* 1957. Swakopmund: Usakos, *Dinter* 6847; between Okahandja and Swakopmund, *Dinter* 160 (SAM); between Walvisbaai and Swakopmund, *Strey* 2504.

Characteristically a small, rounded, entirely grey stellate-tomentose bush about 20 cm tall, branched from the base with slender branches. The leaves are coarsely crenate in the upper half and the ten horns on the capsule are long, pilose and spreading to recurved.

In F.S.W.A. this species is put in synonymy under *H. affinis*, a species which it resembles closely and which differs mainly in being a low bushy plant branched from the base, with branchlets which become less readily indurated and spine-like.

A specimen in BOL, *Miss W. Tucker* s.n., from the sand dunes south of Doornpoort, may be *H. complicata*, but the material is not sufficient for identification.

25. *Hermannia trifurca* L., Amoen. Acad. 6, 90 (1760); Sp. Pl. ed. 2: 942 (1763), as *trifurcata*; Syst. Veg. 610 (1784); Cav., Diss. t. 178, fig. 2 (1788), as *trifurcata*; Jacq., Schoenbr., t. 125 (1797); DC., Prodr. 1: 495 (1824), as *trifurcata*; Thunb., Fl. Cap. ed. Schult. 503 (1823); Harv. in F.C. 1: 205 (1860), as *trifurcata*. Type: "Cap. b. Spei", Linn. Herb. Cat. No. 854 (LINN, holo.; PRE, photo.).

H. bicornis Eckl. & Zeyh., Enum. 49 (1834). Type: Cape, "Piketberg", Ecklon & Zeyher Enum. No. 385 S; PRE, photo. PRE!). *H. hiliaris* (Eckl. & Zeyh.) Hochr. in Annu. Conserv. Jard. bot. Genève 11 & 12: 2 (1907).

Mahernia incana Eckl. & Zeyh., Enum. 49 (1834). Type: Cape, between Saldanha Bay and Bergrivier, Ecklon & Zeyher Enum. No. 388 (PRE!).

M. hiliaris Eckl. & Zeyh. l.c. 49 (1834). Type: Cape, "Brackfontein", Clanwilliam, Eckl. & Zeyh. Enum. No. 389 (S; PRE, photo.; TCD; PRE!).

Suffrutex, erect, woody, much branched, ultimate branchlets becoming indurated and spiky; branchlets scaly to minutely stellate-scaly, ridged in part. *Stipules* subulate to linear acute, 1,5–2,5 mm long. *Leaves* sessile or shortly petiolate, clustered on abbreviated shoots or single on the ultimate elongated shoots; blade linear to linear-cuneate, varying in size in each cluster, 6–25 mm long, 1,5–5 mm broad, rounded, acute or truncate at apex and often 3-toothed, densely to sparsely pubescent with, usually, minute stellate hairs, rays appressed and short, rarely long, margins entire, rarely toothed below tridentate apex. *Inflorescence* of 1-flowered cymes in the axils of upper leaves or arranged in fairly long terminal (pseudo-) racemes, flowers cernuous and secund; peduncle usually aborted or very short but occasionally up to 5 mm long, bi-bracteate at apex, stellate-pubescent; bracts subulate to linear, 1–3 mm long; pedicels usually 3–5 mm long when peduncle is not obvious, otherwise ranging from 1,5–4 mm, stellate-pubescent. *Calyx* 6–8 mm long, lobed to just beyond middle, subclaxly stellate-pubescent, usually denser in lower portion, the hairs short or long, lobes densely ciliate with tufted hairs. *Petals* "mauve", "purple", "pink to wine-red, ageing blue", 7–11 mm long, suborbicular to broadly oblong-elliptic in upper half, narrowed below into a claw with infolded margins, glabrous. *Stamens* 7–8 mm long; filaments hyaline, oblong-obovate to narrowly oblong-cuneate, apparently glabrous, adhering at base to stipe; anthers ciliate, 4–5 mm long with the base overlapping the dilated filament. *Ovary* stipitate, 5-lobed, scaly and papillose, papillae longer on keels of lobes, about 1,5 mm long; stipe about 1,5 mm long; styles 6–7 mm long, eventually shortly exserted. *Capsule* 5-lobed, about 7 mm long, 6 mm broad, stipitate at base, apex with 5 pairs of spreading horns, keel of lobes and horns villous; stipe about 2 mm long; horns at first short, eventually up to 5 mm long.

Found from Worcester in the western Cape northwards through Namaqualand to the Klinghardt Mountains in South West Africa.

CAPE.—Calvinia: S.W. of Soetwater, farm Lokenburg, De Winter & Verdoorn 9012. Ceres: Ceres, Pienaar s.n. Clanwilliam: Clanwilliam, Schlechter 4397; 5056; Galpin 10731; Brakfontein, Ecklon & Zeyher Enum. No. 389; Citrusdal, Liebenberg 4336. Malmesbury: "Saldanhabay", Drège s.n. (S); Ecklon & Zeyher Enum. No. 388; Darling, Hutchinson 230. Namaqualand: without precise loc., *H. Bolus* in Herb. Norm. 441; Springbok, Van der Schijff 8127: 16 km S.E. of Arris, Marloth 12409; Steinkopf, Marloth 12224. Piketberg: Piketberg, Ecklon & Zeyher Enum. No. 385; near Bergrivier station, Boucher 82; between Veldrif and St. Helena Bay, Marsh 1276; Pickeniers Kloof, Leipoldt 19862. Vanrhynsdorp: Klaver, Andreae 490; Vredendal, Thompson 1010; Hall 3809. Worcester: Worcester, Van Breda & Joubert 1811; "Karee Bergen", Schlechter 8283; Hex River Valley, Tyson 688.

S.W.A.—Lüderitz: Klinghardtsberge, Spitzkuppe Sud, Watmough 881.

This woody much branched shrub is characterized by the linear leaves which are usually 3-toothed at the apex, although sometimes very shallowly so, and the drooping, bell-shaped flowers secund towards the apices of the branchlets. The petals are reminiscent of flies' wings and fold together to give a truncate appearance to the flower. Often the filiform styles are shortly exserted. The short, broad, 5-lobed capsules, partly concealed by the persistent perianth, are made conspicuous by the pairs of pilose horns spreading horizontally from the apices of the lobes.

A common Hottentot name for this species is "Koerhassie".

With regard to the epithet "*trifurca*", not only did Linnaeus use it in the original description but, according to Latin scholars, it is more correct than "*trifurcata*" (private letter to N. S. Pillans from Capt. Salter).

26. *Hermannia affinis* K. Schum. in Verh. Bot. Ver. Prov. Brandenb. 31: 180 (1890); in Engl., Monogr. Afr. Pfl. 5: 81 (1900); M. Friedrich et al. in F.S.W.A. 84: 11 (1969), for the greater part. Type: South West Africa, Lüderitz, "between Angra Pequena and Aus", Schinz 1113 (Z!; PRE, photo.).

H. windhukiana Engl. in Bot. Jb. 39: 588 (1907). Type: South West Africa, Windhoek, Dinter 851 (Z; PRE, photo.).

H. spinulosa Engl. in Bot. Jb. 55: 365 (1919). Type: South West Africa, Inachab, Dinter 1077 (Z; PRE, photo.).

H. squarrosa Dinter ex Range in Reprim nov. Spec. Regni veg. 36: 262 (1934), nom. nud. based on Dinter 6040 (Z!; PRE, photo.; PRE!; SAM!).

Suffrutex, with woody stems and branches, branchlets varying in colour from pale yellow, metallic, cinnamon-brown to plum-coloured, thick and square to slender and virgate but all with ultimate branchlets becoming bare, indurated and spine-like (the persistent peduncles usually not indurating as in *H. spinosa*), at first minutely glandular hairy, covered by dense stellate pubescence which, at least on some twigs, is cinnamon-coloured and appears powdery, rarely with some gland-tipped hairs as well. *Stipules* 1,5–3 mm long, persistent, tomentose and with a few long hairs at apex. *Leaves* petiolate; blade usually oblong-cuneate, sometimes oblong-elliptic, coarsely but shallowly lobed in upper half, some leaves entire, often broadest at apex, 8–30 mm long, 4–15 mm broad at centre or near apex, densely stellate-tomentose, stellate hairs from a scaly base; petiole 3–6 mm long, tomentose. *Inflorescence* of 1-flowered, axillary cymes; peduncle 3–4 mm long, pedicel 1,5–4,5 mm long; bracts at apex of peduncle small, 0,5 mm long. *Calyx* 7–10 mm long, lobed to beyond middle, tube 3 mm long, lobes 7 mm long, stellate-tomentose without, sparsely pubescent within, ciliate. *Petals* in shades of red and purple, about 9 mm long, 2–3 mm broad, oblong-cuneate, narrowly inrolled along margin in lower half. *Stamens* with hyaline, obovate filaments, sparsely hairy on shoulders, anthers ciliate, overlapping filaments at base. *Capsule* 7 mm long, glandular and sometimes also stellate-pubescent on surface, setose along sutures; horns spreading to recurved, pilose, about 8 mm long.

Found on rocky hills and slopes, on quartzite outcrops, sandy shale cliffs, or in gravelly soils. Recorded from the northern Cape (Griqualand West) from Prieska and Kenhardt northwards into Botswana and South West Africa.

CAPE.—Barkly West: Danielskuil, Acocks 257. Hay: near Griquatown, Leistner 891; Lovedale, Acocks 17674. Herbert:

Campbell, *Leistner* 919. Kenhardt: between Pofadder and Aggeneys, *White* 10741. Kimberley: Witdam, *Acocks* H. 849. Kuruman: Olifantshoek, *Hardy & Bayliss* 1249; Langberg, *Sitwell* 40. Prieska: Buis Vlei, *Acocks & Hafström* 946.

S.W.A.—Bethanien: Inachab, *Dinter* 1077 (Z). Gibeon: north of Mariental, *Merxmüller & Giess* 764. Keetmanshoop: Aroab, *De Winter* 3360. Lüderitz: Aus, *Dinter* s.n. (Z); *Dinter* 6040; west of Aus, *Giess & Van Vuuren* 746. Rehoboth: south of Rehoboth, *Hall* 991. Warmbad: Klein Karas, *Dinter* 4856 (Z); Great Karas, *Pearson* 7908. Windhoek: Auas Mts, *Strey* 2568; 2433; west of Windhoek, *De Winter* 2609.

Characterized by the usually stellate-tomentose leaves, the indurating branchlets, and the long, pilose horns on the capsules. *H. affinis*, as defined here, varies considerably, but it can, nevertheless, be recognised as an entity and distinguished from related species. The two species with which it has been very generally confused are *H. spinosa* and *H. helianthemum*. From *H. spinosa* it can be distinguished, among other details, by the branchlets being stellate-tomentose and becoming indurated or spine-like, whereas in *H. spinosa* the branchlets are sparsely stellate-pubescent or glabrous and it is usually the persistent, enlarged peduncles which become spike-like. *H. helianthemum* differs considerably from *H. affinis*, for it has long, slender branchlets which do not become indurated but terminate in raceme-like inflorescences.

In F.S.W.A. *H. complicata* Engl. is placed in synonymy under *H. affinis*, a species to which it is certainly very close, and from which it differs mainly in habit and habitat, being a low, bushy plant confined to the edge of the Namib.

The following insufficiently known species may also be synonymous with *H. affinis*: *H. arenicola* Engl.; *H. longicornuta* Engl. and the unpublished *H. schumannii* Schinz based on *Dinter* 4856 (Z!; PRE, photo.!).

27. *Hermannia fruticulosa* K. Schum. in Verh. bot. Ver. Prov. Brandenb. 30: 233 (1888); in Engl., Monogr. Afr. Pfl. 5: 81 (1900); M. Friedrich et al. in F.S.W.A. 84: 14 (1969). Syntypes: South West Africa, Bethanien, *Schenck*, 361 (PRE!; Z!); Guldbrandtsthal, *Schinz* s.n. (Z!); Schakatsfluss, *Schinz* 602 (K; PRE, photo.!.; Z!; BOL!).

Suffrutex, virgate, 40–60 cm tall, stems with grey or brown bark, branches becoming woody and leafless, often glutinous, with numerous minute papillae, otherwise glabrous, ultimate flowering branchlets short and congested with leaves and flowers, minutely papillose. *Stipules* terete, blunt, usually just under 1 mm long, papillose. *Leaves* shortly petiolate; blade oblong-cuneate, 5–10 mm long, 3–8 mm broad, broadest at or near apex, dentate in upper part, teeth usually thickened with glands, upper and lower surface papillate and sparsely stellate-pubescent (hairs appressed), nerves prominent beneath; petiole 1–3 mm long. *Inflorescence* of 1-flowered, solitary cymes, usually in axils of leaves on short congested shoots; peduncle usually very short, about 1,5 mm long (rarely on same plant one up to 2,5 mm long), glabrous; pedicels up to 5 mm long, papillose and sparsely stellate-pubescent, thickening towards apex; bracts minute, $\pm 0,5$ mm. *Calyx* usually lobed to beyond the middle, 4–6 mm long, obscurely papillose with a few appressed stellate hairs without, ciliate on margin and pubescent on inner face. *Petals* broadly oblong-cuneate, about 8 mm long, 4 mm broad near apex, claw with narrowly inrolled margin, not thickened, appearing glabrous. *Stamens* with obtrullate, hyaline filaments (appearing glabrous), about 3

mm long; anthers 3, ciliate. *Ovary* densely hispid, stipitate (stipe $\pm 1,25$ mm), about 1,5 mm long; styles about 4 mm long. *Capsule* from about 4–5 mm long, with 5 laterally compressed carpels, 2,5 mm broad, papillate on surfaces, sometimes stellate-pubescent too, setose along sutures, with 10 diverging, pilose horns which are up to 8 mm long.

Broken veld, on shaly, quartz or granite hills and plateaux or frequently in water-courses. Recorded from the Gordonia District in the Cape, near the South West Africa border and in the Keetmanshoop, Gibeon and Bethanien Districts of South West Africa.

CAPE.—Gordonia: Rietfontein, *Werdermann & Oberdieck* 2253.

S.W.A.—Bethanien: Aus, *Walter* 2616 (WIND); Helmeringhausen, *Dinter* 8028; Bersaba-Bethanien, *Schenk* 361; Dasiessfontein-Inachab, *Pearson* 7905. Gibeon: Mariental, *Basson* 151. Keetmanshoop: Keetmanshoop, *Acocks* 15619A; Hoachabeb, *Pearson* 7905 (BOL).

Distinguishing features are: abbreviated, slender, congested shoots bearing small, persistent bracts in lower half, and leaves and flowers above; long, indurated branchlets, minutely papillose (not stellate-pubescent) becoming glutinose; peduncle short, persistent; pedicels longer and stellate-pubescent; petals longer than calyx, margins inrolled on claw, not thickened, glabrous on inner face; capsule with five laterally compressed carpels free to the axis; horns 10, long, pilose, spreading and recurved.

28. *Hermannia spinosa* E. Mey. ex Harv. in F.C. 1: 205 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 80 (1900), but with authors as "(Burch.) E. Mey."; M. Friedrich et al. in F.S.W.A. 84: 21 (1969). Syntypes: Cape, Gamke River, *Burke & Zeyher* s.n.; Nieuweveld, *Drège* s.n. (K; PRE!).

Mahernia spinosa Burch. ex DC., Prodr. 1: 497 (1824). Type: Cape, Dwaal River, *Burchell* s.n. (K, holo.; PRE, photo.!).

Hermannia asbestina Schltr. in J. Bot., Lond. 36: 373 (1895). Type: Asbestos Mtn, *Marloth* 2057 (PRE!).

H. aspericaulis Dinter & Engl. in Bot. Jb. 55: 366 (1919). Type: South West Africa, Quartel, Rehoboth, *Dinter* 2163 (SAM).

Suffrutex, 20–40 cm tall, usually a rounded bush, with wiry stems and branches, young branchlets sparsely stellate-pubescent with short hairs, glabrescent, usually metallic coloured and flexuose, armed with persistent indurated spine-like peduncles. *Stipules* 1–2,5 mm long, rather thick and sometimes hooked, stellate-pubescent and with gland-tipped hairs, usually a few pointed hairs at apex, persistent. *Leaves* petiolate; blade oblong-cuneate to narrowly so, coarsely toothed in upper half or at broad apex only, or elliptic and entire (both shapes often on the same plant), 4–20 mm long, 2,5–7 mm broad, minutely papillate and stellate-pubescent on both surfaces, usually sparsely so, hairs short from a central scale, radiating and appressed to surface of the leaf; petiole 2–5 mm long, sparsely stellate-pubescent and with a few additional glandular hairs or papillae. *Inflorescence* of 1-flowered, axillary cymes; peduncles at first short, about 2–4 mm long, persistent, glabrescent, becoming indurated and elongating to about 8 mm, rarely longer, more or less patently spreading, appearing spiny but apex blunt; pedicels about 2–5 mm long, nodding, stellate-pubescent, deciduous. *Calyx* from about 5 mm to 7 mm long, lobed to just beyond middle, minutely glandular and laxly stellate-pubescent outside, lobes sparsely appressed hairy on inner face. *Petals* "wine-red", "purple-mauve", "rose-red", "rose-pink",

"brick-red", oblong-cuneate, 7–10 mm long, margin inrolled on claw only, apparently glabrous on inner face (or reddish papillae in a patch). *Stamens* with narrowly obovate, hyaline filaments, joined at base, free portion 2–3,5 mm long, pubescent on shoulders which are only slightly wider than the overlapping anther bases; anthers 4–5 mm long, ciliate. *Ovary* stipitate, 2,5–3,5 mm long, crowned by 10 erect, 1,5 mm long horns, glandular but with setae along sutures and on horns; styles filiform, erect, cohering. *Capsule* up to 1 cm long, papillose between sutures, stellate with long hairs or setose on sutures; horns ultimately divergent and recurved, up to 8 mm long, pilose; seeds about 7 developed in each cell. Figs 2.2 & 2.6.

Found in karroid veld and on stony koppies in the western Cape from Prince Albert northwards to Gordonia and from Warmbad northwards to Rehoboth in South West Africa.

CAPE.—Beaufort West: Wagonwheel Motel, *Mauve* 4458; east of Beaufort West, *Adamson* D. 166; S.E. of Fraserburg, *Hutchinson* 967. Calvinia: Loeriesfontein, *Lock* 3966. Carnarvon: *Acocks* 1744. Ceres: Gembokfontein, *Hanekom* 2165. Gordonia: N. of Upington, *Pole Evans* 2137; S.E. of Augrabies, *Leistner & Joyn* 2854. Hay: Asbestos Mountains, *Marloth* 2057. Hopetown: Strydenburg, *Acocks* 1700. Kenhardt: Kenhardt, *Leistner* 2331; N.E. of Pofadder, *Van der Schijff* 5710. Prince Albert: Prince Albert, *H. Bolus* 11449; *Marloth* 4412; Gamka River, *Zeyher* 124 (S). Victoria West: Melton Wold Estate, *Smith* 2439. Williston: Williston, *Comins* 684.

O.F.S.—Cult. Fauresmith, originally from Britstown, *Verdoorn* 1110; *Henrici* 2666.

S.W.A.—Bethanien: Helmeringhausen, *Giess* 8805. Gibeon: Gamkanas, *Dinter* 1991 (SAM). Keetmanshoop: W. of Aroab, *De Winter* 3387; E. of Koës, *Leistner* 1798. Maltahöhe: Nassab, *Giess, Volk & Bleissner* 5194. Rehoboth: Quartel. *Dinter* 2163 (SAM). Warmbad: Udabis, *Giess, Volk & Bleissner* 708a; Ariamsvlei, *Schweickerdt* 12581.

Distinguished by its habit: a rounded bush habit with many wiry branchlets and straight, persistent, spine-like peduncles.

When Harvey described *H. spinosa*, he stated that he was not sure that *M. spinosa* Burch. was the same species, therefore his name is not a new combination but a new name.

29. *Hermannia linifolia* *Burm. f.*, Prodr. Fl. Cap. 18 (1768); L., Mant. Alt. 256 (1771); DC., Prodr. 1: 495 (1824), as *H. linifolia* L. Type: Cape of Good Hope, specimen in herb. *Burm. f.* (G, holo.; PRE, photo.! Neg. 5185).

Mahernia scoparia *Eckl. & Zeyh.*, Enum. 51, No. 404. (1834). Type: Cape, "Riedvalley", *Ecklon & Zeyher* Enum. No. 404 (K; PRE, photo.!; TCD; PRE; BOL!)—var. *glabra* *Eckl. & Zeyh. l.c.* Type: Cape, Zwartland near Piketberg, *Ecklon & Zeyher* s.n. (K; PRE, photo.!; TCD);

Hermannia scoparia (*Eckl. & Zeyh.*) *Harv.*, F.C. 1: 194 (1860); *Adamson* in *Adamson & Salter*, Fl. Cap. Penins. 585 (1950).

Suffrutex, stems several from the taproot, slender, decumbent, with ascending, secund branches, stem and branches terminating in an inflorescence, bright green, striate in dried specimens, glabrous or very sparsely stellate-hairy with rays few, long and pointed; internodes 8–40 mm long, sometimes longer. *Stipules* leaf-like, about half as long as leaves, 4–12 mm long, linear, usually broad at base, often sparsely ciliate like the leaves, with distinct, pointed hairs. *Leaves* subsessile, appearing linear but, tapering into a petiole-like base, often acicular, 13–30 mm long, apex acute or broad and lobed, margins often sparsely ciliate with long, pointed, bulbous-based hairs. *Inflorescence* of 1-flowered cymes arranged in terminal racemose cymes. *Calyx* about 6 mm long, lobed to about mid-way, sparsely stellate-hairy especially on margins and veins, rays long and pointed, few or solitary from a

bulbous base, glabrescent; lobes deltoid with acute to acuminate apex. *Petals* yellow or "orange-yellow", glabrous, about 9 mm long, upper third or half oblong-orbicular, narrowed below into a claw with infolded margins. *Stamens* about 6 mm long; filaments hyaline, oblong, somewhat cuneate, with hairs on shoulders, united around short stipe; anthers about 3,5 mm long, overlapping the filament for 1 mm, ciliate, cells acute. *Ovary* 2,5 mm long, 5-lobed, narrowing towards base, stellate-hairy in upper half, especially along sutures; stipe 1 mm long; styles 5 mm long, cohering, hairy in basal third. *Capsule* more or less globose, bluntly 5-umbonate at apex and with a 1,5 mm long stipe.

Recorded from the Peninsula and northwards from the Malmesbury and Piketberg Districts in the Cape. Found in coastal Fynbos on sandy flats and dunes.

CAPE.—Bellville: Tigerberg, *Pillans* 8619 (BOL). Malmesbury: near Saldanha Bay, *Drège* s.n.; Zwartland, *Ecklon & Zeyher* Enum. No. 404b. Peninsula: Peninsula, *Pappe* s.n. in Herb. Austr. Afr. 14406 (SAM); Rapenberg, *Pillans* 3950; Rietvlei near Milnerston, *Adamson* 2657 (BOL); "Rietvlei", *Ecklon & Zeyher* s.n.; "Riedvalley", *Ecklon & Zeyher* Enum. No. 404. Piketberg: west of Aurora, *Acocks* 19806.

When investigating *H. linifolia* in the sense of Harvey in *Flora Capensis* (1: 195, 1860), it was found that the description and specimens cited did not agree with the type of the species but rather with a variety of *H. filifolia*. *Burman's* type of the species agreed instead with that of *H. scoparia* (*Eckl. & Zeyh.*) *Harv.* based on *Mahernia scoparia* *Eckl. & Zeyh.* Further study of the species shows that *M. scoparia* var. *glabra* *Eckl. & Zeyher* is merely a glabrescent form of the species and is hardly worthy of any taxonomic rank.

H. linifolia *Burm. f.* is characterized by the very sparse, few-rayed, stellate hairs on the branches and the long-pointed hairs on the margins of the leaves and the calyx, which arise singly or in tufts from a bulbous base. It is a bright green, low, slender-stemmed, procumbent plant with more or less linear leaves and leaf-like stipules which are almost as long as the leaves.

30. *Hermannia decumbens* *Willd. ex Spreng.*, Neue Entdeck. 1: 299 (1880); *Link*, Enum. 2: 181 (1822); *Reichb. Ic. Descr. Pl. Cult.*, t. 52, fig. 1 (1822); DC., Prodr., 1: 494 (1824); *Eckl. & Zeyh.*, Enum. 41: No. 328 (1834); *Harv.* in F.C. 1: 185 (1860); *Adamson* in *Adamson & Salter*, Fl. Cape Penins. 583 (1950). Type: Cult. Hort. Berlin, *Willdenow* 12327 (B, holo., PRE, photo.!; C);

H. pratensis *Eckl. & Zeyh.*, Enum. 41, No. 327 (1834). Type: Cape, Caledon, near mouth of "Klynrivier", *Ecklon & Zeyher* Enum. No. 327 (S; PRE, photo.!; SAM!; PRE!);

H. disermifolia *sensu* *Eckl. & Zeyh.*, Enum. 41, No. 325 (1834), based on specimen from between "Breederivier and Duivenshoeksrivier" (S; PRE, photo.!), non *Jacq.*

H. collina *Eckl. & Zeyh.*, Enum. 41, No. 326. Type: Cape, near "Langehoogde and Pot and Klynrivier", *Ecklon & Zeyher* Enum. No. 326 (S; PRE, photo.!);

H. argyrata *Presl*, Bot. Bemerk. 20 (1844). Type: Cape, between Cape Agulhas and Potberg, *Drège* 7303 (K; PRE, photo.!; PRE!; W!);

H. decumbens var. *hispida* *Harv.* in F.C. 1: 185 (1860). Type as for *H. decumbens* *Willd.*—var. *argyrata* (*Presl*) *Harv.*, l.c. Type not indicated.—var. *collina* (*Eckl. & Zeyh.*) *Harv.* l.c. (1860). Type not indicated.

Suffrutex, decumbent; branches up to about 30 cm long, trailing, with inflorescence ascending, with small, scattered, stellate scales, hairs in parts long and matted, sometimes scales stalked. *Stipules* narrowly lanceolate-elliptic to broadly ovate, narrowed or subcordate at base, acuminate and acute to subacute at apex, stellate-pubescent with short or

long, matted, often grey hairs, glabrescent at least on surfaces, several-veined from base. *Leaves* petiolate, variable, blade from narrowly lanceolate-elliptic to ovate-oblong or very broadly ovate-oblong, 9–50 mm long, 5–25 mm broad, evenly or unevenly crenate on margin, sometimes entire, stellate-pubescent with short, or long and matted hairs, often glabrescent at least on surfaces; petiole 4–15 mm long, stellate-pubescent with hairs short or long and matted, sometimes glabrescent in parts. *Inflorescence* terminal in pseudocymose racemes or panicles on ultimate branchlets, flowers clustered in a few, short cymes at intervals along the ascending branchlets, especially towards the ends; bracts variable, mostly stipule-like, from narrowly oblong-elliptic to broadly ovate with subcordate base, up to 9×6 mm long, sometimes the broad bracts 1–2-lobed at apex, usually glabrescent on surfaces; bracteoles usually 3, smaller than bracts, linear to lanceolate-elliptic, often about 3,5×1 mm, rarely up to 10×3 mm and the linear ones 8×1 mm; peduncles usually short, about 5 mm long, rarely longer; pedicels 1,5–5 mm long. *Calyx* campanulate, subinflated, 6–8 mm long, lobed to almost halfway, the stellate or grouped hairs usually long and matted. *Petals* strongly twisted, yellow to orange, oblong-orbicular in upper half, abruptly narrowed into a claw with broad infolded margins, stellate-pubescent on edges of claw and on inrolled margins. *Stamens* about 6–8 mm long; filaments hyaline, obovate-oblong, minutely stellate-pubescent on shoulders. *Ovary* about 3,5 mm long, 5-angled or winged, stellate-pubescent especially on the angles; stipe 0,5 mm long. *Capsule* enclosed in persistent calyx and petals, 5-angled, stellate-pubescent.

Found principally in Coastal Fynbos, in dune bush, on undulating hills and in river plains, in sand or on shaly ground. Recorded from the Cape, from the Peninsula and northwards to Mamre Road and from the Caledon District eastwards along the coast to Knysna, with a few records in valleys farther inland.

CAPE.—Bredasdorp: Between Cape Agulhas and Potberg, Drège 7303; near Wydgeleë, between Malgas and Bredasdorp, Ellis & Schlieben 12398. Caledon: near the mouth of the Klein River, Ecklon & Zeyher Enum. No. 327; 9 km W. of Rietpoel, Acocks 22579. George: Groene Valley, Burchell 3679 (LE). Knysna: Lake Pleasant Hotel, Acocks 21527. Malmesbury: Mamre Road, Compton 18147 (NBS; BOL). Montagu: Kloof at Montagu Baths, Page 27. Mossel Bay: Mossel Bay, Marloth 7540; 17 km N. of Mossel Bay, Acocks 15392. Peninsula: Cape Flats, H. Bolus 2999 (BOL); Salter 7469 (BOL). Riversdale: The Fisheries, Acocks 21344; 14 km S. of Albertinia, De Winter & Verdoorn 9099; Gouritz River, Schlechter 4395.

This species is characterized by the consistently decumbent habit, the practically leafless, ascending inflorescence with clustered flowers, and the hairs on the calyx and parts of the inflorescence which are longer and more obvious than on most other parts of the plant. It is nearest to *H. althaeifolia*, having the same semi-inflated calyx and large stipules, but it can be distinguished by the more or less leafless inflorescence with long, spreading, matted pubescence on the calyx and the usually glabrescent stipules. The areas of distribution are adjacent but do not overlap. *H. althaeifolia* is recorded from the Peninsula and northwards to beyond Calvinia and eastwards to Uniondale and northern Mossel Bay; it is generally found just to the north of the Coastal Fynbos in which *H. decumbens* occurs.

Ecklon & Zeyher 324 (S!; SAM!), the type of *H. diversifolia* Eckl. & Zeyh. (see note under *H. althaeifolia*) seems to be a form or hybrid of this species.

It is cited in F.C. as a synonym of *H. althaeifolia*.

31. *Hermannia prismatocarpa* E. Mey. ex Harv. in F.C. 1: 186 (1860); E. Mey. in Drège, Zwei Pfl. Doc. 103 & 192, nomen (1843); Adamson & Salter, Fl. Cape Penins. 584 (1950); Verdoorn in Flower. Pl. Afr. 41, t. 1628 (1971). Type: Cape, Riebeckskasteel, Drège s.n. (S, lecto., photo!; TCD; LE!).

H. hirsuta sensu Eckl. & Zeyh., Enum. 43, No. 339 (1834), (in S!) non Schrad.

H. rugosa Adamson in J. S. Afr. Bot. 10: 123 (1944), partly, as to Bolus 12619 (BOL!; PRE!); Pillans 4761 (BOL!; PRE!); Gillett 4162 (BOL!; PRE!).

Suffrutex, branching from base, branches long, decumbent, terminating in leafless, ascending inflorescence, up to 60 cm long, laxly to densely pubescent with minute fringed scales or papillae, interspersed with long, bulbous-based hairs, rarely gland-tipped hairs present; lateral branchlets secund, sub-erect and terminating in an inflorescence. *Stipules* narrowly to broadly ovate, acute to abruptly acuminate, base usually broad, oblique, rounded or cordate, semi-amplexicaul and sometimes decurrent, 3–10 mm long and about as broad at base, finely stellate-pubescent above and below, sometimes also hirsute with long, pointed hairs. *Leaves* petiolate; blade more or less oblong to ovate-oblong, usually broadest below the middle, slightly cuneate at base, 10–70 mm long, 7–34 mm broad, upper surface finely pubescent with stellate hairs and fringed scales, glabrescent, lower surface thinly and finely white-tomentose (sometimes not obviously white) between nerves, and stellate-pubescent on raised nerves; crenate-dentate and plicate at least when young; petiole 5–20 mm long, densely pubescent either with fringed scales or tufted, pointed hairs, or both. *Inflorescence* of erect, leafless, racemose or paniculate cymes which terminate main branch and branchlets; peduncles and pedicels pubescent as on branchlets; bracts more or less like the stipules, when in groups of 3 the central one elliptic, in upper parts of inflorescence united and lobed, often 3-lobed. *Calyx* shallowly campanulate, finely stellate-pubescent to tomentose without, about 4,5 mm long, 5-lobed almost to middle, sinuses wide, lobes acute. *Petals* twisted, “rich yellow”, about 9 mm long, more or less oblong, narrowed at middle and eared, margins half infolded in lower and narrowing to a claw, glabrous or minutely hairy on margin and inner face. *Stamens* with hyaline, obovate-oblong filaments, glabrous or with minute hairs on shoulders; anthers ciliate, overlapping filaments at base. *Ovary* 5-angled and almost flat between the angles, stellate-tomentose with rather short hairs. *Capsule* about 10–16 mm long, with calyx and stamens persisting at base, sharply 5-angled, pubescent with short hairs in tubercle-based tufts, especially on keels of carpels, umbos or horns up to 2 mm long. Figs 2.3 & 2.4.

On hills in the Cape Peninsula and from Tulbagh northwards through Malmesbury to Clanwilliam.

CAPE.—Bellville: near Philadelphia, Mauve & I. Oliver 126. Clanwilliam: near Knechtsvlakte, Leipoldt 3671. Malmesbury: Porterville, Schlechter 4501; hills near Saldanha Bay, Hutchinson 276; Kalabaskraal, Hutchinson 195; Moorresberg (sic.), Bolus 9950. Peninsula: 50 km north of Cape Town, Gillett 4162; Tigerberg, Pillans 4761. Piketberg: Britannia Bay, De Winter & Verdoorn 9071; Schlieben 12433. Tulbagh: Saron, Schlechter 4863; Wellington, Hafström & Acocks 937; Thompson 16.

Characterized by the decumbent habit and the terminal, ascending, leafless, paniculate cymes, the pubescence of minute fringed scales mixed with long, pointed hairs in tubercle-based tufts, the glabrous petals and the long, sharply 5-lobed capsules which are pubescent with short hairs in tubercle-based tufts.

Putative hybrids have been observed between this species and *H. multiflora* and *H. alnifolia*.

What appears to be a form or hybrid of this species was collected south of Vanrhynsdorp near the bridge over Doring River on the way to Clanwilliam (*De Winter & Verdoorn* 9034 & 9035). The plants were somewhat smaller in all parts and the branches, although spreading, were not trailing on the ground. In all other respects they agreed with *H. prismatocarpa*. This needs further investigation.

32. *Hermannia scordifolia* Jacq., Hort. Schoenbr. 1: 64, t. 120 (1797); Reichb., Ic. Descr. Pl. Cult., t. 58, fig. 1 (1923); DC., Prodr. 1: 494 (1824); Harv. in F.C. 1: 187 (1860), partly, excl. syn. Iconotype: Jacq. Hort. Schoenbr. 1, t. 120 (no specimen of actual plant figured can be traced).

H. scordifolia Jacq. var. *integriuscula* Harv. l.c. (1860). Syntypes: Cape, Brandenburg, Zeyher 117 (PRE!; Z!; LE!; W); Cape, Ebenezer, Olifants River, Drège 7289 (7298 sphalm. in F.C.) (W!; S!).

Suffrutex, stems many, somewhat flexible, decumbent, up to 1,5 m long, bright green to glaucous, striate, appearing smooth but often pubescent with stellate or tufted hairs, the hairs short or long, few in a tuft and bulbous-based, branched especially in upper parts; branchlets subherbaceous, secund, ascending, sometimes sparsely stellate-pubescent, glabrescent or with minute gland-tipped hairs, towards the apex. *Stipules* linear to filiform from a broad base, small, about 4 mm long, early caducous. *Leaves* sparse, petiolate; blade discolorous, more or less oblong, from narrowly to broadly so, sometimes ovate-oblong and rarely slightly obovate-oblong, 12–50 mm long, 3–28 mm broad, upper surface subdensely to sparsely and minutely stellate-pubescent, glabrescent, nerves impressed, lower surface whitish stellate-tomentose, sometimes thinly so, nerves prominent, margins shallowly to deeply crenate, sometimes lobate-crenate; petiole 3–20 mm long, stellate-pubescent, densely so in contrast to the subglabrous branches. *Inflorescence* ascending, terminal on branches and branchlets, forming lax paniculate or racemous cymes; peduncles 10–60 mm long; bracts united, about 4 mm long, bracteoles filiform or narrowly lanceolate, 1,5–5 mm long, all caducous; pedicels 3–6 mm long, glabrous, stellate-pubescent or with some tufted hairs, sometimes gland-tipped hairs are present. *Calyx* 6–8 mm long, lobed to about midway, finely stellate-pubescent, the rays long or short and with black, gland-tipped hairs intermixed, lobes triangular, sinuses fairly wide. *Petals* yellow, fading orange, 8–10 mm long, upper portion suborbicular, narrowed just above middle into a claw with inrolled margins which are obscurely ciliate. *Stamens* about 7 mm long; filaments hyaline, oblong-cuneate, 4,5 mm long; anthers ciliate, 3,5 mm long, overlapping filaments and base. *Ovary* 2,5 mm long, stellate-pubescent, especially densely at apex where hairs are longer; stipe 1 mm long; styles 4,5 mm long, minutely and sparsely hairy in lower portion. *Capsule* subglobose, exerted from persistent calyx, 5-lobed, shortly 5-umboned, finely stellate-pubescent, more coarsely so on keel of lobes, up to 7 mm long.

Found on coastal dunes, in sandy soil in open veld and on stony outcrops. Recorded from the Cape, from the Malmesbury District through Clanwilliam and Vanrhynsdorp to Calvinia.

CAPE.—Calvinia: Calvinia, *Henrici* 3306; Clanwilliam: Clanwilliam, *Leipoldt* 390; 24 km W. of Clanwilliam, *De Winter & Verdoorn* 9045; Lambert's Bay, *Van Breda* 330; Langevalei, *Zeyher* 117. Malmesbury: Britannia Bay, *Taylor* 5188; 3 km N.E. of Vredendal, *Hall* 3686; 1,5 km N. of Vredendal, *Thompson* 1007. Vanrhynsdorp: 17 km S. of Vanrhynsdorp, *De Winter & Verdoorn* 9031; Sandkraal, *Acocks* 14801.

H. scordifolia is characterized by the long, smooth-looking, bright green, decumbent branches with terminal, ascending, leafless inflorescences and lateral branches which are ascending and also terminate in an inflorescence. The leaves, on fairly long petioles, vary considerably in shape but are all somewhat discolorous.

H. fistulosa Eckl. & Zeyh., based on *Ecklon & Zeyher* Enum. No. 330 (S; PRE, photo!), appears to be a luxuriant form of *H. scordifolia* and is not here upheld as a separate species. *Bachmann* 2121 (Z!) seems to be intermediate between *Ecklon & Zeyher* Enum. No. 330 and *H. scordifolia*.

33. *Hermannia ternifolia* Presl ex Harv. in F.C. 1: 197 (1860); *H. ternifolia* Presl, Bot. Bemerk. 22 (1844), nomen. Type: Cape, between "Groenkloof and Saldana Bay", *Drège* s.n. (S!; PRE, photo!).

Suffrutex, erect to sprawling, branches slender with small but prominent leaf-bases, densely covered with fringed scales, in parts finely tomentose as well. *Stipules* leafy, narrowly oblong-cuneate, oblanceolate or spatulate, from about 7–12 mm long, 1–2,5 mm broad near apex, on both sides with stellate scales forming a tomentum. *Leaves* shortly petiolate; blade obovate, tapering at base into short petiole, subtruncate or rounded and crenate at apex, from about 7 to 14 mm long and 6–10 mm broad near the apex, stellate-tomentose as on stipules; petiole 1–7 mm long. *Inflorescence* of a few, usually 1-flowered cymes, terminal and in axils of upper leaves, "orange-yellow", "red to orange" or "marmalade-coloured"; peduncles short and stout or up to 5 mm long. *Calyx* about 7 mm long, inflated, oblong to subglobose, somewhat 5-angled, squamulose with minute fringed scales, lobed to about one-third of its length; lobes broadly ovate, mucronulate; sinuses narrow. *Petals* about 13 mm long, strongly convolute, apical portion spreading to recurved; limb oblong-obovate, about 6 mm long, narrowing abruptly into a claw about 7 mm long, scaly-stellate on sides above and with infolded margins for most of length below. *Stamens* with oblong hyaline filaments about 5 mm long; anthers 3 mm long, minutely ciliate. *Ovary* with a very short, 0,5 mm long) stipe, 3,5 mm long, somewhat 5-angled, tomentose with short stellate hairs except at apex where hairs are slightly longer; styles cohering, 5 mm long.

Found in coastal scrub, in sand or on limestone, up to a few miles inland. Recorded from Saldanha Bay and the Peninsula eastwards along the coast to Bredasdorp in the Cape Province.

CAPE.—Bredasdorp: Bredasdorp, *Taylor* 4037; Strand Kloof, *Compton* 14752; Buffelsjacht, *Van Breda* 845. Caledon: Hawston, *Marloth* 9194; Rooi Els, *Leighton* 1456, 2106; Gansbaai, *Gillett* 4268. Malmesbury: between Groenekloof and Saldanha Bay, *Drège* s.n. (PRE, photo!). Peninsula: Pringle Bay, *Boucher* 618; Simonstown Nature Reserve, *Taylor* 5953; Swartklip, *Leighton* 1770.

Characterized by the petioled leaves, the inflated calyx with broadly rounded, shortly acute lobes which are often incurved, and the pubescence of minute fringed scales.

Adamson in Adamson & Salter Fl. Cape Penins., p. 586, mentions that this species cannot be separated from *H. trifoliata* L. With the adequate material now available, these species can be readily distinguished.

34. *Hermannia trifoliata* L., Sp. Pl. 674 (1753); Mant. Alt. 431 (1771); Cav., Diss. t. 182, fig. 1 (1788); DC., Prodr. 1: 494 (1824); Harv. in F.C. 1: 198 (1860); Adamson in Adamson & Salter, Fl. Cape

Penins. 586 (1950). Type: Cape, Cult. Herb. Hort. Cliff. (BM, holo.; PRE, photo.!).

H. imbricata Eckl. & Zeyh., Enum. No. 381 (1834). Type: Cape, Paardekop near Plettenberg Bay, Ecklon & Zeyher Enum. No. 381 (S!; PRE, photo.!.; TCD; PRE!).

Suffrutex, usually under 30 cm tall, often sprawling, stems and branches stellate-tomentose, ridged or quadrate, leafy in upper portion right to apex, stipules and leaves imbricate. *Stipules* oblong, shortly cuneate, stellate-tomentose with fringed crater-like scales, often 2-veined, 5–8 mm long, 2–3 mm broad in upper half. *Leaves* thickly tomentose with fringed crater-like scales, sessile or subsessile, obovate-cuneate, slightly longer than the subtending stipules, 7–10 mm long, 4–5 mm broad at apex, usually folded, apex broadly rounded to truncate, sometimes crenate. *Inflorescence* of cymes in terminal heads, usually nodding and surrounded by stipules and leaves; pedicels 0–2 mm long, with reddish brown fringed scales. *Calyx* about 7 mm long, lobed in upper third, becoming somewhat inflated, covered with small crater-like fringed scales, hairs very short, lobes erect or inflexed, rather broad, mucronate, sinuses fairly narrow. *Petals* "red", "orange" or "claret-red", twisted, with upper portion of the blade spreading to reflexed, about 10 mm long, suborbicular in upper third, narrowed in middle forming a long waist, lower third clawed with infolded margins, ciliate in middle. *Stamens* about 4,5 mm long, united at base, filaments very thinly hyaline, oblong, slightly narrowing towards base, nerves brown; anthers usually less than 2 mm long, ciliate, overlapping filaments at base. *Ovary* pubescent, 5-lobed, lobes rounded at apex; styles cohering, stigmas terminal. *Capsule* enclosed in the somewhat enlarged calyx, about 5 mm long, 5-angled and 5-umbonate.

Found in Fynbos and Dune Bush and sometimes on limestone ridges or chalk hills near the sea. Recorded along the coast from Bredasdorp to Riversdale.

CAPE.—Bredasdorp: Cape "Between Aghullas & Potberg"; *Drège* s.n.*; Sandhoogte, *Smith* 2997; Bredasdorp, *Sidey* 1807, *Acocks* 15459; Bredasdorp Poort, *Compton* 14727; Riversdale: Vermaaklikheid, *Acocks* 22530; Stille Bay, *Muir* 1969; Milkwoodfontein, *Galpin* 3782; Albertinia, *Muir* 1777.

This species is characterized by the imbricating leaves and stipules which are concentrated in the upper portion of the branches and by the terminal flower heads which are usually nodding and surrounded at the base by the upper leaves and stipules. The calyx becomes rather membranous and subinflated with age.

Cavanille's figure of *H. trifoliata* is on t. 182, fig. 1, not fig. 2, as cited in *Flora Capensis* and in *De Candolle's Prodromus*.

A specimen of Ecklon & Zeyher Enum. No. 381, the type number of *H. imbricata* in PRE has long, exposed pedicels whereas on photos of the same number in S and TCD the pedicels are hidden by the leaves.

35. *Hermannia concinnifolia* Verdoorn in Flower. Pl. Afr. 43, t. 1691 (1974). Type: Cape, Bredasdorp district, De Mond Forestry Reserve, *Taylor* 8248 (PRE, holo.!).

Suffrutex, 15–90 cm tall, branching from base; branches ascending, leaves and stipules usually neatly arranged in ranks (imbricate), pubescence not conspicuous, consisting of minute fringed scales or stellate hairs, grouped hairs from a tubercled base also

sometimes present. *Stipules* green, subcoriaceous, 7–10 mm long, about 3 mm broad, more or less oblong or oblong-elliptic, sometimes slightly oblique and slightly narrowed towards base, mucronate or bimucronate. *Leaves* subsessile, lettuce-green, subcoriaceous, broadest at apex narrowing into a petiole-like base, plicate, apex rounded and emarginate with a recurved mucro or more or less truncate with 2 or more lobes, rough with minute, fringed scales and often minute, stellate hairs on margin, margin sometimes with a narrow red-brown rim. *Inflorescence* of 1–2-flowered cymes at apex of leafy branchlets and in axils of upper leaves; peduncle suberect, 5–12 mm long, with stipule-like bracts at base; pedicels cernuous, 2–3 mm long, with 3 narrow, 4–5 mm long bracteoles at base. *Calyx* often suffused or mottled with red, campanulate, rough with minute stellate scales and on margins with a few short hairs from a tubercled base, 6–9 mm long, somewhat 5–10-angled, 5-lobed; lobes about 4 mm long, broadly oblong, shortly acuminate and mucronate, sinuses narrow. *Petals* lemon-yellow, strongly twisted, shortly exerted from calyx, about 10 mm long, blade broadly oblong, contracted below middle into a claw with infolded margins and minute stellate hairs on edges of claw. *Stamens* about 5 mm long; filaments hyaline, oblong; anthers 2,5 mm long, ciliate. *Ovary* 3–4 mm long, 2,5–3,5 mm broad, 5-lobed, stellate-tomentose; stipe 0,5 mm long; styles 4 mm long. *Capsule* enclosed by persistent calyx and petals, about 6 mm long, 5 mm diam., 5-angled, thinly stellate-tomentose between angles, more coarsely so on angles.

Found in Coastal Fynbos on limestone formations. Recorded from the Bredasdorp, Swellendam and Riversdale Districts in the Cape Province.

CAPE.—Bredasdorp: near Wydgelegen, *Acocks* 23171; *Schlieben & Ellis* 12399; De Hoop Provincial Farm, *Lewis* 6031 (NBG); Windhoek Plato, *C. V. van der Merwe* 1006; near Arniston, *Marsh* 920; De Mond Forestry Reserve, *Taylor* 8248 (type). Riversdale: S. of Vermaaklikheid Post Office, *Acocks* 24124; Hanglip, *Muir* 1961. Swellendam: Cape Infanta, *Walgate* 879.

This recently described species is characterized by the leafy branches with regularly arranged, rather stiff leaves. The stipules are leaf-like and usually more than half as long as the leaves. They can be distinguished from the leaves by their shape which is more or less oblong and not clearly narrowed towards the base. The leaves and stipules, which appear to be glabrous, are minutely stellate-pubescent.

H. concinnifolia has, to date, been found only in Coastal Fynbos on limestone formations in the Bredasdorp district and eastwards to Riversdale. It can be distinguished from the nearly related species *H. rudis* and *H. flammea* principally by the more densely leafy branches with regularly arranged leaves. Compared with *H. rudis* it is also less roughly pubescent and from *H. flammea* it can be distinguished by the flowers being more compactly disposed, not in elongated racemose cymes. In the case of *H. flammea* the petals are usually dark red, at least on the outside, and on herbarium specimens they dry darker than the calyx. This is not usually so in *H. concinnifolia* which has been described as having yellow petals. Colour, however, often varies in most species of *Hermannia* and cannot be relied on as a diagnostic feature.

36. *Hermannia muirii* Pillans in Verdoorn in Bothalia 10: 571 (1972). Type: Cape, Riversdale District, Droogeveldvlakte, *Muir* 1882 (BOL, holo.!.; PRE!).

* In Zwei pflanzengeographische Documente, p. 122, this *Drège* specimen is numbered 7275, but a specimen in W bearing this number and no name is *H. concinnifolia*. Gatherings in LE and PRE with the same number are *H. trifoliata*.

Shrublet, low, branched from base; branches sparsely hispid with long, fairly soft hairs, 2 or more grouped on a bulbous base, old wood glabrescent but rough with minute hair-bases. *Stipules* foliaceous, more than half the length of subtending leaf, oblong, narrowly oblong or ovate-lanceolate, usually broad-based, 5–10 mm long, hispid especially on margins. *Leaves* sessile to subsessile, neatly imbricately arranged, more or less oblong, usually narrowing slightly towards base, 6–10 mm long, entire or occasionally few-lobed at apex, hispid as on stipules. *Inflorescence* of 1–2-flowered cymes in axils of crowded upper leaves, appearing to grow in clusters at apices of branches and branchlets; peduncles short, about 1–2 mm long; bracteoles 3, linear, about 4 mm long; pedicels about 4 mm long, hispid as in other parts. *Calyx* about 6 mm long, lobed to just below middle, laxly pubescent with long hairs grouped on a bulbous base, tube cyathiform, lobes deltoid-acute. *Petals* white becoming pale pink, 7–8 mm long, upper portion oblong-obovate, narrowing just below middle into a claw with infolded margins, glabrous. *Stamens* about 4 mm long; filaments oblong-cuneate, hyaline; anthers 2,5 mm long, overlapping hyaline filaments for 0,75 mm. *Ovary* stellate-tomentose, about 4 mm long, 5-lobed, lobes rounded at apex; stipe 1 mm long; styles 4 mm long. *Capsule* more or less enveloped by the calyx and petals, about 4 mm long, subrotund, 5-lobed, stellate-pubescent with short hairs between sutures and longer hairs on sutures.

Found in Coastal Fynbos in sandy valleys between limestone ridges south of Albertinia; locally common. Recorded only from the Riversdale and Uniondale Districts.

CAPE.—Riversdale: Droogeveldvlakte, Muir 1882; Ystervarkfontein, Bayliss 3774; Buffelsfonteinlaagte, Acocks 22890; about 15 km S. of Albertinia, Acocks 24170.

Characterized by the wiry, dark brown branches, the light green, neatly arranged, suberect, usually entire and hispid leaves and stipules, the stipules which are leaf-like and almost as long as the leaves, the white flowers which turn pale pink; the calyx divided to or beyond the middle, drying with brownish borders and having a cyathiform tube.

37. *Hermannia floribunda* Harv. in F.C. 1: 201 (1860); Burt Davy, Fl. Transv. 1: 267 (1926); Wild in F.Z. 1: 542 (1960). Type: Transvaal, Vaal River, Jan. 1842, Burke & Zeyher s.n. (K; PRE!).

H. melissifolia Engl. in Bot. Jb. 55: 357. Type: Lesotho, Leribe, Dieterlen 555 (B, holo.†; PRE!; Z!).

Suffrutex, 60–120 cm tall, branched at base, branches long, erect or sprawling, subdensely stellate-pubescent, hairs fairly long from a minute bulbous base, often shortly stalked, older glabrescent parts rough with minute persistent stalks. *Stipules* from ovate to ovate-acuminate, ovate-lanceolate or subulate, 3–7 mm long, 1–4,5 mm broad near base, soon withering and falling on old wood, stellate-pubescent. *Leaves* petiolate; blade ovate, ovate-cordate or ovate-oblong, occasionally broader than long, about 2–6 cm long, 1–7 cm wide near base, usually 5-nerved from base, nerves prominent beneath, stellate-pubescent on both surfaces, hairs fine and appressed, from a central scale, some shortly stalked and caducous, lower surface slightly lighter than upper, margins unevenly crenate; petiole 1–3 cm long, stellate-pubescent. *Inflorescence* of 1– to several-, mostly 3-flowered, cymes simple or crowded in axils of leaves and at apices of main branches and short

lateral branchlets; flowers many, small, under 6 mm long on dried specimens; peduncles about 1–3 mm long, stellate-pubescent; pedicels 2–5 mm long; bracts more or less subulate or lanceolate, 1–3 mm long. *Calyx* broadly campanulate, becoming thin and subinflated, 5,5 mm long, stellate-pubescent with hairs fine and some spreading, lobed to about one third from top, lobes mucronate. *Petals* about 6,5 mm long, narrowly oblong-obovate, with infolded lobes just below middle and narrow infolded margins on claw. *Stamens* about 5 mm long, with narrow, more or less linear, hyaline filaments overlapped by anther bases. *Ovary* about 2,5 mm long, densely stellate-tomentose, 5-lobed; stipe under 1 mm long; styles about 3 mm long. *Capsule* about 6 mm long and broad, exerted from persistent, subinflated calyx, 5-lobed, lobes acute to mucronate, punctate and stellate-pubescent, hairs from a microscopic scale or base, becoming short and wearing off with age.

Found on stony hill slopes, in shade or open grassveld, also on rocky ledges. Recorded from Leribe in Lesotho, the Potchefstroom District in the Transvaal and northwards to the Soutpansberg District. Also occurs in Botswana and Rhodesia.

TRANSVAAL.—Heidelberg: Suikerbosrand, Bredenkamp 442. Johannesburg: Ormonde, Gerstner 6533. Krugersdorp: Witpoortjie, Murray 664. Letaba: Sarahsdrift, Scheepers 943. Lydenburg: Magnet Heights, Barnard & Mogg 858; Erasmus Pass, Codd 10499. Pietersburg: Dyer 3164; Blouberg, Strey & Schlieben 8614. Potchefstroom: Vaal River, Burke & Zeyher s.n.; Rhenosterfontein, Cohen 301. Potgietersrus: Pyramid Estate, Galpin 8925. Pretoria: Leeuwhoek, Strey & Leistner 8274; Crocodile and Magalies Rivers, Burt Davy 198. Soutpansberg: Louis Trichardt, Rogers 21149 (Z); Gerstner 5785; Tshakoma, Obermeyer 991. Zeerust: Linokana, Holub s.n. (Z).

LESOTHO.—Leribe, Dieterlen 555.

H. floribunda is characterized by the long branches which arise near the base of the plant; these may be erect or sprawling and are stellate-pubescent not canescent-tomentose; they bear short, floriferous lateral branchlets. The specific name is apt, because in the axils of the leaves and at the apices of both the main and lateral branches, several cymes with flowers of different ages are clustered, with several grey, subglobose buds in each group.

From the description of *H. floribunda* Harv. given by K. Schumann in Engl., Monogr. Afr. Pfl. 5: 56 (1900), it is obvious that the specimens he had before him did not belong to this species. In F.S.W.A. 84: 17, Schumann's concept is put into synonymy under *H. minutiflora* Engl. and this is in all probability correct although the two specimens cited have not been seen.

H. minutiflora differs from *H. floribunda* in being a much smaller plant with smaller leaves and flowers and with canescent-tomentose branches.

38. *Hermannia bryoniifolia* Burch., Trav. 2: 258 (1824), as *bryoniaefolia*; DC., Prodr. 1: 494 (1824), as *bryonifolia*; Harv. (under doubtful and little known species) in F.C. 1: 207 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 56 (1900); Burt Davy, Fl. Transv. 1: 267 (1926), partly, excl. loc. Transvaal. Type: Cape, Postmasburg, Blinkklip, Burchell 2141 (K, holo., PRE, photo.; PRE!; LE!).

H. rehmannii Szyszyl., Polypet. Thalam. Rehm. 139 (1887). Syntypes: Cape, Roggeveld, Rietpoort, Rehm 3249 (Z!); Orange Free State, Bloemfontein, Rehm 3797 (Z!); Rietfontein, Rehm 3715 (Z!).

Suffrutex, bushily branched, leafy parts ± uniformly covered with rather coarse stellate hairs from a scaly base, on lower parts from a tubercled base, rarely interspersed with obscure, gland-tipped hairs, rays

many but short, mostly under 0,5 mm long. *Stipules* variable, even on same specimen, from narrowly lanceolate to broadly ovate and then sometimes subcordate and semi-amplexicaul at base, sometimes also 3-lobed, from about 2 mm to 5 mm long and 1–4 mm broad. *Leaves* ovate to ovate-oblong, varying in size (even on same branchlet), from 5×3 mm near base to 30×20 mm, distinctly stellate-pubescent on both surfaces, unevenly crenate-dentate on margin (twice crenate or shallowly lobed and crenate); petiole 3–15 mm long, densely and coarsely stellate-pubescent. *Inflorescence* axillary of 1–3-flowered usually 2-flowered cymes on simple, dichotomous, ultimate branchlets, with most of leaves much reduced and so appearing to be racemose or paniculate cymes; peduncles varying greatly in length, 2,5–8 mm long, coarsely stellate-pubescent; pedicels similar but much shorter, 1–4 mm long; bracts linear-lanceolate, 2–4 at base of pedicels, stellate-pubescent. *Calyx* usually thin in texture, coarsely stellate-pubescent, 5-lobed to slightly above or slightly below middle. *Petals* yellow, more or less oblong with margins infolded in lower half, apparently glabrous but with a few minute hairs on infolded margins, narrowed at base into a short claw about 1 mm long. *Stamens* about 4 mm long, with hyaline oblong-ovate filaments, joined at base and with a few short hairs on shoulders which are overlapped by anther bases; anthers pointed, ciliate. *Ovary* ±2 mm diam., stellate-pubescent, shallowly 5-lobed, ±sessile; styles 2,5 mm long, sparsely and shortly hairy. *Capsule* about as long or slightly longer than calyx, i.e. 3–4,5 mm, coarsely stellate-pubescent, shallowly 5-lobed, lobes obscurely keeled. *Seeds* reniform with folds or wrinkles and minutely granular.

In loamy ground on hills, among rocks, on rocky ledges in crannies. Recorded from Griqualand West, the Orange Free State, and across the Vaal River in the Potchefstroom District.

CAPE.—Colesberg: Colesberg, *Marloth* 49036. Herbert: near Campbell, *Leistner* 905; Kimberley: Wimbledon, *Badenhorst* 53; Hay: Asbestos Mts, *Marloth* 2026. Barkly West: Windsorton, *Hafström* 918 (S), *Hafström & Acocks* H. 918; Postmasburg: Beeshoek, *Leistner & Joyn* 2707; Blinkklip, *Burchell* 2141. Gordonia: Upington, between Olifantshoek and Upington, *Schweickerdt* 2524. ?Roggeveld, Rietpoort, *Rehmann* 3249 (Z).

O.F.S.—Bloemfontein: *Rehmann* 3797 (Z); Naval Hill, *Moss* 4609 (Z). Boshof: Boshof, *Brueckner* 895. Fauresmith: Bergplaats, *Smith* 4378. ?Rietfontein, *Rehmann* 3715 (Z).

TRANSVAAL.—Potchefstroom: Dassiesrand, *Van Wyk* 423.

K. Schumann mistakenly cited the locality for *Rehmann* 3249 as being “Transvaal, Roggeveld, zwischen Porter and Trigardsfontein”. It should be “Roggeveld Rietpoort”, and as the collection has a relatively low number, it must have come from the north-western Cape where the other representatives of this species are found. Acocks writes in connection with the Rehmann locality “Rietpoort, Roggeveld”: “There is a Rietpoort a few miles east of Lokenburg, just to the south of Augustfontein, which could be regarded as being in the Roggeveld”. Lokenburg is situated about 40 km south of Nieuwoudtville in the Cape.

H. bryoniifolia is characterized by the ovate-oblong leaves which are lobulate-crenate and fairly coarsely stellate-pubescent. The flowers and capsules are small.

39. *Hermannia cordifolia* Harv. in F.C. 1: 193 (1860). Type: Cape, Piketberg, “Bonzagen”, *Zeyher* 111 (TCD, holo.; PRE, photo.!: S!; K!; SAM!).

Suffrutex, robust, erect, up to 1 m high; branches ascending, stout, dark brown, densely stellate-pubes-

cent, the hairs of different lengths, sometimes with gland-tipped hairs intermingled. *Stipules* ovate, acuminate, often oblique, cordate to semi-cordate and decurrent at base, about 12 mm long, 7 mm broad near base. *Leaves* petiolate; blade large, ovate to ovate-oblong, 2–5 cm long, 1,5–3 cm broad, rounded to subcordate at base, crenate-undulate on margins, upper surface hirsute with hairs from a scaly base but lying in one direction, lower surface grey-tomentose and stellate-pubescent, nerves prominent beneath; petiole short, 3–12 mm long, densely stellate-pubescent, the rays of different lengths. *Inflorescence* of compound, axillary cymes; ultimate cymes 2-flowered, congested; peduncles 10–30 mm long; pedicels up to 7 mm long; bracts 25 mm long, 7 mm broad, bracteoles like the stipules but smaller and some subulate. *Calyx* 7,5–9,5 mm long, lobed in upper third, densely stellate without, tube at first suburceolate but wide at mouth when mature with capsule protruding, lobes deltoid, erect. *Petals* 9–10 mm long, upper half oblong-cuneate, narrowing gradually into a claw with inrolled margins. *Stamens* about 6 mm long; filaments hyaline, obovate; anthers overlapping filaments for 1 mm. *Ovary* not seen. *Capsule* 8 or 9 mm long, densely stellate-pubescent, shallowly lobed, lobes rounded at apex.

To date the species is known only from the original gathering, *Zeyher* 111, and the more recent *Pillans* 7992. Both were collected in the Piketberg District.

CAPE.—Piketberg: “Bonzagen” on the Piketberg, *Zeyher* 111; Kapiteins Kloof Mountain, *Pillans* 7992.

The description was drawn up from the few pressed specimens available (*Zeyher* 111 in S and SAM and *Pillans* 7992 in BOL). *H. cordifolia* is nearest *H. rugosa*, but differs in being a more robust, erect plant with larger leaves, calyces and capsules, and in having a clustered inflorescence and a calyx which is suburceolate to campanulate, not somewhat salver-shaped as in *H. rugosa*.

40. *Hermannia hispidula* Reichb., Ic. Descr. Pl. Cult., t. 69 (1823); Walp., Repert. 1: 346 (1842); Harv. in F.C. 1: 207 under “little known species” (1860). Iconotype: Cape, cult. Dresden, t. 69 in Reichb. l.c. (typotype not traced).

Suffrutex with several ascending branches from a thick tap-root, branches hispid with long, pointed hairs, one to several from a prominent base, sometimes interspersed with short gland-tipped hairs. *Stipules* 2–6 mm long, oblique, broad-based and decurrent, abruptly narrowed into an acumen up to 4 mm long, basal portion 1–3 mm broad, sparsely hispid with bulbous-based or stellate hairs. *Leaves* petiolate; blade narrowly to broadly ovate or suborbicular, mucronate, base broadly cuneate, dentate, upper surface and margin sparsely hispid with bulbous-based hairs, lower surface finely and densely stellate between the nerves, more coarsely so on nerves; petiole 2–8 mm long, hispid. *Inflorescence* terminal on branchlets, a lax racemosecyme, hispid as on branchlets and sometimes with gland-tipped hairs interspersed, bracts 3–5, like stipules but those at base of pedicels much reduced; peduncles 8–30 mm long; pedicels 2–6 mm long. *Calyx* about 5 mm long, more or less cup-shaped, 5 lobed almost to middle, sinuses wide, very sparsely hispid with one or more hairs from a bulbous base. *Petals* yellow, about 8 mm long, upper portion oblong-orbicular, narrowed just below middle into a claw with broadly infolded margins. *Stamens* about 5 mm long with oblong-cuneate haline filaments; stamens acute, ciliate, about 2,5 mm long.

Ovary about 2,5 mm long, stellate-hairy, hairs long at apex, 5-umbonate, 5-angled; stipe 0,75 mm; styles 3,5 mm. *Capsule* about 6 mm long, glabrescent or very sparsely hispid with grouped hairs, 5-angled, 5-umbonate, calyx and stamens persistent and sometimes petals too.

Found on mountain slopes, at the foot of sandstone ridges in humus-rich pockets of sandy soil. Recorded from the Piketberg District in the western Cape.

CAPE.—Piketberg: Piketberg, *Maguire* 1182 (NBG); Piketberg mountain, *Compton* 22114 (NBG); near Piketberg, *De Winter & Verdoorn* 9059; *Bolus* 7538 (BOL); near Goedverwacht, *Bolus* 8416 (BOL).

There can be little doubt that this species is represented by Reichenbach's figure and his notes confirm this. Distinguishing features are the acute, dentate leaves, green and roughly pubescent on both sides and the obvious hispid hairs on all parts of the plant. The oblique broadbased stipule is a feature shared with several other species such as *H. prismatocarpa* and *H. repetenda*.

41. *Hermannia rugosa* Adamson in *Jl S. Afr. Bot.* 10: 123 (1944); Verdoorn in *Bull. Bot. Soc. S. Afr.* 11: 519 (1975); Adamson in Adamson & Salter, *Fl. Cape Penins.* 584 (1950), partly. Type: Cape, Newlands, *Salter* 8772 (BOL, lower specimen on sheet, lecto!).

Shrublet, rigid, spreading-erect, radical, 30–60 cm tall; branches rough with tubercle-based hairs. *Stipules* narrowly to broadly ovate, acuminate to abruptly acuminate, rounded or cordate to semi-cordate and decurrent at base. *Leaves* petiolate; blade varying in shape and size, narrowly to broadly ovate to obovate, rounded or broadly cuneate to cuneate at base, crenate and crisped on margins, minutely densely stellate on both surfaces, sometimes whitish tomentose on lower surface, nerves prominent beneath; petiole about 3–7 mm long. *Inflorescence* of racemose cymes, cymes 1 or more at a node, 1–3-flowered, the terminal with flowers appearing clustered, branches of inflorescence stellate-pubescent with hairs short from a scaly base or longer from a tubercled base, gland-tipped hairs sometimes present; bracts like stipules; bracteoles deltoid to subulate. *Calyx* somewhat salver-shaped, 5,5 mm long, 5-angled in upper half, lobed to almost midway, sinuses wide, densely stellate-pubescent, the hairs long from a small reddish brown, tubercular base mixed with short hairs from a central scale. *Petals* "golden yellow", "orange-red" or "yellow and red", 9–12 mm long, twisted, oblong to suborbicular in upper half narrowing to a claw with infolded margins. *Stamens* about 6 mm long with hyaline, obovate filaments. *Ovary* about 2,5 mm long, 5-lobed; stipe 0,75 mm long; styles about 5 mm long. *Capsule* enclosed by persistent perianth, densely stellate-pubescent.

Only a few records of this species have been seen. They come from the Peninsula and from the Paarlberg and vicinity.

CAPE.—Bellville: Tygerberg Reserve, *Loubser* 3367. Paarl: Between Paarlberg and Paardeberg, *Drège* (S; SAM); Paarl Mountain, *Kruger* M 22; *Thompson* 1756. Peninsula: Newlands Estate, *Salter* 8772, partly (BOL); *Salter* 8669; 8780 (BOL); 8900 (NBG); S.W. of Durbanville, *Esterhuysen* 17570 (BOL).

The species is characterized by the leaves being crisped as well as crenate on the margin, the calyx being somewhat salver-shaped and with a thick tomentum as in *H. multiflora* but with longer, softer hairs intermixed.

Compton 20752 (NBG) from Bellville is nearest *H. rugosa*.

There is evidence that *H. rugosa* may hybridize with *H. multiflora*. The following paratypes are excluded: *Adamson* 2511, which is probably a hybrid, *Pillans* 4761 (cited as 4701), *Gillett* 4162 and *H. Bolus* 12619, all three of which are *H. prismatocarpa* E. Mey. ex Harv.; *Gillett* 3731 which is probably *H. repetenda* Verdoorn, and *H. Bolus* 9948, a putative hybrid nearest *H. scabra* Cav.

42. *Hermannia althaeoides* Link, Enum. Hort. Berol. 2: 179 (1822); Eckl. & Zeyh., Enum. 42, No. 334 (1834). Type: Cape, cult. Europe (B†, holo.); Uitenhage, Coega River near "Zwartkopshoogte", *Ecklon & Zeyher* Enum. No. 334 (S, neo!; PRE, photo!; TCD, photo!; PRE!; LE!; NBG!).

H. nemorosa Eckl. & Zeyh., Enum. 42, 335 (1834). Type: Cape, Uitenhage, between the Sunday's and Bushman's Rivers, *Ecklon & Zeyher* Enum. No. 335 (K, PRE, photo!; NBG!).

H. plicata sensu Eckl. & Zeyh., Enum. No. 341 (S; PRE, photo!; NBG!) (1834), non Ait.;

H. mollis sensu Eckl. & Zeyh., Enum. No. 336 (K; PRE, photo!; PRE!; Z!) (1834), non Willd.;

H. discolor Otto & Dietr., Gart. 8: 314 (1840). Syntypes: cult. Europe (not traced); Uitenhage, "Zwartkoprivier", *Ecklon & Zeyher* Enum. No. 337 (S; PRE, photo!; PRE! NBG!) named "var. *discolor*" in S and listed as No. 327 (sphalm.) by Harv. in F.C. 1: 186 (1860) under *H. candicans* var. *discolor* Harv.

H. candicans sensu Harv., l.c. (1860), pro parte majore, non Ait.

Suffrutex, erect or suberect and widely branching at base; branches ascending, up to 60 cm tall; pubescence on branchlets, inflorescence and leaves varying from densely and smoothly to roughly and thinly tomentose, often with numerous minute gland-tipped hairs interspersed, or glabrescent with scattered rough stellate or tufted hairs. *Stipules* small (not leaf-like), subulate to deltoid-acuminate, 3–8 mm long, base 1–2,5 mm broad, rounded but not cordate, stellate-pubescent to stellate-tomentose. *Leaves* petiolate; blade variable in size and pubescence, ovate-oblong or broadly, rarely narrowly, oblong, occasionally suborbicular, 10–50 mm long, 6–30 mm broad, base broadly cuneate to rounded or somewhat cordate, apex rounded or rarely broadly acuminate and acute, margins faintly to distinctly crenate to base or almost so; pubescence varying from finely to softly stellate-tomentose on both surfaces to discolourous with upper surface roughly stellate-pubescent and lower surface softly whitish tomentose. *Inflorescence* of 1 or several, 1- to several-flowered cymes in axils of upper leaves and often forming terminal, leafless, paniculate cymes; branches of inflorescence from densely tomentose to glabrescent with scattered stellate or tufted hairs, but often (on inland specimens) with numerous, minute, gland-tipped hairs interspersed. *Calyx* campanulate, about 3–7 mm long, texture thin, from thinly to densely stellate-pubescent or tomentose outside, with a few hairs on inside near margin, lobed in upper third or almost to half way, lobes deltoid, sinuses wide. *Petals* yellow turning red at maturity, not long persistent, 7–11 mm long, upper third suborbicular, 5–6 mm diam., "waist" 1,5–2 mm broad, lower portion with infolded margins, glabrous or obscurely ciliate and pubescent within, not tomentose along edges of claw. *Stamens* about 5 mm long, with broad, hyaline, obovate filaments ciliate on shoulder; anthers overlapping the filaments at base, ciliate. *Ovary* 4 mm long, 5-angled, stellate-pubescent, 5-umbonate at apex, shortly stipitate at base, styles adhering. *Capsule* usually exposed, up to 8 mm long, about as long as petals.

Found on rocky slopes, in hillside scrub, grassy valleys, sandy soil along rivers, coastal thornveld and dune veld. Recorded only from the Cape from the coastal area of Humansdorp eastwards to Bathurst and northwards through Somerset East to Middelburg and then south eastwards through King William's Town to Komga.

CAPE.—Albany: Bushman's River, *Story* 2349; Grahamstown, *Galpin* 144; Coombes Valley, *Bayliss* 4352; Botha's Hill, *Dyer* 1451. Alexandria: near Nanaga, *Acocks* 12800; Quagga Flats, *Burt Davy* 11930; Bushman's River Mouth, *Lanham* 132; *Galpin* 10673. Bathurst: Bathurst, *Sidey* 3139; *Hutchinson* 1557; Port Alfred, *Galpin* 2951; *Schlechter* 2686; Kowie, *Britten* 680; 672; 2591. Fort Beaufort: Koonap Heights, *Britten* 2031. Humansdorp: Kabeljouw, *Phillips* 3325; Klipdrift, *Thode* A2464. Keiskammahoek: Keiskammahoek, *Wells* 3103; *Acocks* 0123. King William's Town: King William's Town, *Tyson* 850. Komga: Komga, *Flanagan* 487. Middelburg: Gordonsville, *Acocks* 17999. Port Elizabeth: Port Elizabeth, *Sidey* 3047. Queenstown: Junction Farm, *Galpin* 8255. Somerset East: Klein Bruintjieshoogte, *Drège* 7297d. Uitenhage: Uitenhage, *Thode* A630; near Zwartkops River, *Ecklon & Zeyher* Enum. No. 336; near Uitenhage, *Ecklon & Zeyher* 1982; 1983 (W); *Marais* 146; *Schlechter* 2507; Addo, *Ecklon & Zeyher* Enum. 334; 337.

The pubescence varies considerably in this species, from densely and smoothly to roughly and thinly tomentose. *Ecklon & Zeyher* Enum. No. 334 in S was chosen as neotype because it has the ferruginous pubescence mentioned in the original description.

This variable species is distinguished from *H. incana* mainly by the inflorescence which ends in a leafless, racemose or paniculate cyme, by smaller flowers with petals that fall, leaving the maturing capsule partly exposed, and by the tomentum not being as uniform as that of *H. incana*. Moreover, *H. althaeoides* is not as tall or robust a shrublet as *H. incana*.

Remarking on his four varieties of *H. candicans* Ait., which mainly constitute the species here described, Harvey writes in F.C. 1: 186 "Very variable in size and pubescence, but tolerably constant in other characters. I have no hesitation in uniting under one head, the various specimens of *Ecklon & Zeyher* above quoted." On examination of representatives of *Ecklon* and *Zeyher* specimens listed the same conclusion has been reached with the exception of *Ecklon & Zeyher* Enum. No. 333 which is *H. incana*, the earlier name for *H. candicans*.

The specimens of *Schlechter* 6103 in Z and BOL, the type number of *H. prismatocarpoides* Engl., fall within the variation of *H. althaeoides* Link, and that species is therefore probably also a synonym of our species. Note that the Botha's Hill, at which *Schlechter* 6103 was collected, is the one near Grahamstown, not that near Durban.

43. *Hermannia minutiflora* Engl. in Bot. Jb. 55: 361 (1919); M. Friedrich et al. in F.S.W.A. 84: 17 (1969). Type: Cape, Namaqualand, l'us *Schlechter* 11426 (PRE, lecto.!; W!; LE!; MO!; BOL!; Z!).

H. floribunda sensu Schum. in Engl., Monogr. Afr. Pfl. 5: 56 (1900), non Harv.

Suffrutex, erect, bushy, 20–60 cm tall, much branched, in all parts canescent with two layers of stellate hairs, rays many from a central scale, spreading or in upper layer tufted on scales which often become detached, very minute black-headed glandular hairs often scattered in the tomentum, branches and branchlets somewhat zigzag. *Stipules* varying in size, 1.5–4 mm long, 0.5–1.5 mm broad. *Leaves* petiolate; blade suborbicular or broadly ovate-oblong, 4–19 mm long, 4–20 mm broad, truncate or

broadly cuneate at base, sometimes some of upper leaves cuneate in lower third, obscurely 3–5-lobate, margin crenate, plicate or corrugated at least towards margin; petiole 2–10 mm long. *Inflorescence* of 1 or more 1–3-flowered cymes in axils of upper leaves and terminal on ultimate branchlets often forming leafy, cymose racemes, flowers on herbarium specimens under 5 mm long; bracts and bracteoles about 1.5 mm long, subulate, rather thick. *Calyx* broadly campanulate, on herbarium specimens up to 2.5 mm long, lobed almost to the middle. *Petals* yellow or orange, about 5 mm long, oblong-obovate in upper half, narrowed into a waist and produced below into a portion with infolded margins narrowing into a claw below, stellate-pubescent dorsally about middle. *Stamens* 3.5 mm long, with broadly obovate, hyaline filaments about 2 mm long, 2.5 mm broad in upper portion, with minute hairs on shoulders; anthers almost 2 mm long, ciliate, overlapping filaments at base. *Ovary* stellate-tomentose, shallowly 5-lobed; stipe 0.5 mm long; styles 2.5 mm long. *Capsule* enveloped by persistent calyx and corolla, 5-angled, at first densely stellate-pubescent then glabrescent and membranous.

Found on rocky hills, on boulders in valleys, in loose sandy soil, among grass and on sandstone rocks. Recorded from South West Africa from Omaruru in the north, southwards to the border and beyond into Namaqualand, to Kenhardt, Gordonias and Prieska Districts in the Cape with one record from west of Luchhoff in the Orange Free State.

CAPE.—Gordonias: north of Kakamas, *Wasserfall* 1155. Kenhardt: 6.2 km N.E. of Pofadder, *Hutchinson* 940; near Kakamas, *Van der Schijff* 8067. Namaqualand: l'us, *Schlechter* 11426. Prieska: no exact locality, *Bryant* J. 108.

S.W.A.—Bethanien: Helmeringshausen, *Merxmüller & Giess* 2826. Keetmanshoop: 48 km S. of Narubis, *De Winter* 3283. Lüderitz: Numeis, *Dinter* 8077. Maltahöhe: Duwisib, *Volk* 12631; Omaruru: Erongo, *Boss* A65; Brandberg, *Numas Valley*, *Wiss* 1441. Rehoboth: Bullsport, *Strey* 2183. Swakopmund: Remhoogte, *Strey* 2616. Warmbad: Sperlingspütz, *Giess, Volk & Bleissner* 6975; Warmbad, *Verdoorn & Dyer* 1778. Windhoek: Auasberge, *Dinter* 3485.

This species is close to *H. vestita*, but differs principally in the smaller flowers and the short hairs of the tomentum. The main areas of distribution are distinct. *H. minutiflora* is recorded from the central mountain plateau of South West Africa and southwards to the Arid Karoo-like southern districts along the Orange River valley, and across the border into the north-western Cape where the distribution overlaps in places that of *H. vestita*. See under that species for further notes.

44. *Hermannia althaeifolia* L., Sp. Pl. 673 (1753); Curtis's bot. Mag. t. 307 (1795); Jacq., Hort. Schoenbr. t. 213 (1797); Eckl. & Zeyh., Enum. 41, No. 322 (1834); Harv. in F.C. 1: 184 (1860), excl. syn. *H. diversifolia* (in S); Verdoorn in Flower. Pl. Afr. 41, t. 1603 (1970). Type: Cape, Cult. Hort. Cliff. (BM, holo.; PRE, photo.!).

H. hirsuta Mill., Gard. Dict. ed. 8, No. 8 (1786). Type: Cape, *Miller* 8 (BM; PRE, photo.!).

H. plicata Ait., Hort. Kew ed. 1, 2: 411 (1789). Type: Cape, cult. England, seed from Masson (BM, holo.; PRE, photo.!).

Subherbaceous annuals or short-lived perennials becoming woody at base; stems branching from base with many lateral, ascending branchlets; branchlets sometimes densely stellate but pubescence throughout is of stellate hairs intermixed to a greater or lesser degree with short, patent gland-tipped hairs and long, patent, pointed hairs. *Stipules* leafy, ovate-lanceolate, the upper larger, about 1, 1 cm long (sometimes 2 cm

long), 6–8 mm broad above base, gradually acuminate to a subacute apex, usually 3-nerved or faintly 5-nerved, entire or rarely unequally lobate, pubescent as on leaves and bracts. *Leaves* petiolate; blade varying in size, large ones more or less 6 cm long, 4 cm broad, ovate, ovate-oblong or ovate-lanceolate, shallowly cordate, rounded or broadly cuneate at base; lateral veins about 3, suberect, margins sinuate-crenate, upper surface rather laxly stellate-pubescent, more densely so on lower surface, sometimes with gland-tipped hairs or long, pointed hairs intermixed; petioles of varying lengths, the longer about 3 cm long, sometimes slightly swollen and kinked near the apex. *Inflorescence* of usually 2-flowered cymes, 3 usually developing successively in axils of leaves and crowded at apices of branches and branchlets to form leafy pseudopanicles; peduncles about 25 mm long, pedicels 5 mm long; bracts 3–5 at a node, sessile, narrowly ovate to linear, varying in size, up to 5 mm long and 1–2 mm broad near base, pubescent as on other parts. *Calyx* subinflated, campanulate, about 8 mm long, lobed to above the middle, obviously pubescent with three types of hairs, stellate, gland-tipped and long, patent, acute hairs. *Petals* cadmium-yellow (and do not turn red with maturity), twisted, about 9 mm long, upper third an oblong blade narrowing abruptly into a claw with broadly infolded margins, stellate-pubescent along sides of claw (not on margins). *Stamens* with hyaline filaments about 5 mm long and 1,5 mm broad near apex, narrowly obovate, ciliate on shoulders; anthers 3,5 mm long, acute, ciliate. *Ovary* very shortly (0,5 mm) stipitate, about 3 mm long, densely pubescent with stellate and long, pointed hairs, shortly 5-lobed at apex; styles cohering, acute, about 5 mm long. *Capsule* enclosed in persistent calyx and petals, 6 mm long, pubescence persistent; seeds several. Fig. 1.1.

Found in Fynbos and Renosterveld in the south-western Cape, on mountain slopes, hills, in waste lands and sandy watercourses or in gravelly soil at roadsides. Recorded from the Peninsula eastwards to northern Mossel Bay and Uniondale, and northwards to Calvinia.

CAPE.—Calvinia: Hantam Mts, *Marloth* 10448. Ceres: Cold Bokkeveld, *Marloth* 10722. Clanwilliam: between Witte Els and Lamberts Hoek, *Pillans* 9075. Ladismith: Sevenweeks Poort, *Bayliss* 2437. Malmesbury: Swartberg, *Acocks* 20657. Montagu: on road to Barrydale, *Ellis & Schlieben* 12368. Mossel Bay: Cloete's Pass, *Acocks* 14633. Peninsula: Peninsula, *Prior* 5340; Camps Bay, *Letty* 247; Table Mtn, *Ecklon* in Herb. U.I. 392. Piketberg: Piketberg, *De Winter & Verdoorn* 9063. Swellendam: Barrydale, *Galpin* 3783. Uniondale: near Joubertina, *Marsh* 1398. Worcester: Worcester, *Marloth* 10782.

This marsh-mallow leaved *Hermannia* is characterized by its many ascending, subherbaceous branchlets, the leafy stipules, the fineness of the conspicuous pubescence and the broadly campanulate, subinflated calyx. It is related to *H. disermifolia* and *H. amoena* of Namaqualand and where their distribution areas overlaps it may hybridize with these species. The distinguishing feature is the appressed pubescence of *H. disermifolia* and *H. amoena* which covers the branchlets, as opposed to the soft spreading hairs found on *H. althaeifolia*. Several putative hybrids have been noted among specimens under the name *H. althaeifolia*.

H. aurea Jacq., Hort. Schoenbr. t. 214 (1797) may be a synonym but this cannot be judged from the painting. It seems to have less of the long, patent, acute hairs and may be a hybrid. A specimen in W, named *H. aurea*, does not match Jacquin's figure and is *H. althaeifolia* L. *H. diversifolia* Eckl. & Zeyh., Enum. No. 324 included by Harvey and I.K. as a

synonym of *H. althaeifolia* is rather *H. decumbens* (see specimen in S).

A specimen of *Ecklon & Zeyher* Enum. No. 323 named "*H. aurea* Jacq." in SAM is *H. althaeifolia* L.

45. *Hermannia johanssenii* N.E.Br. in Hooker's Icon. Pl. 8, t. 2709 (1905). Type: Cape, Calvinia, "Brand Vley", *Johanssen* s.n. (K, holo.; PRE, photo. !; SAM!).

Suffrutex, low, usually under 30 cm tall, when protected somewhat taller, sometimes, probably through heavy browsing, more or less prostrate with rather thick woody branches; young branches leafy to apex, completely stellate-tomentose hairs short and fine from a minute central scale, minute glandular hairs sometimes present, some stellate hairs very shortly stalked and readily falling, older branches thinly pubescent and dark coloured in contrast. *Stipules* narrowly lanceolate to oblong-lanceolate, 2–8 mm long, 1,5–4 mm broad near base, upper usually longer than those near base of plant, minutely stellate-pubescent. *Leaves* petiolate; blade suborbicular to broadly oblong or ovate-oblong, broadly cuneate or more rarely cuneate at base, shallowly and unevenly crenate on margins, 7–19 mm long, 5–11 mm broad, subdensely stellate-pubescent to tomentose with short fine hairs from a minute central scale, minute gland-tipped hairs sometimes present; petiole 2–7 mm long, sometimes basal leaves with petioles up to 19 mm long. *Inflorescence* of short, 1–2-, rarely 3-flowered cymes in axils of leaves which usually continue to apices of branches forming long, leafy, terminal, racemose cymes with secund flowers; peduncles 0–7 mm long, stellate-pubescent; bracteoles 1–2 mm long; pedicels 1,5–4 mm long, stellate-pubescent, hairs slightly longer than on branches. *Calyx* ovoid-globose to globose, narrowed at mouth, inflated, pale, about 7 mm long, shortly toothed, teeth deltoid, up to 2 mm long, subdensely stellate-pubescent with hairs short and fine from a minute central scale, some stellate hairs shortly stalked, rays relatively long, readily falling. *Petals* twisted, yellow or "golden yellow", only shortly exerted from inflated calyx, about 9 mm long, more or less narrowly oblong in upper third, narrowing slightly into a waist and produced below into a claw with infolded margins, minutely stellate dorsally. *Stamens* about 5 mm long with narrow hyaline filaments; anthers overlapping filaments at base, ciliate. *Ovary* depressed globose, 5-lobed, about 4 mm long, 5 mm diameter, densely stellate-pubescent; stipe up to 1 mm long; styles 4 mm long. *Capsule* enclosed in persistent calyx.

Found in Western Mountain Karoo, in sandy flats, in clay, shaly ground, on dolerite ridges "among vygies". Recorded from Laingsburg District through Sutherland to Calvinia District.

CAPE.—Calvinia: Akkerendam, *Leistner* 859; Kree Kom, *Acocks* 18559; Laingsburg: Klein Roggeveld, *Marloth* 10396. Sutherland: Junction of Quaggafontein and Visrivier roads, N.W. of Sutherland, *Thompson* 1800; Waterkloof, *Marloth* 9675.

Characterized by the floriferous, tomentose branches which bear secund flowers regularly arranged in the axils of leaves, in the upper half to two-thirds of branchlets. Closely related to *H. comosa*, from which it differs principally in the leaves, inflorescence and distribution. *H. johanssenii* has smaller leaves of more or less uniform size and arranged at regular, rather short intervals, reaching to the tops of the branches and consequently the axillary flowers, which are more or less of the same age and size, form a uniform

inflorescence. The distribution area of *H. comosa* lies farther to the north-east, in the False Upper Karoo from Richmond and Colesberg Districts northwards to South West Africa.

H. leucophylla Presl is a synonym of *H. comosa*, not of this species, as some have thought.

46. *Hermannia comosa* Burch. ex DC., Prodr. 1: 493 (1824); Harv. in F.C. 1: 184 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 60 (1900); M. Friedrich et al. in F.S.W.A. 84: 12 (1969); Verdoorn in Flower. Pl. Afr. 41: t. 1605 (1970). Type: Cape, Asbestos Mountains, Burchell 1683 (K, holo.; PRE!).

H. leucophylla Presl, Bot. Bemerk. 20 (1844). Type: Cape, Winterveld between Nieuwjaarsveld & Ezelsfontein, Drège s.n. (named *H. plicata*) (TCD; PRE, photo.; PRE!; LE!).

H. dinteri Schinz in Bull. Herb. Boissier 6: 748 (1898). Type: South West Africa, between Inachab and Lüderitzbucht, Dinter 6 (Z!).

H. comosa var. *crenata* K. Schum. in Engl. Monogr. Afr. Pfl. 5: 6 (1900). Type: Cape, between Griquatown and Witte Waters, Burchell 1989 (B, holo.†).—var. *minor* K. Schum. in Engl. Monogr. Afr. Pfl. 5: 60 (1900). Type: Cape, Kimberley, Bolus in Herb. norm. 324 (B, holo.†).

H. glabripetala Engl. in Bot. Jb. 55: 355 (1919). Syntypes: South West Africa, Aus, Steingröver 35 (Z!); 36 (Z!); Dinter 1061 (SAM!); Range 958 (SAM!); Pearson 5272 (SAM!) & 8222 (SAM!).

H. ausana Dinter ex Range in Reprium nov. Spec. Regni veg. 36: 260 (1934), nom. nud. based on Dinter 6058 (Z!).

Subherbaceous perennials, one to several stems arising from tap-root; stems branched at base; branches suberect to spreading-ascending, laxly sub-branched, pubescent to tomentose with fine short appressed stellate hairs often intermixed with stalked, tufted hairs. *Stipules* narrowly deltoid, linear-lanceolate, lanceolate or ovate-lanceolate, 3–6 mm long, 1–2,5 mm broad near the base, dorsally stellate-pubescent. Leaves petiolate; blade oblong to oblong-obovate, rarely oblong-elliptic, broadly cuneate to rounded at base, 1,5–5 cm long, 0,6–3,5 cm broad near base, pubescent with fine stellate hairs on both surfaces but more often densely so to tomentose underneath, sometimes partly glabrescent above, margins coarsely crenate to lobate-crenate or rarely entire; petiole densely stellate-pubescent to stellate-tomentose, often with tufted hairs intermixed. *Inflorescence* of usually 2-flowered cymes, 2–3 developing at the apices of branches and in axils of upper leaves; peduncles 5–20 mm long; pedicels 2–10 mm long; bracts subulate to linear-lanceolate, usually 3 at a node, sometimes 2 joined together, 2–5 mm long. *Calyx* inflated, white or ivory-coloured and some flowers suffused with shades of green, yellow or rose, about 9 mm long, depressed globose, 5-lobed almost to middle, with lobes incurved, pubescent on outside with short stellate hairs intermixed with longer, stalked, tufted hairs (the stalks sometimes up to 1,5 mm long). *Petals* twisted lemon-yellow, about 10 mm long, upper third oblong-orbicular, 2,5–4 mm broad narrowing into a claw 2 mm broad, lower two-thirds with infolded margins, sparsely to conspicuously dorsally pubescent with stellate and tufted hairs, especially along sides, glabrescent. *Stamens* 5 with hyaline, obovate-oblong filaments, 4 mm long, joined at base and sometimes adhering along margins to almost middle, pubescent on shoulders; anthers acute, about 4 mm long, ciliate. *Ovary* about 4 mm long, shallowly 5-lobed, stellate-tomentose, hairs fine and appressed or some, especially at apex, slightly longer and erect; styles cohering, about 6 mm long. *Capsule* enclosed in persistent calyx and petals, deeply 5-angled,

angles produced for 2 mm beyond the style bases, rounded; seeds reniform, corrugated. Fig. 2.5.

Recorded from the north-western Cape as far south as Richmond and Colesberg and northwards through the Orange Free State, the south-western Transvaal and Griqualand West to South West Africa. Found in deep sand or gravelly soil on flats or in stony ground at the foot of hills.

CAPE.—Barkly West: Barkly West, Leistner 613; Acocks 237. Colesberg: Colesberg, Bayliss 3882. Gordonia: Gordonia, Leistner 2029. Hay: Hay, Acocks 1763. Herbert: Herbert, Wilman s.n. Hopetown: Hopetown, Smith 2819. Kimberley: Kimberley, Schlieben 8711; Acocks 16; Marloth 713. Postmasburg: Postmasburg, Leistner & Joyn 2783. Prieska: Prieska, Bryant 112. Richmond: Richmond, J. Wood in TRV 19104.

O.F.S.—Bloemfontein: Bloemfontein, Hanekom 817; Burt Davy 11770. Boshof: Boshof, Burt Davy in Govt. Herb. 10153; 10346. Edenburg: Edenburg, C. A. Smith 5182. Fauresmith: Fauresmith, Pole Evans 1822; C. A. Smith 5277. Glen: Glen, Mostert 528; Heyink 22. Petrusburg: Petrusburg, Henrici 4299.

TRANSVAAL.—Bloemhof: Bloemhof, Theron 5457; Schweizer-Reneke: Schweizer-Reneke, Burt Davy in Govt. Herb. 11262.

S.W.A.—Aus: Aus, Marloth 5036; Dinter 6058 (Z); 6041; 6054; 3592. Lüderitz: Lüderitz, Van Vuuren 920; Rehoboth: Rehoboth, Tölken & Hardy 704; Dinter 7977. Warmbad: Warmbad, Strahl sub Dinter 5030. Windhoek: Windhoek, Merxmüller & Giess 803.

Burchell distributed specimens of his 1683 under the name *H. comosa* and De Candolle based the species on that one specimen.

H. comosa is a variable species and several putative hybrids have been noted. The feature which probably suggested the specific epithet, namely the stalked tufts of hairs which are commonly found on the calyx, is not completely diagnostic. These comas fall readily and appear to be absent on some plants. There is also considerable variation in the density of the fine, stellate pubescence that covers all parts of the plant and often gives it a silvery grey sheen.

H. cinerascens Engl. in Bot. Jb. 55: 355 (1919) is most probably a synonym, and it is so treated by M. Friedrich et al. in F.S.W.A. The type gathering, Range 286, seen in BOL and SAM, could conceivably fall within the range of variation of *H. comosa*.

In Z, Schenk 321, which agrees with *H. comosa*, is noted as the type of *H. hottentotta* Schinz but this name was evidently never published.

47. *Hermannia incana* Cav., Diss. 6: 328, No. 473 (1788); Reichb., Ic. Descr. Pl. Cult. t. 53 (1822); Eckl. & Zeyh., Enum. 42, No. 333 (1834). Type: Cape, cult. D. Cels, Paris (MA, holo.; PRE, photo.).

H. candicans Ait., Hort. Kew 2: 412 (1789); Jacq., Hort. Schoenbr. t. 117 (1797); Reichb., Ic. Descr. Pl. Cult. t. 55 (1822); DC., Prodr. 1: 493 (1824); Harv. in F.C. 1: 186 (1860), pro parte minore. Type: Cape, cult. Hort. Kew (BM, holo.; PRE, photo.).—var. *incana* Harv., l.c., pro parte as to Ecklon & Zeyher Enum. No. 333 (S; PRE, photo.; SAM!).

H. praemorsa Wendl., Bot. Beobacht. 51 (1798). Type: not traced but Wendland & Schrader 1259 in W! may be authentic; also specimens so named in Herb. Schrader (LE!).

H. mollis Willd., Enum. Hort. Berol. 692 (1809); Reichb., Ic. Descr. Pl. Cult. t. 54 (1822); DC., Prodr. 1: 494 (1824). Type: Cape, cult. Europe, Willdenow 12308 (B, holo.; PRE, photo.).

Suffrutex, up to 2 m tall, usually erect; branchlets whitish grey tomentose with densely fringed scales with hairs flattened to give a smooth appearance, often minute gland-tipped hairs scattered in the tomentum. *Stipules* subulate to narrowly linear or long acuminate from a 1,5 mm broad base, up to 7 mm long, 1 to 1,5 mm broad at base, tomentose. *Leaves* petiolate; blade ovate-oblong to broadly or narrowly oblong, broadly cuneate to cuneate at base, 7–35 mm

long, 5–20 mm broad, softly stellate-tomentose on both surfaces, at least when young, faintly to fairly distinctly undulate-crenate except at the broadly cuneate base, apex rounded or sometimes shortly acuminate and acute; petiole 3–15 mm long, softly tomentose. *Inflorescence* of 1-several-flowered, but mostly 2-flowered, cymes, one or more developing in axils of upper leaves of ultimate branchlets, forming leafy, paniculate cymes; peduncles and pedicels tomentose but not quite as smoothly as on branchlets, not of equal lengths but both varying, peduncles from 2.5–20 mm long and pedicels 2–15 mm long; bracts usually 3 at apex of peduncles, subulate, about 3 mm long, caducous. *Calyx* stellate-tomentose, subinflated, campanulate, 6–9 mm long, lobed in upper half, lobes about 3 mm long, deltoid, sinuses wide. *Petals* yellow, persistent 7–10 mm long, broadly rounded or truncate at apex, narrowing slightly at waist, claw broad with infolded margins and densely tomentose along sides. *Stamens* with hyaline, obovate filaments, minutely and sparsely pubescent on margins; anthers ciliate. *Ovary* about 8 mm long, 5-angled, stellate-pubescent, 5-umbonate at apex and shortly stipitate at base; styles adhering, at length shortly exerted. *Capsule* hidden by long-persistent petals, 5-angled, densely stellate-pubescent, 5-umbonate at apex.

Found on top of koppies, on slopes of hills and mountains in stony karroid scrub and valley bushveld. Recorded from the Peninsula through Worcester and Ceres eastwards to George.

CAPE.—George: Heimans River, *Oliver* 3579. Ladismith: Ladismith, *Bayliss* BS/1092; Amalienstein, *Acocks* 15304. Laingsburg: Whitehill, *Compton* 14875. Boschluiskloof Pan, *Leistner* 245. Mossel Bay: east of Gouritz, *Burchell* 6418 (LE). Oudtshoorn: E. of De Rust, *Dahlstrand* 1457. Peninsula: Tygerberg, *Marloth* 4478. Prince Albert: Zwartberg Mts, *Bolus* in Herb. Austro. Afr. 11720. Riversdale: Gouritz River Bridge, *Story* 2881; *Acocks* 21629; Middledrift, *Muir* 1383. Swellendam: east of Kochmanskloof, *Ecklon & Zeyher* Enum. No. 333 (S). Worcester: Veld Reserve, *Van Breda* 10; *Olivier* 128.

Schlechter 8516, named *H. disermifolia*, is *H. incana* but Vogelfontein in the Clanwilliam District is outside the known distribution area. Vogelfontein, Beaufort West is more likely.

Characterized by the smooth tomentum on the branches, the usually 2-flowered cymes in the axils of the upper leaves, leaves which are broadly cuneate at the base, usually broadest just below the middle and softly tomentose on both surfaces, and the petals which are broad and persistent, covering the capsule.

Harvey (1860), when describing *H. candicans* Ait., with four varieties, cites a number of Ecklon and Zeyher specimens listed in their "Enumeratio" under seven different names. Of these only the specimen Enum. No. 333, named *H. incana*, agrees with Aiton's *H. candicans* and is therefore *H. incana* Cav. The rest form a variable species here treated as *H. althaeoides* Link. See notes under that species.

Judging from Presl's description of *H. dregeana* in Bot. Bemerk. 20 (1844) and from a specimen, *Drège* 7301, so named in S, *H. dregeana* Presl may well be yet another synonym of *H. incana* Cav.

48. *Hermannia vestita* Thunb., Diss. Herm. 12 (1794); E. Mey. in *Drège*, Zwei Pfl. Doc. 60, 62, 64 (1843). Type: Cape, *Thunberg* s.n. Herb. No. 15499 (UPS, holo.; PRE, photo.).

H. candidissima Spreng. f., Syst. Veg. 18 (1828); Eckl. & Zeyh., Enum. 42, No. 331 (1834); Harv. in F.C. 1: 201 (1860). Type: "C.B.S., *Zeyher* (n. 149)" (LE!).

Suffrutex, erect, bushy, up to about 60 cm tall but often smaller, densely tomentose on most parts with short-rayed stellate hairs radiating from a central scale, interspersed with usually longer rayed, grouped hairs on a scale which becomes detached and often with very minute, scattered, black-headed, gland-tipped, hairs; branches or branchlets often zig-zag. *Stipules* in upper parts of plant lanceolate to ovate-lanceolate, 6–10 mm long, 2–4 mm broad just above base, lower stipules smaller, 3–4 mm long, about 1 mm broad above base. *Leaves* petiolate; blade usually broadly ovate to suborbicular with a truncate or broadly cuneate base, varying in size even on same plant, from about 8 mm long and 7 mm broad just above base, to about 35 mm long and 30 mm broad (lower-most up to 45 mm long), some leaves in upper parts of plant narrowly ovate-lanceolate and cuneate in lower half, stellate-tomentose on both surfaces, strongly corrugated at least at margins, nerves prominent beneath obscurely 3-lobed as well as crenate at margin; petiole tomentose, 4–26 mm long. *Inflorescence* of 1 or more, 1–3-flowered cymes in axils of upper leaves and crowded at apices of ultimate branchlets or sometimes forming long, leafy, racemose cymes; mature flowers on herbarium specimens 6–10 mm long; bracts and bracteoles subulate to narrowly lanceolate, 2–10 mm long, up to 3 mm broad near base; peduncles and pedicels short, mostly under 5 mm long. *Calyx* not or subinflated with age, urceolate to campanulate, narrowed at mouth when young, lobed almost to middle, stellate-tomentose with short hairs, often mixed with long hairs, in mature flowers on herbarium specimens measuring from 4.5 mm to 9 mm long. *Petals* orange to lemon-coloured, about 6 to 9 mm long, more or less oblong in upper third, then narrowed into a waist with infolded margins and produced below into a claw, stellate-pubescent in parts especially in waist. *Stamens* about 4 mm long, with broadly obovate to suborbicular hyaline filaments minutely pubescent on shoulders, anthers about 2.5 mm long, overlapping filament at base, ciliate. *Ovary* 5-lobed, about 2.5 mm long, stellate-tomentose, hairs long at apex; stipe about 1 mm long; styles cohering, about 5 mm long, minutely capitate at apex, exerted from flowers. *Capsule* enveloped by long-persistent calyx and corolla, about 5 mm long, stellate-tomentose with hairs short and long, 5-umbonate at the apex. *Seeds* reniform, corrugated, 1.5 × 1 mm, minutely papillose.

Found on mountain slopes, hillsides, river banks and open veld. Recorded from the Karoo, the Cape midlands, the southern Kalahari and southern Orange Free State.

CAPE.—Barkly West: near Boetsap, *Acocks & Hafström* H 1387. Beaufort West: Farm Doornboomsfontein, *Van Breda* 535; Sunnyside, *Esterhuysen* 2705. Carnavon: Carnavon, *Erik Wall* s.n. (S). Colesberg: Colesberg, *Brink* 247. Cradock: near Dwingfontein, *Story* 1318. De Aar: E. of village, *Acocks* 624. Gordonia: between Olifantshoek and Upington, *Schweickerdt* 2525. Hay: Excelsior, *Acocks* 488; east of Postmasburg, *Acocks* 471; Dunmurray, *Pole Evans* 45. Laingsburg: Matjiesfontein, *Cannon* 132. Middelburg: Middelburg *Theron* 18; Conway Farm, *Gilfillan* sub *Galpin* 5508. Prieska: between Carnavon and Vosberg, *Hafström & Acocks* 944. Prince Albert: Droog Kloof, *Marloth* 11291; S. of Zeekoegat, *Acocks* 22697. Somerset East: near Annsville, *Long* 746. Williston: below Jan Swartsberg, *Acocks* 18916. Willowmore: Grootrivier, Trompeterspoort, Beer Valley, *Ecklon & Zeyher* s.n.

O.F.S.—Bethulie: Nature Reserve, *Roberts* 5515. Fauresmith: Veld Reserve, *Pole Evans* 1820; *Kies* 235.

Characterized by the dense tomentum covering most parts of the plant; the broadly ovate leaves, which are only slightly longer than they are broad in

the lower half with the base truncate or broadly cuneate and the margins crenate and usually wavy, the subinflated and somewhat urceolate calyx, and the rays of the grouped hairs, which are longer in parts than on the rest of the plant. In these features *H. vestita* resembles *H. minutiflora*. As the name implies, the flowers are consistently small, under 5 mm long on herbarium specimens, as against 5.5–10 mm in *H. vestita*. The calyx does not appear to be subinflated in *H. minutiflora*, also the majority of the leaves is more suborbicular or oblate than in our species. For a comparison of the areas of distribution see notes under *H. minutiflora*.

The type of *H. candidissima* Spreng. f. is cited as "Uitenhage, C.B.S. Zeyher (n. 149)". The Uitenhage District as delimited at the time when the plant was collected, extended further north into the distribution area of the species. The plant is not known, however, from the Uitenhage District as defined today.

Specimens of *Drège* 7298 in MO and LE are obviously *H. vestita* Thunb. Harvey (1860), however, cites this number as *H. scordifolia* Jacq. var. *integriuscula* Harv. This is probably a printing error for *Drège* 7289 which is *H. scordifolia*. Common name recorded as "Katte Kruid".

49. *Hermannia amoena* Dinter ex M. Holzhammer-Friedrich in Mitt. Bot. StSamml., Münch. 1: 345 (1953); M. Friedrich et al. in F.S.W.A. 84: 13 (1969) in syn. Type: South West Africa, Lüderitz, Numeis (not "Uhabis", see photo of *Dinter* 8074 at K), *Dinter* 8074 (K; PRE, photo.!: PRE!).

H. ernesti-ruschii Dinter ex M. Holzhammer-Friedrich, l.c. 346 (1953). Syntypes: South West Africa, Lüderitz dist., Wittpüts, *Dinter* 8089; Wittpütts—Sendlingsdrift, *Wettstein* 314 (K; PRE, photo.!: PRE!).

Suffrutex, about 50–60 cm tall, erect, much branched in upper half, branchlets densely stellate-tomentose with interspersed minute gland-tipped hairs, tomentum smooth, canescent with stellate hairs of varying lengths, mostly short, radiating from or grouped on a central scale (some scales readily becoming detached). *Stipules* 5–10 mm long, 1–5 mm broad at base, large ones found towards apices of branchlets and there ovate-acuminate from a broad clasping base or semi-ovate and decurrent on branchlets, stellate-tomentose on both sides, hairs mostly short but sometimes long on margins, sometimes upper stipules glabrescent on inner face, in lower parts of plant stipules smaller, narrowly ovate-acuminate to subulate, about 5 mm long. *Leaves* petioled; blade oblong to ovate-oblong, 1.5–4 cm long, 0.5–2 cm broad, sometimes larger, stellate-tomentose on both surfaces, rounded at base and apex, crenate on margins, young leaves corrugated, nerves impressed above, prominent beneath; petiole stellate-tomentose, up to about 2 cm long. *Inflorescence* of 2- to 3-flowered cymes arranged in lax, racemose or paniculate cymes at apices of branches and branchlets and occasionally in axils of upper leaves, branches of panicle glabrescent with sparse, stellate hairs and scattered gland-tipped hairs, shiny brown in contrast to the canescent branchlets which they terminate; peduncles about 15 mm long, glabrescent; pedicels up to 5 mm long, remaining tomentose; bracts 5–10 mm long, 1–5 mm broad at base, ovate-acuminate to narrowly lanceolate; bracteoles smaller, narrowly lanceolate, linear or subulate. *Calyx* about 8 mm long, subinflated, not narrowed at mouth, subglobose or campanulate, sometimes suffused with pink in parts, lobed to about middle, stellate-pubescent without, hairs longer and softer

at base of calyx and on margins of lobes. *Petals* "golden yellow" or "orange-yellow", turning orange-red at maturity, about 11 mm long, glabrous, oblong to oblong-globose in the upper half, narrowed into a fairly short and wide waist (about 2 mm wide) and produced below into a rather wide claw with infolded margins. *Stamens* about 7 mm long; filaments hyaline, obovate, microscopically and sparsely stellate on the shoulders; anthers overlapping filaments at base, ciliate. *Ovary* about 5 mm long, 5-lobed, densely stellate-pubescent, the hairs longer at apex; styles about 5 mm long; stipe up to 1 mm long. *Capsule* about 10 cm long, hidden by persistent petals and calyx, stellate-pubescent, 5-lobed, lobes rounded at apex.

Found on granite hills or in valleys, in sand or "yellow clay", on or west of the escarpment in Namaqualand and South West Africa. Recorded frequently at Steinkopf and surroundings, northwards into the Warmbad and Lüderitz Districts of South West Africa and southwards through Spektakelberg, that is west of Springbok, to the western parts of Vanrhynsdorp.

CAPE.—Namaqualand: Steinkopf, *Theron* 1303; *Marloth* 6781; Annenous Pass, *Hardy* 2646; Steyers Kraal near Kookfontein, *H. Bolus* 6683; Oranjemund, *Lavranos* 11034; Spektakelberg, *Van der Merwe* 191. Vanrhynsdorp: E. of Vredendal, *Hall* 3645.

S.W.A.—Lüderitz: 10 km S. of Wittpüts, *Dinter* 8089; Farm Wittpüts, *Merxmüller & Giess* 3193; Numeis, *Dinter* 8074.

H. amoena is characterized by the glabrescent, slender, dark brown axis of the mature inflorescence, which contrasts sharply with the canescent tomentum of the rest of the plant, especially on the branchlets terminating in the inflorescences. Besides this diagnostic feature *H. amoena* differs from the closely related *H. disermifolia* in that the calyx of the latter is not at all inflated, the upper stipules not so large, and the hairs of the pubescence in *H. amoena* are longer and softer on some parts of the plant, usually at the base of the calices, giving a villose appearance to these parts. The main areas of distribution of the two species differ in that *H. amoena* usually occurs on or west of the escarpment, while *H. disermifolia* is found on the plateau east of the escarpment. The areas of distribution may overlap in places. Hybrids with *H. althaeifolia* are suspected.

Drège 3262 (Z), named *H. erosa* E. Mey. (a species evidently never published) appears to be *H. amoena*. According to "Zwei Documente" it was collected on Kamiesberg foothills, Kasparskraal, Ellenbogfontein and Geelbeksraal."

Holzhammer-Friedrich, when describing this species, cited the type specimen as coming from "Uhabis". A photograph of a specimen of *Dinter* 8074 in Kew shows a line drawn through "Uhabis" and "Nume-is" written above it, in what appears to be Dinter's handwriting. The specimen could have been collected at either locality.

50. *Hermannia disermifolia* Jacq., Hort. Schoenbr. 1, t. 121 (1797); Reichb., l.c. Descr. Cult. t. 68, fig. 2 (1822); DC. Prodr., 1: 494 (1824); Harv. in F.C. 1: 188 (1860). M. Friedrich et al. in F.S.W.A. 84: 13. Iconotype: Hort. Schoenbr. 1, t. 121 (typotype not traced).

H. bryoniifolia sensu Eckl. & Zeyh., (as *bryonifolia*) Enum. 42, No. 332 (1834), non Burch.

Suffrutex, about 40–60 cm tall, sometimes taller, erect, branched above; branchlets persistently and smoothly canescent, stellate hairs appressed, with short rays radiating from a central scale (some scales

become detached); tomentum interspersed with minute, gland-tipped hairs. *Stipules* subulate to narrowly ovate-acuminate, upper sometimes up to 7 mm long and 2.5 mm broad near base, lower smaller, tomentose on both sides, stellate hairs short. *Leaves* petiolate; blade oblong to ovate-oblong, about 10 to 20 cm long, densely stellate-tomentose on both sides, becoming subdensely so in older leaves, surface corrugated, margin crenate and crisped, sometimes shallowly lobate as well near base, nerves deeply impressed above, prominent beneath; petiole 3–9 mm long, stellate-tomentose as on blade. *Inflorescence* of 1–3-flowered cymes terminal on the branchlets and 3 or more developing in the axils of upper leaves forming a pseudoracemose cyme, branches of inflorescence stellate-tomentose and hairs short; peduncles 4–15 mm long; pedicels 2–5 mm long; bracts linear-subulate, 4–7 mm long, sometimes narrowly ovate or oblong-acuminate, 5–7 mm long, 2 mm broad near base, occasionally 3 together and united at base. *Calyx* not obviously inflated, 5–7 mm long, lobed almost to middle, densely stellate-tomentose, hairs short, fringing a central scale. *Petals* about 8 mm long, upper third oblong, narrowed slightly into a waist and then produced into a claw with infolded margins, glabrous. *Stamens* about 5 mm long; filaments hyaline, obovate; anthers overlapping filaments at base, ciliate. *Ovary* densely stellate-pubescent, about 2.5 mm long, shallowly 5-lobed, lobes rounded at apex; stipe short, up to 1 mm long. *Capsule* 6 mm long, densely stellate-pubescent, calyx persistent at base.

Found on rocky hills, stony slopes, in dry riverbeds among rocks, and in sandy loam on sandstone hillocks. Recorded from the north-eastern area of Vanrhynsdorp District northwards into Namaqualand as far as Springbok and a few miles farther north.

CAPE.—Namaqualand: without exact locality, *Krapohl* sub *Marloth* 11162. Springbok: Springbok, *Van der Schijff* 8132; S.W. of Springbok, *Thompson* 1070; *Reynolds* 5446; E.N.E. of Springbok, *Leistner* 2538; *Garies*, *Schlechter* 11099; *Kamiesbergen*, *Ecklon & Zeyher* Enum. 332 (S). Vanrhynsdorp: "Hofkraal at Hartebeestrivier", *Zeyher* (or *Drège*) 110 (PRE; W).

H. disermifolia is characterized by the densely stellate-tomentose calyx which is not inflated, the very much corrugated leaves, and the branchlets and axis of the inflorescence being \pm smoothly stellate-tomentose with the rays of the stellate hairs short. M. Friedrich et al. in F.S.W.A. (1969) put *H. amoena* into synonymy under *H. disermifolia*, but more material of the former having come to light, it seems reasonable to keep them apart. The areas of distribution are adjacent and may overlap in part. *H. disermifolia* has been found in the northern portion of Vanrhynsdorp District and around Garies and Springbok in Namaqualand, whereas *H. amoena* comes principally from farther north, around Steinkopf and northwards into South West Africa in the Warmbad and Lüderitz Districts with a few southerly records on or near Spektakelberg, that is west of the escarpment. For further distinguishing features see the notes under *H. amoena*.

A specimen of *Ecklon & Zeyher* Enum. No. 332 in S named *H. bryoniifolia* Burch. is rather poor, but does appear to be *H. disermifolia*, as given in the Index Kewensis. It is certainly not *H. bryoniifolia* Burch.

51. *Hermannia mucronulata* Turcz. in Byull. Mosk. Obshch. 31: 217 (1858); Harv. in F.C. 1: 199 (1860). Type: Cape, Uitenhage, "Van Stadensriviersberge",

Ecklon & Zeyher Enum. No. 353 (TCD; PRE, photo.; S; SAM!; LE!; W!).

H. salviifolia sensu Eckl. & Zeyh., Enum. 45, No. 353 (1834), as *salvifolia*, non L.f.

Suffrutex, 30 cm–1.25 m high, branchlets shortly tomentose with fringed scales interspersed with groups of short hairs from a scaly base. *Stipules* leaf-like, subsessile or petiole up to 1 mm long, about 15 × 4 mm, velvety tomentose on both surfaces, mucronate, somewhat cuneate at base. *Leaves* petioled; blade obovate-oblong, 15–30 mm long, 6–15 mm broad in upper half, entire, velvety pubescent on both surfaces, mucronate, cuneate at base; petiole 2–4 mm long. *Inflorescence* of few-flowered cymes in the axils of upper leaves; peduncle about 6 mm long; bracts linear to subulate, 3–10 mm long; pedicels 3–7 mm long, shortly tomentose. *Calyx* inflated to subinflated, subglobose, about 9–10 mm long, lobed in upper third, subsparingly to densely stellate-pubescent, hairs short, many in a cluster on a scaly base, lobes 2–3 mm long, more or less deltoid with narrow sinuses. *Petals* yellow, shortly exerted from calyx, about 14 mm long with the apical portion recurved, narrowed in lower third to a short waist and produced into a claw with infolded margins, shortly hairy in waist. *Stamens* about 8 mm long with broadly obovate hyaline filaments; anthers about 4 mm long, overlapping filaments at base. *Ovary* about 3 mm long, densely and shortly tomentose; stipe 1 mm long; stigmas 6 mm long. *Capsule* enclosed in persistent perianth.

Found on mountains, along slopes and in gorges. Recorded from Humansdorp, Steytlerville, Uitenhage, Port Elizabeth and Albany Districts.

CAPE.—Albany: Hounslow, *Galpin* 145. Humansdorp: Otterford area, *Oliver* 4465. Port Elizabeth: "Van Stadensriviersberge", *Ecklon & Zeyher* Enum. No. 353; Steytlerville: Slagboom, *Britten* 5813. Uitenhage: 25 km up Elands Riv. road, *Acocks* 21263; Winterhoek Mountains, *Fries*, *Norlindh & Weimarck* 1055.

Characterized by the leaf-like stipules, the stipules and leaves which are velvety tomentose on both surfaces, and by the subglobose, inflated calyx.

When Turczaninov described this species, based on *Ecklon & Zeyher*'s concept of *H. salviifolia*, Enum. No. 353, he wrote that it differed from *H. salviifolia* in the inflated calyx and that *H. salviifolia* could not be distinguished from *H. involucrata*. This suggests that he had Thunberg's sense of *H. salviifolia* in mind which I have found is *H. involucrata*. *H. salviifolia* L. f. has an inflated calyx but *H. mucronulata* differs from it principally in the velvety pubescent, entire leaves.

H. mucronulata is nearest *H. velutina* in leaf character but differs in the larger flowers and the calyx which is lobed in the upper third and not to the middle or beyond.

Putative hybrids between our species and *H. hyssopifolia* have been observed.

Much confusion exists in connection with specimens of *Drège* 7267 as seen in various herbaria. In LE, S and W it is definitely *H. mucronulata*; in MO this number is mounted on a sheet with two distinct elements and two collectors' labels. The specimen in the lower right-hand corner (nearest the *Drège* label) is *H. salviifolia* var. *grandistipula*. The other label, Krauss 1588 collected on the Winterhoek Mountains, belongs with the specimens in the upper half which are *H. mucronulata*. (See also *H. bracteosa* under Species Requiring Further Attention (p. 61). The type specimen of *H. bracteosa* Presl, in PR has the same two elements on it but only one label, *Drège* 7267.

Presl described the right-hand specimen as *H. bracteosa* and the left-hand one as *H. velutina*. The former has not been matched and appears to be a hybrid between *H. velutina* and *H. salviifolia* var. *grandistipula* while the latter is *H. mucronulata*.

52. *Hermannia suavis* Presl ex Harv. in F.C. 1: 198 (1860). Syntypes: Cape, "Zuurebergen", northern slopes, Drège 7268 (K; PRE, photo.; W!; Z!); between Coega and Sunday rivers, Ecklon & Zeyher Enum. No. 354 (TCD; PRE, photo.; S!; LÉ!; Z!).

H. involucreta sensu Eckl. & Zeyh., Enum. No. 354 (1834), non Cav.

Suffrutex, low, up to about 30 cm tall, much branched, lateral branches spreading, long, appressedly scaly and villose with loose, tufted, spreading hairs. *Stipules* broadly oblong to oblong and oblong elliptic, velvety appressed-pubescent on both faces with tufted, villose hairs intermingled on lower surface, usually 3-nerved from base on lower surface. *Leaves* crowded towards apices of branches, petioled; blade obovate to oblong-cuneate or suborbicular-cuneate, rounded or subtruncate at apex, often folded, 6–12 mm long, 4–7 mm broad (near apex), velvety tomentose on both surfaces interspersed with grouped villous hairs from a scaly or tubercled base; petiole 2–6 mm long. *Inflorescences* of crowded, short cymes at apices of branchlets and in axils of upper leaves; pedicels short, up to 3 mm long, villose; bracts (not conspicuous), caducous, subulate, about 10×3 mm, dorsally villose, *Calyx* villose, inflated; tube urceolate to broadly oblong, 6 mm long, narrowed at the mouth, 5-lobed in upper quarter; lobes 2 mm long, sinuses narrowly deltoid. *Petals* yellow, apparently glabrous, more or less narrowly oblong, about 10 mm long, apex reflexed, narrowed below middle in a claw with broad, infolded margins. *Stamens* about 5 mm long, filaments oblong, hyaline; anthers about 2 mm long, overlapping filaments at base, ciliate. *Ovary* shallowly 5-lobed, about 2 mm long, stellate-pubescent with pale hairs, hairs longer at apex; stipe 1 mm long; styles about 3 mm long.

Found on hills and grassy plains from the dune hills at Cape Recife northwards to the Zuurberg. Recorded from the Port Elizabeth, Uitenhage and Somerset East Districts of the Cape.

CAPE.—Somerset East: northern slopes of the Zuurberg, Drège 7268. Uitenhage: Long 1305; between Coega & Sunday rivers, Ecklon & Zeyher Enum. No. 354. Port Elizabeth: Aloes, I. L. Drège in Govt. Herbarium 3029; hill and dunes Cape Recife, Ecklon & Zeyher 1992a; Glendinning Vale Reservoir, Olivier 461.

This species is close to *H. salviifolia* var. *grandistipula*, but differs mainly in its pubescence which is pale and villose and its leaves, which are velvety tomentose on both surfaces with scattered villose hairs, whereas the leaves in *H. salviifolia* var. *grandistipula* are densely but coarsely stellate hairy on both surfaces with some of the long hairs or the stellate hairs golden yellow.

H. suavis is characterized by leaf-like stipules and an inflated calyx, besides the pale, villose pubescence which gives the plant a soft look.

53. *Hermannia hyssopifolia* L., Sp. Pl. 674 (1753); Cav., Diss. 6, t. 181, fig. 3 (1788); Reichb., Ic. Descr. Pl. Cult. t. 49, fig. 3 (1822); DC., Prodr. 1: 494 (1824); Eckl. & Zeyh., Enum. 45, No. 355 (1834); Harv. in F.C. 1: 197 (1860); Adamson in Adamson & Salter, Fl. Cape Penins. 586 (1950). Type: Cape, Cult., in Herb. Hort. Cliffortianus (BM, holo.; PRE, photo.!).

H. angularis sensu Eckl. & Zeyh., Enum. 356 (1834); sensu Reichb., Ic. Descr. Pl. Cult. t. 68, fig. 1 (1822), non Jacq.

Suffrutex, virgate with rigid branches, 36 cm–2 m high, sometimes over 2 m tall near river, new growth roughly and densely stellate-pubescent intermingled with tufted hairs on raised bases. *Stipules* varying in size from 2 mm long and subulate near base of plant to 12 mm long and 3 mm broad in upper portions. *Leaves* petiolate; blade broadest at or near apex and long-cuneate to base or oblong-elliptic, cuneate in lower half only, 9–30 mm long, 3–15 mm broad, toothed at apex only or in upper half, finely stellate-pubescent on both surfaces, sometimes densely so to velvety tomentose, glabrescent; petiole 5–8 mm long. *Inflorescence* of several bracteate cymes usually crowded at apices of branches and branchlets; bracts large, 3- or more-nerved from base, about 9×4 mm; bracteoles smaller, about 3–7 mm long, 1.5–3 mm broad; peduncles 4–9 mm long; pedicels 2–5 mm long. *Calyx* inflated, with 5 obtuse angles, subglobose to oblong-globose, narrowed at mouth, about 9 mm long, 6 mm diam., lobed almost to halfway but lobes broad and conniving, stellate-pubescent outside. *Petals* "lemon to yellow", "citron-yellow", "pale greenish" or "cream with red rim", narrowly oblong, about 10 mm long, slightly narrowed about midway into a claw with inrolled margins, glabrous. *Stamens* with broad, hyaline filaments about 6 mm long; anthers 2 mm long, overlapping filaments at base, minutely ciliate. *Ovary* about 2.5 mm long, densely stellate-hairy; stipe 1.75 mm long; styles 3 mm long. *Capsule* enclosed in persistent calyx, about 6 mm long, 5-angled; stipe 1.5 mm long.

Widely distributed in Fynbos, Coastal Renosterveld or Karroid Broken Veld. Found on mountain slopes or sandy plains. Recorded from the Cape Peninsula northwards to Malmesbury and eastwards to Port Elizabeth.

CAPE.—Albany: Grahamstown, Britten s.n.; MacOwan 323 (Z). Bredasdorp: Bredasdorp, Smith 3040. Caledon: Caledon, Schlechter 5412 (3 sheets); Dahlstrand 1175. Ceres: Mitchell's Pass, Schlechter 8946. Humansdorp: Humansdorp, Story 2846; Acocks 15415. Knysna: Knysna, Tyson 993. Malmesbury: Malmesbury, Marsh 1298. Mossel Bay: Cloete's Pass, Acocks 14637. Paarl: Paarl, Kruger s.n.; French Hoek Pass, Marsh 655. Peninsula: Doornhoogte, Zeyher 1995; Signal Hill, Marloth 157; 5543, 5301; Kirstenbosch, Esterhuysen 291. Port Elizabeth: near Witteklip, Rodin 1040; Enon, Thode A2610. Riversdale: near Albertinia, Muir 1770. Robertson: east of McGregor, Marsh 886. Stellenbosch: Stellenbosch, Strey 667; Jonkershoek, Boucher 514; Kruger 140. Swellendam: Appelskraal, Zeyher 1998 & 1999; Story 2887. Wellington: Wellington, Doidge s.n. Worcester: Fairy Glen, Marloth 7546.

Characterized by the inflated calyx which is usually pale greenish to lemon-yellow, narrowed at the mouth with usually citron-yellow petals shortly exerted and reflexed, by cuneate leaves toothed at the apex or in the upper half, by a fine, close stellate pubescence often with tufted hairs interspersed, and especially by the bracteate inflorescences. These bracts are like large stipules and surround the flowers. The stipules in the lower part of the plant are the smallest and increase in size upwards.

Specimens have been observed that appear to be hybrids between this species and *H. mucronulata*.

54. *Hermannia salviifolia* L.f., Suppl. 302 (1781), as *H. salviifolia*. Type: Cape, Thunberg s.n., Linn. Herb. Cat. No. 854.3 (LINN, holo.; PRE, photo.!).

Suffrutex, straggling or erect, 30 cm to 1.22 m high, branchlets and most vegetative parts roughly and densely to subdensely pubescent with stellate or

Restricted to the coast in the George and Knysna Districts and in gorges along the northern borders of these districts.

CAPE.—George: near George, *Schlechter* 5860; Victoria Bay, *Schlechter* 2397. Knysna: Wittedrift, Plettenberg Bay, *Pappe* s.n. (TCD; PRE, photo.); Hontini Pass, *Galpin* 3785; Buffalo Bay, *Keet* 869; Paarde Kraal, *Burchell* 5168 (LE); between Knysna and Avontuur, *Fries, Norlindh & Weimarck* 1637; Goukama, *Heinecken* 273. Uniondale: Prince Alfred's Pass, *Acocks* 21112; Sapree River, *Van Breda* 1173.

Harvey did not designate a type but a specimen in TCD, *Pappe* s.n., was named by Harvey "var. *oblonga*" and can therefore be considered as authentic.

55. *Hermannia holosericea* Jacq., Hort. Schoenbr. 1, t. 292 (1797); Reichb., Ic. Descr. Pl. Cult., t. 69 (1822); DC., Prodr. 1: 495 (1824); Eckl. & Zeyh., Enum. 45, No. 362 (1834); Harv. in F.C. 1: 190 (1860). Type: Cape, cult. Hort. Schoenbr., top right-hand specimen annotated by Jacquin (W, lecto.!; PRE, photo.).

H. incana sensu Thunb., Fl. Cap. ed. Schult., 505 (1823), based on *Thunberg* s.n. Herb. No. 15483 (UPS; PRE, photo.).

Suffrutex 30–120 cm tall; stem erect, laxly branched from base, lower branches long and spreading, ascending; branches slender, at least new growth velvety grey-tomentose; branchlets numerous, short and slender. *Stipules* subulate to narrowly lanceolate, 2–8 mm long, velvety tomentose, early caducous. Leaves petiolate; Blade from narrowly oblong-cuneate to oblong-cuneate or suborbicular, 5–25 mm long, 2–10 mm broad, densely and finely tomentose on both surfaces, apex truncate or rounded, margins crenate in upper half or at apex only; petiole 1–10 mm long. *Inflorescence* of compound cymes, terminal on upper, ultimate branchlets; flowers sound and often crowded; peduncles and pedicels velvety tomentose; bracts linear-subulate to narrowly lanceolate, 1–3 mm long, velvety tomentose on both surfaces. *Calyx* about 3,5 mm long, stellate-tomentose without, tube turbinate, 5–10-ribbed, teeth up to 1,5 mm long, sinuses wide. *Petals* yellow, about 4,5 mm long, blade oblong, narrowed into a waist about midway where it is ciliate, lower third a claw with infolded margins. *Stamens* with oblong-elliptic hyaline filaments, 1,75 mm long, united at base and surrounding stipe of the ovary; anthers very shortly overlapping the filaments, ciliate. *Ovary* 1,5 mm long, stellate-tomentose; stipe 1,75 mm long, styles about 2,5 mm long, minutely pubescent. *Capsule* subglobose, stellate-tomentose, about 2 mm diam., surrounded by persistent calyx; stipe short, 0,5 mm long.

Found in Fynbos and Coastal Renosterveld, grassland, marginal forests, valley scrub, on lime flats, on hills and mountain slopes. Recorded from Worcester and Bredasdorp north-eastwards to Graaff-Reinet and eastwards to Albany.

CAPE.—Albany: near Grahamstown, *Schlechter* 6063 (Z); Ecklon & Zeyher Enum. 362; Hounslow, *Britten* 5680; *Galpin* 143; Alicedale, *Rogers* 37773 (Z). Bredasdorp: west of Welgelegen, *Taylor* 3788. George: Wilderness, *Levyns* 725 (BOL). Graaff-Reinet: Graaff-Reinet, *H. Bolus* 488 (Z). Ladismith: Huis Rivier Pass, *Van Niekerk* 535 (BOL). Mossel Bay: Gouritz River, *Burchell* 6421 (LE, W); *De Winter & Verdoorn* 9102; Little Brak River, *Sidley* 1736; near Herbertsdale, *Acocks* 16061. Oudtshoorn: near De Rust, *Acocks* 18281. Riversdale: Riversdale, *Acocks* 23997; Swartklip, *Muir* 1574. Robertson: De Hoop, *Britten* 657. Swellendam: Swellendam, *Mauve* 4695. Uitenhage: between Coega and Sunday Rivers, *Zeyher* 1984; Addo, *Ecklon & Zeyher* 362. Willowmore: Kouga Mtns *Oliver* 4631.

Characterized by the velvety tomentose branchlets, leaves, stipules and branches and bracts of the inflorescence; the cymose panicles terminal on ulti-

mate branchlets with the flowers secund, small and numerous. If protected, this species grows into a large, leafy bush over 1 m high and 1 m in diameter.

H. Andreae sub *Marloth* 946 from Blydeberg near Willowmore probably belongs to this species, but the hairs are longer than usual and some stipules larger.

56. *Hermannia lavandulifolia* L., Sp. Pl. 674 (1753); Curtis's bot. Mag. t. 304 (1795); Cav., Diss. t. 180, figs 1 & 1x (1788); Jacq., Hort. Schoenbr. t. 215 (1797); Reichb., Ic. Descr. Pl. Cult. t. 56, fig. 1 (1822); Eckl. & Zeyh., Enum. 45, No. 360 (1834); Harv. in F.C. 1: 199 (1860), excl. syn. *H. odorata*. Type: Cape, specimen in Herb. Hortus Cliff. (BM, holo.; PRE, photo.).

H. cavanillesiana Eckl. & Zeyh., Enum. No. 361 (1834), partly as to reference Cav. Diss., t. 180, fig. 1 (1788).

Suffrutex, weak, twiggy, 30–60 cm tall; branchlets tomentose with fringed scales and fine stellate pubescence. *Stipules* linear-subulate, early deciduous, 3–5 mm long, velvety tomentose on both surfaces (as on leaves). *Leaves* petiolate; blade oblong-oblongeolate to oblong-obovate, 6–23 mm long, 2–6 mm broad near apex, the majority entire, velvety tomentose on both surfaces, mucronate, rarely some leaves subtruncate or with one or more lobes at or near apex, broadly cuneate at base; petiole 2–3 mm long (extension of thick midrib obvious below). *Inflorescence* of 1–3-flowered cymes, leaf-opposed; peduncle scaly-pubescent, slender, long, 4–15 mm long, usually curved downwards; pedicels short, 1–2,5 mm long; bracts like leaves and stipules but smaller, 0,5–2,5 mm long. *Calyx* about 5 mm long, turbinate, lobed to just beyond middle, scaly-pubescent without, tube 5-angled, lobes with apices often infolded, *Petals* yellow, about 6,5 mm long, upper third suborbicular, narrowed at waist, claw with broad, membranous, incurved lobes on margin. *Stamens* about 4,5 mm long; filaments hyaline, apparently glabrous, oblong-obovate; anthers ciliate, overlapping filaments at base. *Ovary* finely stellate-tomentose, hairs longer at apex, 5-lobed, 1,5 mm long with a short stipe 0,5 mm long; styles cohering, capitate at the apex, sparsely pubescent, often exerted. *Capsule* more or less hidden by subsistent perianth, about 4,5 mm long, 5-lobed, stellate-tomentose; styles long persistent.

Occurs on the south Cape coast in Renosterveld, on chalky hills, in grassy country and Valley Bush. Recorded from Bredasdorp and Caledon eastwards to Mossel Bay or just beyond.

CAPE.—Bredasdorp: Between Napier and Oudekraal, *Acocks* 15494; Fort Beaufort, *Marsh* 816. Caledon: on slopes of Kleinberg, 0,3 km north-west of Napier, *Thompson* 3204. Mossel Bay: Ruytersbosch, *Van Niekerk* 41; Morau in TRV 19039. Riversdale: Nature Reserve, *Taylor* 7737; Plattkloof, *Muir* 471; near Wyders River, *Muir* 886. Swellendam: 27 km from Middelburg, *Story* 2888; near Heidelberg, *Acocks* 21098.

Characterized by entire, velvety tomentose leaves (tomentum made up of fringed scales and fine stellate pubescence), distinct but short petioles, small, subulate stipules, long, slender, leaf-opposed, spreading to decurved peduncles, and scaly calyces lobed to beyond the middle.

This species was confused by Ecklon & Zeyher with *H. diversistipula* var. *graciliflora*, which they referred to as *H. cavanillesiana*.

Drège 7283 in MO is for the greater part *H. lavandulifolia* and for the lesser part *H. diversistipula* and *H. odorata*.

57. *Hermannia odorata* Ait., Hort. Kew. ed. 1, 2: 412 (1789); Reichb., Ic. Descr. Pl. Cult., t. 56 (1822); Willd., Sp. Pl. 3: 597 (1800); Pers., Syn. Pl. 2: 216 (1807). Type: Cape, cult. Kew., sine coll., sine no. (BM, holo.; PRE, photo.).

Suffrutex up to 150 cm tall with suberect branchlets, new growth densely clothed with fringed scales, ribbed in parts. *Stipules* subulate, 3–8 mm long, up to 1 mm broad at base, usually less, velvety tomentose on both surfaces. *Leaves* cuneate into a very short petiole; blade oblanceolate to narrowly oblong-cuneate, 10–26 mm long, 2,5–7 mm broad near apex, velvety tomentose on both surfaces, usually folded along midrib which is thick and prominent beneath, acute and slightly recurved at apex, margin entire, occasionally with an odd tooth near apex; petiole up to 2 mm long. *Inflorescence* terminal on ultimate branchlets or in axils of, or opposite, upper leaves, in few-flowered pseudoracemose cymes, flowers more or less secund; peduncle short and stiff; bracts subulate, 1–2,5 mm long, usually occurring in threes (the reduced leaf and 2 stipules), reduced leaves only twice as long as stipules and stipule-like). *Calyx* about 7 mm long, lobed to above middle (sinuses V-shaped), densely yellow-tomentose without, hairs fringing pit-like scales. *Petals* twisted, yellow, about 9 mm long, upper portion oblong, about 5 mm long, abruptly narrowed into a short, densely ciliate waist (stellate-pubescent dorsally) and then into a claw with infolded margins. *Stamens* with oblong, hyaline filaments about 3 mm long, anthers pointed, ciliate, about 2,5 mm long, overlapping filaments at base. *Ovary* about 2,5 mm long, 2 mm broad, tomentose, hairs longer at apex, obscurely 5-lobed and 5-umbonate at apex; styles adhering, with a few short hairs in lower half, about 3,5 mm long; stipe under 1 mm long. *Capsule* about 5 mm long, cupped at base by persistent calyx, stellate-tomentose, 5-angled, 5-umbonate.

Found in mountainous Renosterveld, on hills and rocky slopes. Recorded from the Clanwilliam, Ceres and Montagu Districts and eastwards through Riversdale, Ladismith and Prince Albert to Uniondale.

CAPE.—Ceres: Karooport, *Marloth* 9032; *Hafström* & *Acocks* 939; N. of Pienaarspoort, *Acocks* 23687. Clanwilliam: "Kerskopp", *Schlechter* 8798; Kromme River, *Leighton* 21572; *Esterhuysen* 20524. Ladismith: Roodeberg Pass, *Lewis* 5041. Montagu: North Slope. *Dahlgren* & *Peterson* 4 (GB); near Baths, *Michell* 144. Prince Albert: Swartberg Pass, *Acocks* 15526; Zand River Mountains, *Muir* 4334. Riversdale: near Garcias Pass, *Galpin* 3786. Uniondale: Joubertina, *Horn* SKF 2444; *Acocks* 20011; Mannetjiesberg, *Taylor* 1474.

In F.C. 1: 199 *H. odorata* Ait. is treated as a synonym of *H. lavandulifolia*, but Aiton's type in BM was found to match the specimens cited here. It also matches Reichenbach's figure very well, cited above, named *H. odorata*. *H. odorata* differs from *H. lavandulifolia* in the plants being taller, more robust, the peduncles suberect instead of slender and cernuous, the calyx yellow-tomentose without and not so deeply lobed. This species is quite distinct from *Mahernia odorata* Andr., Bot. Rep. 7: 85 (1800). *M. odorata* sensu Ecklon & Zeyher, Enum. No. 405, is *H. scabra* Cav. (= *H. presliana* Turcz.).

Specimens labelled *H. fourcadii* Pillans ms. belong to this species.

58. *Hermannia sulcata* Harv. in F.C. 1: 200 (1860). Type: Cape, Sondag River near Port Elizabeth, *Ecklon* & *Zeyher* Enum. No. 359 (S, lecto.; PRE, photo.).

H. odorata sensu Eckl. & Zeyh., Enum. 359, non Ait.

Suffrutex up to 60 cm tall, sprawling, much branched, branches slender, new growth tomentose with fringed scales. *Stipules* linear-oblanceolate, sessile, acute, velvety tomentose on both sides, 5–10 mm long, about 1 mm broad. *Leaves* shortly petiolate; blade velvety tomentose on both surfaces, narrowly obovate, 12–17 mm long, 5–8 mm broad near apex, often folded, margins usually entire, occasionally some shallowly crenate in upper portion; petiole about 2,5 mm long. *Inflorescence* of leafy racemose cymes terminal on branchlets and in axils of upper leaves; peduncle slender, suberect, bracteoles linear-subulate, in threes (reduced leaf and stipules), about 2 mm long; pedicels of ultimate pair of flowers more or less the same length. *Calyx* narrowly obconic, narrowed at the mouth, 5-lobed in the upper half, often with 5 thick, prominent ribs alternating with 5 less prominent ribs, fairly densely pubescent with small fringed scales and stellate hairs, hairs long on margins of lobes; lobes about 2 mm long, acute, mucronate. *Petals* stongly twisted, yellow, sometimes partly suffused with dark red, about 8 mm long, oblong-orbicular and emarginate in upper quarter, narrowing slightly into a long waist and in lower quarter into a spur with infolded margins, minutely stellate-pubescent just behind the margin of narrowed central portion. *Stamens* about 4 mm long with oblong-cuneate hyaline filaments; anthers ciliate, overlapping filaments at base. *Ovary* about 1 mm long, shallowly 5-lobed and very shortly 5-umbonate at the apex, stellate-pubescent, especially along the lobes, hairs longer at the apex; stipe under 0,5 mm long; styles adhering, rather thick; stigma terminal, capitate.

Found on slopes, in river valleys, in clayey ground. Recorded from around Port Elizabeth, from near Grahamstown and in the Steytlerville District.

CAPE.—Port Elizabeth: Sundays River near Port Elizabeth, *Ecklon* & *Zeyher* Enum. No. 359 (S); Algoa Bay, *Forbes* s.n. (K); Baakens River, *Long* 476; Walmer, *Cruden* 316. Albany: north of Grahamstown, *Robbertse* 2. Steytlerville: Baviaansklouf Mts; Kleinrivier area, N.E. of Smitskraal, *Oliver* 4560.

The specimen of *Ecklon* & *Zeyher* Enum. No. 359 in S has the name *H. sulcata* written on the label in Harvey's handwriting. This specimen has therefore been selected as lectotype.

It is evidently a species with a restricted distribution. The specimens cited above are the only ones seen.

Apparent hybrids between this species and *H. velutina* have been observed in the Steytlerville district (*Oliver* 4517 and 4516). Their calyx is too long for *H. velutina* and the infusion of red in the centre of the petals is present as in *H. sulcata*. The leaves are more like those of *H. velutina*.

59. *Hermannia velutina* DC., Prodr. 1: 495 (1824); Eckl. & Zeyh., Enum. 45, No. 357 (1834); Harv. in F.C. 1: 199 (1860); Sim, For. Fl. Cape Col. 146, t. 15 (1907). Type: Cape, Somerset East, "Zwartwater Poort", *Burchell* 3393 (K; PRE, photo.; PRE!; LE!).

Frutex, slender, erect, 70 cm to 3 m high, branches rather slender, new growth pubescent to velvety tomentose with minute fringed scales and stellate hairs, glabrescent. *Stipules* leaf-like, elliptic-cuneate to oblanceolate-elliptic, 3–20 mm long, 1–6 mm broad, sessile or shortly petioled, velvety tomentose on both surfaces, mucronate. *Leaves* petiolate; blade broadly to narrowly oblong-elliptic, or oblanceolate-elliptic, 5–50 mm long, 2,5–20 mm broad, velvety tomentose on

both surfaces, mucronate, often folded along midrib, midrib impressed above, prominent beneath; petiole 2–10 mm long, *Inflorescence* of short, paniculate cymes terminal on branchlets and in axils of upper leaves, 2,5–6 cm long; bracts early caducous, terete, up to 9 mm long, tomentose; pedicels short, 2–6 mm long. *Calyx* campanulate, 5–7 mm long, lobed to middle or beyond, pubescent with scale- or tubercle-based hairs, drying thin. *Petals* usually only slightly longer than calyx, from about 6 to 8 mm long, oblong to suborbicular in upper third, narrowed to a ciliate waist and produced in lower third into a claw with broadly infolded margins. *Stamens* about 5 mm long, filaments hyaline, obovate, obscurely pubescent on shoulder, anthers about 3 mm long, ciliate, overlapping filaments at base. *Ovary* finely pubescent with longer hairs at the apex, 5-angled and 5-umbonate at apex; stipe small, up to 0,75 mm long; styles cohering, about 2,5 mm long. *Capsule* enclosed in persistent perianth, about 5 mm long, finely stellate-tomentose but hairs longer at apex of capsule.

Occurs on rocky slopes at forest margins, along rivers, in open grassveld, on sand dunes and in Coastal Fynbos. Recorded from Humansdorp eastwards through the Transkei to Natal and inland as far as Somerset East.

CAPE.—Albany: Coombes Valley, *Bayliss* 4310; Grahamstown, *Rogers* 28683; Stone's Hill Range, *Galpin* 160. Alexandria: Nanaga, *Acocks* 12797; *Story* 1309. Bathurst: Three Sisters, *Britten* 702; Buffalo River, *Galpin* 1871. Humansdorp: Humansdorp, *Rogers* 2828; *Wells* 2948; Klipdrift, *Thode* A2463. Kentani: Kentani, *Pegler* 453; Nomaheya Forest, *Strey* 6712. Komga: Komga, *Flanagan* 510. Port Elizabeth: Vaal Vlei Estate, *Mogg* 5379; Baakens River, *Long* 478. Somerset East: "Zwartwater Poort", *Burchell* 3393. Uitenhage: between Coega and Sundays Rivers, *Zeyher* 1989; Groendal, *Long* 1160. Victoria East: Pepperskop, *Alice*, *Acocks* 9761.

NATAL.—Durban: Malvern, *Medley Wood* 11846 (NH). Isipingo: Isipingo, *Ward* 893; 5889; between "Omcomas and Omlas", *Drège* s.n. (S).

Characterized by the velvety leaves which are entire and petioled, the leafy stipules, campanulate calyx and leafy panicles.

This species usually occurs as a robust plant, but sometimes it is twiggy with small leaves and very small flowers. Specimens representing this small form are *Zeyher* 1989 in PRE, a PRE specimen originally from Herb. Sonder, labelled with the Enum. label No. 359 *H. odorata*, but named *H. sulcata* by Tych. Norlindh in 1939 and probably also the lower specimen on No. 311334 in W (labelled *H. odorata*) (the upper is *H. diversistipula*).

On many herbarium specimens the author is given as Burchell, but DC. actually published the species with Burchell's specimen as type.

In leaf character, *H. velutina* approaches *H. mucronata* Turcz., but differs in the inflorescence and the smaller flowers with the calyx lobed to the middle.

Specimens which appear to be hybrids between *H. velutina* and *H. sulcata* have been observed.

60. *Hermannia gracilis* Eckl. & Zeyher, Enum. 45, No. 358 (1834); Harv. in F.C. 1: 200 (1860). Type: Cape, Graaff-Reinet, *Ecklon* & *Zeyher* Enum. No. 358 (S!; PRE, photo.!).

Suffrutex with slender branchlets, 90–120 cm tall, new growth thinly tomentose with fringed scales, glabrescent. *Stipules* leaf-like, narrowly elliptic to oblanceolate-elliptic, 5–20 mm long, 1–4 mm broad, acute at apex, cuneate at base, sometimes cuneate into a petiole up to 3 mm long, velvety tomentose on both surfaces, sometimes fairly thinly so. *Leaves* usually

shortly petiolate; blade narrowly elliptic-cuneate to oblanceolate-elliptic or oblong-cuneate, 10–23 mm long, 4–8 mm broad, often acute at apex, cuneate at base, margins entire or rarely with a few teeth in upper portion, velvety tomentose on both surfaces, sometimes fairly thinly so; petiole 2–5,5 mm long. *Inflorescence* a few-flowered racemose cyme terminal on the lateral branchlets. *Calyx* tubular, campanulate, about 7 mm long, tomentose with short stellate hairs, minute gland-tipped hairs and fringed scales, lobed to above middle, subglabrescent, lobes acute to subulate from a deltoid base, about 2 mm long, sinuses wide, u-shaped, margins pubescent. *Petals* "yellow and red", "dull yellow", "orange", "rather pale yellow" or "brownish yellow", contorted, about 10 mm long, exceeding calyx, upper half broadly oblong, emarginate, narrowing into a long claw with infolded margins, pubescent along sides in centre. *Stamens* about 5 mm long, with hyaline, narrowly oblong filaments united for less than 1 mm at base around short stipe; anthers acute, ciliate. *Ovary* about 4 mm diam., subglobose, obscurely 5-lobed and 5-umbonate at apex, stellate-tomentose hairs short but longer towards apex of ovary; stipe almost 1 mm long; styles adhering; stigma small. *Capsule* exerted from calyx remains, about 7–8 mm long, pubescent with stellate hairs, hairs short except along sutures and at apex.

Found in karroid bushveld, on rocky slopes, in river valleys and karroid scrub. Recorded from Steytlerville and Graaff-Reinet Districts eastwards to the Fish and Kat River valleys.

CAPE.—Albany: near Grahamstown, *Dyer* 519; 1377; Brak-Kloof, *Acocks* 12044; Pluto's Vale, *Story* 2278; Botha's Hill, *Schlechter* 6086. Bedford: N. of Camerons Glen, *Acocks* 12802; 12803; Koonop Heights, *Britten* 2047; on banks of Baviaans River, *Theron* 1051. Graaff-Reinet: Wimbledon, *Henrici* 4933. Jansenville: N.E. of Jansenville, *Comins* 818. Port Elizabeth: Coega, *Bayliss* BS 2271 (MO). Steytlerville: N.W. of Patentie, *Story* 2441. Uitenhage: Kirkwood area, *Hardy* 3815; Winterhoek, *Krauss* 1590 (MO).

61. *Hermannia diversistipula* Presl ex Harv. in F.C. 1: 198 (1860); Presl, Bot. Bemerk. 21 (1844), nom. nud. Type: Cape, Swellendam, Breede River, *Drège* 7274 (K, holo.; PRE, photo.!.; LE!).

Suffrutex, branches erect to spreading, ascending or long and distichously arranged, clothed with fringed scales. *Stipules* leaf-like, sessile, linear-acute to elliptic, oblong-obovate or oblong-elliptic, 3–10 mm long, 0,75–3,5 mm broad, scaly-tomentose on both surfaces. *Leaves* subsessile or narrowed into a short petiole; blade 5–20 mm long, 2–10 mm broad at apex, cuneate at base, apex rounded or truncate, sometimes lobed, mucronate, usually conduplicate with small mucro slightly recurved, scaly-tomentose on both surfaces; petiole up to 3 or rarely 5 mm long. *Inflorescence* of short, usually 2-flowered, axillary cymes, flowers nodding and usually secund. *Calyx* lobed to about middle or almost to middle, scaly-tomentose outside, lobes deltoid or oblong, mucronate, apices often incurved. *Petals* twisted in upper portion, garnet-red or chrome-yellow, about 10 mm long, upper third broadly oblong, narrowing into a central waist, produced into a claw with infolded margins in lower third, minutely stellate-pubescent on margins in centre and on edges of claw. *Stamens* with hyaline oblong-elliptic filaments, about 3 mm long; anthers 1,5–2,5 mm long, cells acute, minutely ciliate, overlapping the filaments at base. *Ovary* 2–3 mm long, obscurely 5-angled and 5-umbonate at apex, scaly-pubescent and stellate-pubescent at apex; stipe

almost 1 mm long; styles cohering, minutely pubescent. *Capsule* 5–7 mm long, 5-umbonate at apex, finely stellate-pubescent, more coarsely so at apex. *Seeds* reniform, 1,5 mm long.

Found in stony soil on hill tops with karroid shrubs, also in river flats, valley bush, Coastal Renosterveld and Fynbos. Recorded from Tulbagh District and south-eastwards to George.

The aggregate species is characterized by the rather small, velvety tomentose, mostly entire leaves, the leaf-like stipules and the nodding, often secund flowers which are axillary and occur singly or in pairs on fairly short peduncles. The tomentum is made up of fringed scales intermingled with fine stellate hairs.

Key to varieties

Calyx over 5 mm wide at the mouth, with broad lobes; branches several from a thickened woody rootstock; stipules almost as long as the leaves.....(a) var. *diversistipula*

Calyx tube narrow, under 5 mm wide at the mouth; suffrutex up to 90 cm tall with slender, distichous branches; stipules about half as long as the leaves.....(b) var. *graciliflora*

(a) var. *diversistipula*

Verdoorn in Flower. Pl. Afr. 41, t. 1620 (1970).

H. diversistipula var. *nana* Harv. in F.C. 1: 198 (1860). Type: Cape, Storm Valley, Breede River Poort, Zeyher s.n.

Suffruticose perennial with several spreading, ascending to erect branches from a thickened woody rootstock; branchlets clothed with fairly coarse, fringed scales. *Stipules* oblong-elliptic to oblong-obovate, 2–8 mm long, 1–3,5 mm broad in upper half, velvety tomentose on both surfaces with fringed scales. *Leaves* sessile to subsessile; blade cuneate from a rounded or obtuse apex, conduplicate, 3,5 to 12 cm long, up to 6 mm broad at apex, velvety tomentose on both surfaces with fringed scales, apex rounded or broadly obtuse and lobed. *Inflorescence* axillary in upper leaves (usually only the 3 upper leaves); peduncles 2–5 mm long; pedicels 2 mm long, bracts linear, about 2 mm long. *Calyx* scaly-tomentose, about 5 mm to 7 mm long, lobed to about middle, lobes more or less oblong, up to 3 mm broad, apical portion incurved. *Petals* red or yellow, about 10 mm long. *Capsule* subglobose, shortly exerted from calyx, 5-umbonate at apex.

Found on level stony soil on hilltops with karroid shrubs, on shale hillocks in valley bush and on river flats. Recorded from the Malmesbury District eastward to Swellendam District.

CAPE.—Bredasdorp: between Elandsdrift & Wiesdrift, Dahlgren & Peterson 440a; (G.B.); Klipdale, Smith 3200; Kykhoedie, Acocks 22724. Caledon: west of Rietpoel, Taylor 3756; 23 km from Caledon on way to Swellendam, Story 3070. Malmesbury: Lucasfontein near Oupos Hotel, Acocks 24302. Swellendam: Breede River, Drège 7274; Bontebok Park, Acocks 22567. Tulbagh: Ceres Road (Wolseley), Schlechter 8988; Saron, Schlechter 7871 (LE; BOL).

Although the areas of distribution of the varieties overlap to some extent and are approximate, the typical variety seems to favour higher regions in karroid shrub, whereas var. *graciliflora* is found at lower levels in Coastal Renosterveld or Fynbos.

(b) var. *graciliflora* Verdoorn in Flower. Pl. Afr. 41, t. 1620 (1970). Type: Cape, between Heidelberg and Witsand, De Winter & Verdoorn 9095, cult. PRE 20920 (PRE, holo!; K!).

H. cavanillesiana Eckl. & Zeyher, Enum. 45, No. 361 (1834) partly, as specimen Eckl. & Zeyher from between Hassaquaaskloof and Breede River (TCD; PRE, photo!; PRE!; LE!); sensu Harv. in F.C. 1: 199 (1860) as to Eckl. & Zeyher specimen cited.

Suffrutex up to 90 cm high with spreading branches which are distichous and densely to sparsely pubescent with minute fringed scales. *Stipules* linear-acute to narrowly elliptic, 3–10 mm long, 0,75–3,5 mm broad, tomentose on both surfaces with minute fringed scales and stellate hairs, sometimes with minute glands intermixed. *Leaves* subsessile or shortly petiolate; blade tomentose on both surfaces, tomentum as on stipules, oblanceolate to obovate, cuneate at base, usually conduplicate, 4,5–20 mm long, 2–10 mm broad near apex, entire, apex broadly acuminate with a small recurved mucro; petiol up to 3 mm long rarely up to 5 mm. *Inflorescence* of usually 2-flowered cymes, axillary, flowers secund; peduncle 2–5 mm long; pedicels 1–3 mm long, bracts up to 5 at base of pedicels variable and linear-lanceolate to ovate-lanceolate, simple or 3-lobed, lobes up to 3 mm long, acute. *Calyx* about 5 mm long, lobed almost to middle, obscurely 5-angled, tomentose without, lobes deltoid, acute or acuminate, apices sometimes strongly in-curved. *Petals* red or yellow, about 9 mm long. *Capsule* about 5 mm long, eventually half exerted from persistent calyx, 5-angled, 5-umbonate at apex.

Found in Fynbos, Coastal Renosterveld and valley bush along the southern Cape coast. Recorded from the Caledon District eastwards to George and Uniondale.

CAPE.—Bredasdorp: 33 km E. of Bredasdorp, Marsh 941; Kathoek, Acocks 22597. Caledon: Zwartberg in the vicinity of the Baths, Zeyher 1988. George: near Camfer Station, Acocks 22343. Mossel Bay: Mossel Bay, Sidey 1741; Acocks 15398; near Cooper Siding, Acocks 24094. Oudtshoorn: De Rust, Acocks 20458. Riversdale: Gouritz River, Drège 7272; Marsh 576; Tygersfontein, Galpin 3790. Swellendam: between "Hassaquaaskloof and Breede River", Ecklon & Zeyher s.n.; between Heidelberg and Witsand, De Winter & Verdoorn 9095; Marsh 935; Mauve 4786; Bonnievale, Marloth 11834. Uniondale: 1 km N. of Uniondale, Ellis 16396.

Besides the diagnostic characters mentioned in the key, that is the difference in habit, calyx and stipules, there are other features that may assist in distinguishing the two varieties. In var. *diversistipula* the fringed scales are usually larger, the leaves, which hardly exceed the stipules, are often lobed at the apex and the flowers are usually found in the axils of only the upper three to five leaves. In var. *graciliflora* the fringed scales are minute, the leaves which overtop the stipules by about half are entire at apex and flowers usually arise in the axils of leaves along the upper half or two-thirds of the branchlets.

62. *Hermannia cuneifolia* Jacq., Hort. Schoenbr. 1, t. 124 (1797). Type: Cape., cult. Hort. Schoenbr., two flowering twigs on left hand of sheet, with the name, in Jacquin's handwriting, on the label (W, lecto.!; PRE, photo!).

Suffrutex, usually heavily browsed, varying in height from 15–90 cm tall, rigid, erect or spreading, much branched, branchlets very sparsely to very densely lepidote-stellate and then silvery grey in appearance. *Stipules* from small and subulate from a broad base to broadly ovate in upper parts of plant, base broad and sometimes subcordate, apex acute or acuminate, up to about 3,5 mm long and 3,5 mm broad at base, pubescence as on leaves but with a few long hairs at apex or also on margin near apex. *Leaves* appearing fascicled when crowded on abbreviated shoots, shortly petiolate; blade dull grey-green to silvery grey, concolorous, cuneate, from about 6–18 mm long, 3–10 mm broad at apex, truncate, bi-lobed or broadly rounded and coarsely crenately

lobed at apex, sometimes conduplicate, upper and lower surfaces from sparsely to densely tomentose with fringed pitted scales (lepidote-stellate), lateral nerves usually obscure; petiole 1–9 mm long. *Inflorescence* a raceme of secund, 1–2-flowered cymes terminal on ultimate branchlets, or cymes 3–5 congested at apices of short, lateral branchlets; peduncles very short (1 mm long) and spreading or about 4 mm long and then strictly erect; bracts 2–3 or more at a node and sometimes with an entire, elliptic bract among them, broadly ovate, usually about 3–4 mm long, 2–4, 5 mm broad at base, semi-amplexicaul, sometimes united, cucullate, sometimes with bristle-like hairs on margins and apex; pedicels 1–5 mm long, cernuous. *Calyx* campanulate, about 6 mm long, lobed to about one third the length, laxly to very densely lepidote-stellate, the scales and hairs straw-coloured or some light reddish brown. *Petals* bright yellow to dark orange-red, up to about 5–10 mm long, narrowed at base into a claw, claw glabrous to densely pubescent along margins, lower portion with inrolled margins. *Stamens* with hyaline, oblong-ovate filaments, a few hairs on shoulders; anthers 3 mm long, pointed, ciliate. *Ovary* densely lepidote-stellate (hairs short), shallowly 5-lobbed, shortly stipitate; stipe 1 mm long; styles about 5 mm long. *Capsule* lepidote-stellate, about 7 mm long.

Found along the eastern margins of the winter-rainfall area and from there eastwards to the Great Fish River and northwards to Namaqualand, the southern Orange Free State and Lesotho.

Key to varieties

- Flowers secund, about 9 mm long; calyx and leaves, at least on lower surfaces, densely lepidote-stellate. (a) var. *cuneifolia*
 Flowers 3 to 5 in a cyme, congested at apices of numerous short, lateral branchlets about 5,5 mm long, leaves fairly sparsely to sparsely lepidote-stellate on both surfaces.
(b) var. *glabrescens*

(a) var. ***cuneifolia***. Verdoorn in *Bothalia* 10, 1: 79 (1969).

H. cuneifolia Jacq., Hort. Schoenbr. 1, t. 124 (1797); Reichb., Ic. Deser. Pl. Cults. t. 60 (1822); DC., Prodr. 1: 495 (1824); Harv. in F.C. 1: 189 (1860), partly, excluding syn. *H. multiflora* and specimen cited. Type: Cape, cult. Hort. Schoenbr., two flowering twigs on left hand of sheet with the name, in Jacquin's handwriting, on the label. (W, lecto.; PRE, photo.!)

H. pallens Eckl. & Zeyh., Enum. 48, No. 378 (1835). Harv. in F.C. 1: 190 (1860). Type: Cape, Uitenhage between Coega and Sundays Rivers, *Ecklon & Zeyher* Enum. No. 378 (K; PRE, photo.! PRE!; S!; NBG!).

H. secundiflora Eckl. & Zeyh., Enum. No. 380 (1835). Type: Cape, Caledon, Potrivier, Langehoogde et Bontjes Kraal, *Ecklon & Zeyher* Enum. No. 380 (PRE!; S!).

H. lepidota Buch. ex Krauss, Flora 27: 294 (1844), nom. nud. based on *Krauss* s.n. from Winterhoek (W!; PRE, photo.! LE).

H. membraniflora Schltr. in Bot. Jb. 55: 359 (1919). Type: Cape, Vanrhynsdorp: Pappelfontein, Onderbokkeveld, *Schlechter* 10911 (K; PRE, photo.!; PRE! BOL!; S!; LE!).

The typical variety is a more robust plant and is reported to be more palatable than var. *glabrescens*; flowers are larger and secund on lateral branchlets and petals usually densely pubescent on margins of claw. The dense lepidote-stellate pubescence gives branches and leaves a silvery grey appearance especially in eastern and northern regions. Under the microscope this pubescence is seen to be composed of pitted scales fringed with hairs.

Found in marginal Fynbos from Bellville in the south-western Cape northwards to Namaqualand and eastwards through the Broken Veld and Arid Karoo to the Alexandria and Middelburg Districts.

CAPE.—Alexandria: Addo National Park, *Archibald* 3751. Beaufort West: Oukloof Pass, *Acocks* 14332. Bellville: near Durbanville, *Taylor* 4963. Bredasdorp: Napier, *Compton* 8989 (NBG); Klipdale Station, *Smith* 3196. Caledon: Potrivier, Langehoogde et Bontjeskraal, *Ecklon & Zeyher* Enum. No. 380 (S). Calvinia: Calvinia, *Acocks* 14442; *Schmidt* 49: 164, 312. Carnarvon: Carnarvon, *Leistner* 482. Ceres: Ezelsfontein, *Esterhuysen* 20361. Clanwilliam: Clanwilliam, *Acocks* 19667; Olifants River near Rondegat, *Schlechter* 5045. Cradock: Rayner's Koppie, *Acocks* 11922; Dwingfontein, *Storj* 1319; Baroda, *Dyer* 1037. De Aar: De Kalk, *Henrici* 4522. Fraserburg: *Hafström & Acocks* 942. Graaff-Reinet: Klipfontein, *Codd* 3530. Ladismith: *Acocks* 14608. Laingsburg: Whitehill, *Compton* 11202 (NBG). Middelburg: Conway Farm, *Gilfillan* sub *Galpin* 5504; 5505. Mossel Bay: *Sidey* 1742; *Acocks* 15396. Namaqualand: West of Kamieskroon, *Acocks* 16454. Paarl: Paarlberg, *Bos* 368 A. Richmond: Elandskuilen, *Acocks* 8732. Riversdale: east of town, *Acocks* 21377; Onverwacht, *Muir* 1608. Robertson: Robertson, *Van Breda & Joubert* 1921. Somerset East: Aansville, *Long* 747; Sheldon, *Mrs Hutton* 12399; Kommadagga, *Bayliss* 1619. Stellenbosch: Klapmuts, *Esterhuysen* s.n.; *Taylor* 5034. Steytlerville: Barroe, *Storj* 2307. Swellendam: Swellendam, *Martin* 249 (NBG); near Heidelberg, *Barker* 5567 (NBG; BOL). Uitenhage: Winterhoek, *Burchell* s.n. (LE; W): between Coego & Sundays River, *Ecklon & Zeyher* Enum. No. 378 (type gathering of *H. pallens*). Vanrhynsdorp: Heerelogeement, *Zeyher* s.n. (S); Pappelfontein, *Schlechter* 10911; north of town, *Acocks* 14744. Victoria West: *Rehm* s.n. Willowmore: *Theron* 1369. Worcester: Mowers Siding, *Acocks* 14541.

In the past this species has gone under the name *H. pallens* Eckl. & Zeyh., mainly owing to Harvey's (1860) misidentification of *H. cuneifolia* Jacq. See notes under *H. multiflora* for particulars.

Although *H. cuneifolia* var. *cuneifolia* is widely spread from west to east, and consequently varies in some respects, it is clearly definable as a unit. It is evidently very palatable to browsing animals, for most specimens show signs of having been eaten down continuously. The flowers are said to be sweetly scented. *Acocks* reports that this variety has advanced and still is advancing eastwards and northwards into the ecological vacuum caused by the withdrawal of the grassveld.

This variety is close to *H. pfeilii* K. Schum., and *H. Bolus* 6081 and *Acocks* 14994 from Namaqualand appear to be intermediates, with the pubescence on the leaves like that of *H. pfeilii* but the calyx more like that of *H. cuneifolia* var. *cuneifolia*.

H. triphylla sensu Eckl. & Zeyh. Enum. No. 379 (as represented in SAM) is *H. cuneifolia*.

(b) var. ***glabrescens*** (*Harv.*) Verdoorn in *Bothalia* 10, 1: 79 (1969). Type: Without locality, *Drège* s.n. (K, lecto.!; PRE, photo.!; W!).

H. pallens Eckl. & Zeyh. var. *glabrescens* Harv. in F.C. 1: 190 (1860), partly as to *Drège* specimen cited, excluding Mrs Barber, Albany.

This variety differs from the typical in that the shrublets are generally 30–60 cm tall, more repeatedly branched, the branchlets shorter, rigid and early glabrescent; the leaves are more sparsely lepidote-stellate, the inflorescence is congested at the apices of numerous, short, lateral twigs, usually with only 3 to 5 flowers in each cyme; the flowers are smaller, just over 5 mm long (instead of 8–10 mm long), the calyx more narrowly campanulate and slightly narrowed at the throat, and the petals glabrous or nearly so and cuneate into the claw instead of distinctly ciliate to densely pubescent along the margins and abruptly narrowed into the claw.

Found in stony ground, mainly in the transitional zone between Karoo and grassland, which stretches roughly from the vicinity of Beaufort West north-eastwards in a widening band through Middelburg to

Aliwal North and through Herbert District into the Orange Free State, reaching Lesotho in the east.

CAPE.—Aliwal North: Aliwal North, *Thode* A1840. Beaufort West: Nieuwveld Mts, *Esterhuysen* 2748; *Marloth* 2138; Sunnyside, *Esterhuysen* 5056. Colesberg: Colesberg, *Botha* in BLFU 7547. Cradock, *Brynard* 43; Modderfontein, *Acocks* 12811. Herbert: Thornhill, *Leistner* 1422. Middelburg: Middelburg, *Horn* s.n.; Conway Farm, *Gilfillan* sub *Galpin* 2955; 5507. Murraysburg: Murraysburg, *Van Heerden* 1; *Tyson* 271 (SAM). Richmond: Leopard's Vlei, *Bolus* 13852.

O.F.S.—Bloemfontein: Bloemfontein, *Gemmell* in BLFU 6440; *Thode* A521; *De Winter* 8969; Grants Hill, *Wasserfall* 219 (BOL). Fauresmith: Fauresmith, *Smith* 413; 4541; *Henrici* 1815; 1864; *Verdoorn* 1140. Philippolis: Philippolis, *Smith* 4485; 4497. Rouxville: *Ecklon & Zeyher* loc. 114 in *Linnaea* 19. Thaba Nchu: Thaba Nchu, *Roberts* 2666. Zastron: Zastron, *Maree* 1.

LESOTHO.—Leribe: *Dieterlen* 755.

According to "Zwei Documente" the Drège specimen of *H. multiflora*, on which Harvey based his *H. pallens* var. *glabrescens*, was collected in the Hexrivierbergen, Bokkeveld, that is Ceres District, slightly outside the known distribution but it could possibly occur there. The specimens agree with those collected further north.

In *Flora Capensis* 1: 190 Harvey suggested that var. *glabrescens* was possibly *H. multiflora* Jacq. This has proved to be incorrect (see notes under *H. multiflora* Jacq.).

Some specimens from outside the known distribution area appear to be intermediates or hybrids between these varieties.

According to reports, the leaves when squashed form a sticky mass which is considered to have a healing effect when applied as a plaster to sores. This accounts for the common name "Geel pleisterbossie", generally used in the Orange Free State. The prefix "geel" (meaning yellow) is misleading because the flowers may be bright yellow on some plants or orange-red on others.

Burke & Zeyher 122 in S is typical *H. cuneifolia*, but it could hardly have been collected on the Orange River.

63. *Hermannia desertorum* *Eckl. & Zeyh.*, Enum. 48 (1834); Harv. in F.C. 1: 189 (1860). Type: Cape, near Graaff-Reinet, *Ecklon & Zeyher* Enum. No. 382 (K; PRE, photo.!, S!; SAM!).

Suffrutex, usually heavily browsed, if protected, about 60 cm tall with slender, divaricate branchlets becoming indurated, branches chestnut-brown, drying dark brown or with slight metallic sheen, young growth with a fine, greyish, sericeous tomentum made up of microscopic fringed scales and stellate hairs. *Stipules* subulate from a broad base or ovate-cuspidate, 2–3 mm long, covered with a thin grey tomentum. *Leaves* shortly petiolate; limb suborbicular, broadly cuneate into the petiole, from 5×5 mm to 8×7 mm, plicate at first and covered by a thin greyish rather sericeous tomentum, becoming glabrescent on upper surface, older leaves sometimes stellate-pubescent on both sides, broadly rounded at apex, deeply and broadly crenate except at base; petiole 2–5 mm long, pubescence as on leaf undersurface. *Inflorescence* terminal, in few-flowered, racemose cymes, (sometimes 1-flowered and secund-hybrids?); peduncles and pedicels varying from very short, about 2 mm long, to 5 mm long, pubescence as on young branchlets; bracts 1.5–2.5 mm long, rather thick, broadly ovate to subulate from a broad base. *Calyx* thin-textured in dried specimens, subinflated, 5-gibbose, about 5 mm long, wide at mouth, lobed to

near middle, finely pubescent with minute fringed scales. *Petals* yellow, minutely papillose within, upper half more or less oblong-orbicular, abruptly narrowed into a waist and produced below in a claw with margins inrolled, claw sometimes strongly arcuate, appears glabrous, but a few microscopic hairs present. *Stamens* ±4–5 mm long, with obovate-oblong, hyaline filaments which appear to be glabrous but have microscopic hairs on shoulders, united at base; anthers ciliate, overlapping filaments at base. *Ovary* broad, 5-lobed, very shortly stipitate, finely stellate-tomentose. *Capsule* about 4×4,5 mm, stellate-tomentose, shallowly 5-lobed.

Found in karroid broken veld, on the jasper hills and in pan-like depressions with compact calcareous sand. Recorded from Laingsberg and Prince Albert in the south and northwards through Vanrhynsdorp and Prieska to Witpütz in South West Africa.

CAPE.—Beaufort West: N.W. of Bulwater, *Acocks* 14140. Calvinia: N. of Calvinia, Municipal Reserve, *De Winter & Verdoorn* 9009. Carnarvon: W. of town, *De Winter & Verdoorn* 9005. Clanwilliam: Clanwilliam, *Boucher* 3106. Graaff-Reinet: near town, *Ecklon & Zeyher* Enum. No. 382 (SAM). Hay: Floradale, *Esterhuysen* 2321; Lanyon Vale, *Acocks* 1962. Laingsburg: Zoutkloof, *Compton* 6434 (NBG). Postmasburg: near Olifantshoek, *Leistner & Joynt* 2781. Prieska: Prieska, *Bryant* 3383. Prince Albert: Zwartberg Pass area, *Stokoe* 9036. Vanrhynsdorp: Komkas, *Acocks* 23301.

S.W.A.—Lüderitz South: Witpüt, *Merxmüller & Giess* 28770.

Characterized by the fine, pale, stellate pubescence, the semi-inflated, shallow calyx, 5-gibbose at the base, the indurating twigs and suborbicular leaves, which are cuneate into a petiole and crenate-dentate.

Seed of *De Winter & Verdoorn* 9009 germinated in Pretoria. One plant survived and grew to 60 cm tall, flowered profusely during June and July 1970 and was visited by swarms of bees.

Specimens which appear to be a form of this species have larger, glabrescent leaves and they occur west of the escarpment but not in regions with an annual precipitation below 100 mm and thus not near the coast. The following appear to belong to this form or are possibly hybrids nearest *H. desertorum*:

S.W.A.—Lüderitz South, Farm Spitskop, *Merxmüller & Giess* 28714; Zebrafontein, *Merxmüller & Giess* 28787.

CAPE.—Namaqualand: between Steinkopf and Port Nolloth, *Rösch & Le Roux* 1177; S.W. of Kuboos, *Lavranos* 11030. Vanrhynsdorp: S. of town, *Thompson* 2107. Garies: Garies, *Esterhuysen* 5309 (BOL).

64. *Hermannia pfeilii* *K. Schum.* in Notizbl. bot. Gart. Mus. Berl. 2: 304 (1899). Type: Cape, between Port Nolloth and Oakup, *Pfeil* 34 (Z!).

H. patellicalyx Engl. in Bot. Jb. 55: 358 (1919); M. Friedrich et al. in F.S.W.A. 84: 19 (1969). Type: South West Africa; Tafelberg near Buntfeldschuh, *Schäfer* 501 sub *Marloth* 5244 (PRE!).

Suffrutex, much branched, 20–80 cm tall, leaf-scars prominent; branchlets thinly grey-tomentose (tomentum of fringed, minute scales and stellate hairs), glabrescent, indurating and spiky but usually not sharp-pointed. *Stipules* from semi-obovate to deltoid or subulate, falling by a clean cut at base or, if persisting, becoming woody and brittle, 1–3 mm long, finely stellate-pubescent. *Leaves* one or more at a node, very shortly petiolate; blade obovate to obovate-cuneate, often broader at apex than long, 4–15 mm long, 5–12 mm broad at apex, entire or obtusely 3- or more-lobed at apex, concolorous, sometimes conduplicate, grey-tomentose on both surfaces, tomentum of fringed, minute, pitted scales; petiole 0.5–5 mm long. *Inflorescence* of few-flowered, racemose

cymes terminal on ultimate branchlets, flowers secund; peduncle usually indistinguishable or up to 3 mm long; bracts and bracteoles from ovate to deltoid or subulate, 1–3 mm long, rather thick; pedicels 2–6 mm long, thinly tomentose as on branchlets. *Calyx* patelliform, subinflated, 5-angled, from densely to sparsely finely stellate hairy without, lobed to almost middle, lobes erect, broadly triangular, sinuses wide. *Petals* bright yellow, about 10 mm long, blade more or less ovate, narrowed abruptly into a section with broad, incurved margins and below that into a spur which is usually curved. *Stamens* with broad, hyaline, obovate filaments about 3,5 mm long, apparently glabrous on the shoulders; anthers ciliate, about 3,5 mm long, overlapping the filaments for 1 mm. *Ovary* about 2,5 mm long, obscurely 5-lobed, finely stellate-tomentose, hairs slightly longer at the apex; stipe 0,5 mm long; styles cohering, about 4,5 mm long, shortly exerted, shortly and patently pubescent; stigmas capitate. *Capsule* about 5 mm long, stellate-pubescent, obtusely 5-lobed, lobes rounded at apex.

Found along the west coast of Namaqualand from Kleinsee, just north of Buffels River, northwards to the Namib as far as the Lüderitz area.

CAPE.—Namaqualand: near Kleinsee, *Verdoorn* 1871; Port Nolloth, *Galpin & Pearson* 7573; 7518; near Alexander Bay, *Wenger* 507; E. of Oppenheimer Bridge, Orange River Mouth, *Leistner* 3437; Grootderm, *Lavranos* 11013; Anenus Pass, *Rösch* 2167.

S.W.A.—Lüderitz: Bogenfels, *Schäfer* sub *Marloth* 5244; Klinghardsgebirge, *Dinter* 3882; 4057; Pomona, *Dinter* 6348; Haalenberg, *Dinter* 3804.

This species approaches *H. cuneifolia* in several respects, especially in the cuneate, concolorous leaves with more or less the same pubescence. Microscopically the tomentum on both sides is made up of fringed, pitted scales. In *H. cuneifolia* the scales are larger than in our species. The most striking difference is in the calyx; in *H. cuneifolia* it is campanulate, not at all inflated, and shortly lobed, while in *H. pfeilii* it is, as the synonym *H. patellicalyx* implies, shaped like a little dish and subinflated with lobes almost as long as the disc. *H. pfeilii* is also close to *H. desertorum* but differs mainly in the larger flowers and the leaves which are more constantly obovate-cuneate, rather thick in texture and very shallowly, if at all, crenate. The areas of distribution are adjacent but distinct. *H. pfeilii* is restricted to the coastal area.

The scrap of the type gathering of *H. pfeilii* in Z, a twig with a small leaf and a loose, normal-sized leaf, together with the description, leaves one in no doubt that *H. pfeilii* is synonymous with *H. patellicalyx*.

65. *Hermannia multiflora* Jacq., Hort. Schoenbr. 1, t.128 (1797); Reichb., Ic. Descr. Pl. Cult. t.69 (1823); DC., Prodr. 1: 495 (1824). Type: Cape, Cult. Hort. Schoenbr., right hand specimen annotated by Jacquin (W, lecto!; PRE, photo!).

H. cuneifolia sensu Harv. in F.C. 1: 189, partly.

Suffrutex, about 30–75 cm tall, bushy, much branched, outer branches spreading-ascending; branchlets lepidote-stellate, the new growth densely so. *Stipules* with lower lanceolate-subulate, about 2 mm long, the upper ovate-acuminate, about 3 mm long, 1 mm broad at base. *Leaves* petiolate, sometimes appearing fascicled when crowded on abbreviated lateral shoots; blade discolorous, usually oblong-cuneate, sometimes suborbicular-cuneate, variable in size, from about 3 mm long and 1,5 mm broad near apex, to 20 mm long and 11 mm broad, rounded at apex, crenate-dentate in upper portion, dark and finely

lepidote-stellate on upper surface, pale lepidote-stellate-tomentose beneath, midrib and subflabellate nerves impressed above and prominent beneath; petiole 1,5–5 mm long. *Inflorescence* of 1–2-flowered cymes arranged in fairly lax, terminal, racemose cymes, one to two at each node of raceme; peduncles straight, erect or suberect, varying in length, lower short, the terminal long, from about 5–20 mm long; pedicels usually shorter and slightly cernuous; bracts and bracteoles variable, ovate to lanceolate-acuminate, up to 5 at a node, often with an elliptic, entire, petioled bract up to 9 mm long and 1 mm broad among them. *Flowers* yellow to orange-yellow, sweetly scented, about 8 mm long (rarely 5 mm long). *Calyx* broadly campanulate to subpatelliform, about 5 mm long, lobed to about midway, fawn to brown-tomentose, the lepidote-stellate pubescence dense, the scales reddish brown and hairs straw-coloured resulting in a mousey colour. *Petals* 5–10 mm long, suborbicular to oblong-orbicular in upper half, narrowing into a short waist and produced below into a claw with inrolled margins, waist and claw densely to sparsely but obviously stellate-pubescent on margins. *Stamens* with filaments cohering at base of stipe; filaments hyaline, obovate-cuneate, pubescent on shoulders; anthers ciliate, slightly shorter than filaments which they shortly overlap at base. *Ovary* densely lepidote-stellate, the hairs long and erect at apex, shallowly 5-lobed, shortly stipitate; styles cohering, erect, about 2,5 mm long. *Capsule* densely lepidote-stellate, about 4 mm long, shallowly 5-lobed, withering calyx and stamens persisting at base.

Found on rocky slopes, in mountain Fynbos, on level sandy plateaux and on hills above the Atlantic coast. Recorded from the Peninsula northwards to Vanrhynsdorp and Calvinia.

CAPE.—Bellville: Vissers Hok, *Leighton* 1798. Caledon: Dwarsberg, *Stokoe* in SAM 61160. Calvinia: Lokenburg, *Leistner* 338; *Acocks* 17052. Clanwilliam: Olifants River Bergen, *Schlechter* 5080; Blaauw Berg, *Schlechter* 8438. Malmesbury: Mamre, *Van Niekerk* 655; Hopefield, *Compton* 15967 (NBG). Paarl: Klappmuts, *Erik Wall* s.n. (S); near Wellington, *Grant* 2232. Peninsula: Cape Town, *Prior* s.n.; *Marloth* 1558; *Hutchinson* 167; Claremont, *Schlechter* 1512; Cape Flats, *Rehmann* 2192 (Z); Witsands, *Esterhuysen* 12960; Simonstown, *Taylor* 3708; Muizenberg, *Bolus* 308 (SAM, BOL). Piketberg: Elands Kloof, *Hafström & Acocks* 933. Stellenbosch: Stellenbosch, *Bos* 304. Tulbagh: Saron Flats, *Wiese* 16 (NBG). Van Rhynsdorp: Giftberg, *Leipoldt* 3986; N. of Graafwater, *Taylor* 3941. Worcester: Orchard, Hex River Valley, *Esterhuysen* 10299.

This species is characterized by the dense, lepidote-stellate tomentum on the calyx. It was described and figured by Jacquin in Hortus Schoenbrunnensis. The excellent painting makes it possible to match specimens with it and there are numerous representatives in many herbaria. Unfortunately, through a misidentification by Harvey, they are named *Hermannia cuneifolia*. In the Flora Capensis, Harvey writes that he cannot distinguish *H. multiflora* from *H. cuneifolia* by any tangible characters. *H. cuneifolia* is figured on t.124 of Hortus Schoenbrunnensis. With the adequate material that is available today these species can be readily distinguished. The principle diagnostic characters are that in *H. multiflora* the leaves are discolorous with rounded apices and prominent, subflabellate nerves beneath and the flowers are disposed in cymose panicles with acuminate bracts whereas the leaves in *H. cuneifolia* are the same colour on both surfaces, with a silvery hue, truncate or emarginate at the apex and the nerves seldom prominent. The flowers are secondly arranged on short, cernuous pedicels and the bracts are broadly ovate and abruptly acute but not acuminate.

The areas of distribution of the two species meet, but do not overlap.

Among the *Hermannia* specimens in W, a specimen was found with the name *Hermannia multiflora* written on the label in Jacquin's hand. This has all the diagnostic features of the figured plant and is thus selected as the type specimen.

H. multiflora is very variable in habit and crosses readily, but the dense, mousey or brownish lepidote-stellate tomentum on the calyx appears to be a dominant feature, as are the cuneate leaves, which are whitish tomentose on the lower surface. One of the three bracteoles, the central one, sometimes elongates and is narrowly elliptic or lanceolate and acuminate.

A form with small flowers and slender twigs, known only from Pakhuis Pass, is represented in some herbaria (e.g. *Compton* 9620; *Esterhuysen* 3367 and *Acocks* 15036). It has the diagnostic features of *H. multiflora* and is here treated as a form or hybrid of that species. While superficially resembling *H. helicoidea* it differs in the pubescence on the calyx, the type of inflorescence and the stipules.

In some herbaria specimens of *H. multiflora* have been named *H. triphylla* Cav., that is "sensu Cav.", as the type of *H. triphylla* L. is a species of *Lotononis*. With regard to *H. triphylla* sensu Cav., *Diss.* 333, t.178, fig. 3, De Winter observed that *H. Bolus* 308 compares well with Thunberg's specimen in UPS named *H. triphylla* by Cavanilles. *H. Bolus* 308 in PRE, Z, SAM & BOL is *H. multiflora* Jacq.

66. *Hermannia alnifolia* L., *Sp. Pl.* ed. 1: 674 (1753); Cav., *Diss.* t.179 fig. 1 (1788). Curtis's bot, *Mag.* 9: t. 299 (1795); Jacq., *Hort. Schoenbr.* 3: 291 (1798); DC., *Prodr.* 1: 495 (1824); Eckl. & Zeyh., *Enum.* 46: 364 (1834); Harv. in *F.C.* 1: 189 (1860); Adamson in Adamson & Salter, *Fl. Cap. Penins.* 585 (1950). Type: Cape, ex Hort. Cliff., Linn. Herb. Cat. No. 854.5 (BM, lecto.; PRE, photo.!).

Suffrutex, varying from prostrate to semi-erect, occasionally scrambling, usually about 40 cm tall but varying from 30 cm to 2 m, branchlets stellate-pubescent, hairs up to 0,5 mm long, stellate hairs often raised on tubercles (occasional specimens with long hairs may be hybrids). *Stipules* narrowly to broadly ovate, rounded or deeply cordate at base, sometimes auricled, lobes (auricles) decurrent on branchlets, usually abruptly narrowed into a cuspidate or caudate apex, finely stellate-tomentose. *Leaves* subrotund or broadly oblong, cuneate at base, rarely ovate, 3–25 mm long, 2,5–18 mm broad, finely stellate-tomentose on both surfaces, lower white-tomentose, nerves on lower surface subplicate, prominent, margins crenate, sometimes with a bristle \pm 5 mm long on each rounded lobe; petiole 1–5 mm long, stellate-pubescent. *Inflorescence* of racemose or sometimes paniculate cymes, ultimate cymes 2–3-flowered; branches stellate-tomentose; pedicels usually of unequal length, 1–4,5 mm long; bracts on main branchlets of inflorescence mostly ovate-acuminate, sometimes with caudate apex, cordate at base, lobes sometimes decurrent, about 3 mm long (rarely a long, oblanceolate bract up to 4,5 mm), bracts at base of cymes smaller and usually deeply 3-lobed, about 1,5 mm long. *Calyx* campanulate, usually with wide sinuses between subulate teeth, 3–4 mm long, teeth about 1,5 mm long, texture rather thin, sparsely to fairly densely stellate-pubescent without, hairs remaining especially along the 5 main veins. *Petals* yellow to orange, about 3–6 mm long, more or less oblong,

broadly rounded at apex narrowing towards the centre, lower third with inrolled margins, abruptly narrowed into a short 0,5 mm long claw, inrolled margins obscurely ciliate or with sparse stellate hairs near margin. *Stamens* with hyaline filaments, obovate-oblong, about 2,5 mm long, with a few hairs on shoulders; anthers about 2 mm long, cells acute at apex, ciliate in lower half. *Ovary* 5-lobed, densely stellate-pubescent, becoming glabrous in part, lobes rounded at apex; style about 5 mm long, arising from centre of lobes, minutely and sparsely hairy in part. *Capsule* usually enclosed by the calyx and corolla remains, about 3,5 mm long and 4 mm broad, fairly shallowly 5-lobed apices of lobes rounded, not much produced above level of style-base. *Seeds* reniform or variously compressed, minutely papillose (scaly?) becoming very obscure, \pm 1 mm diam.

Occurs on stony hills, low lying loamy places and Coastal Renosterveld. Recorded from George and Oudtshoorn in the east westwards to the Peninsula and then northwards to Clanwilliam, and rare in Namaqualand (see *Salter* 1511 in MO.).

CAPE.—Bredasdorp: Bredasdorp, *Esterhuysen* 3073; Kathoek, *Taylor* 3783. Caledon: Caledon *Storj* 3071. Ceres: Gydo Pass, *Hafström & Acocks* 936; near White Bridge, *Van Breda* 779. Clanwilliam: Pakhuis, *Esterhuysen* 3367; near Clanwilliam, *Schlechter* 5067. George: east of Mossel Bay, *Acocks* 15385. Heidelberg: Heidelberg, *Acocks* 21392. Malmesbury: Darling, *Esterhuysen* 12974. Montagu: Montagu Baths, *Page* 132; Bushmans Vlei, *Pica Survey* 576. Mossel Bay: between George and Mossel Bay, *Sidey* 1728. Paarl: Paarl, *Hutchinson* 456; between Paarlberg and Paardeberg, *Drège* (S). Peninsula: Sea Point, *Smith* 2934; near Cape Town, *Marloth* 1749; Vissers Hok, *Esterhuysen* 9984. Piketberg: Porterville, *Wilman* 720; Pikenierskloof, *Penther* 2089 (S). Riversdale: Soetmelk River, *Acocks* 21374; Gouritz Riv., *Schlechter* 5712. Robertson: Wansbek, *Van Breda & Joubert* 1986. Stellenbosch: near Berg River, Zwartland, *Zeyher* 1985 (3 specimens); Welgevallen, *Taylor* 5020. Swellendam: Swellendam, *Acocks* 14591, Bontebok Park, *Liebenberg* 6449; 6426; Stormsvalley, *Drège* 1987 (S). Tulbagh: hills, *Marloth* 7128. Wellington: Wellington, *Thomson* 15. Worcester: Bainskloof, *Leighton* 1987; Stettyn, *Van Rensburg* 180; Stettynsberg, *Esterhuysen* 15594; Veld Reserve, *Van Breda* 24.

Three not clearly defined groups can be recognized, (1) a fairly robust, suberect to erect form with normal internodes, (2) a form with more or less the same habit but with short internodes, and (3) a prostrate form with flowers rather smaller and petals only slightly longer than the calyx. All three these forms are represented in LINN: the typical form by Cat. No. 854.5, the form with short internodes by 854.6 and the prostrate form with short petals by 854.7. All forms are characterized by numerous small flowers, suborbicular cuneate leaves which are stellate-tomentose on both surfaces, the lower usually whitish tomentose, and the rather thin calyx which is usually laxly stellate-pubescent, with the stellate hairs occurring mainly on the nerves.

Ecklon & Zeyher Enum. No. 363, named *H. multiflora* in S and LE, is *H. alnifolia* L.

67. *Hermannia muricata* Eckl. & Zeyh., *Enum.* 43, No. 343 (1834). Type: Cape, "Zwellendam", *Ecklon & Zeyher* Enum. No. 343 (S!; PRE, photo.!. SAM!).

Mahernia dryadiphyllo Eckl. & Zeyh., *Enum.* 51, No. 400 (1834). Type Cape, Clanwilliam, Brakfontein, *Ecklon & Zeyher* Enum. No. 400 (TCD; PRE, photo.!. S!; PRE!; W!; LE!; SAM!).

Hermannia dryadiphyllo (Eckl. & Zeyh.) Harv. in *F.C.* 1: 191 (1860) as "*dryadifolia*".

H. dryadiphyllo (Eckl. & Zeyh.) Druce in *Rep. bot. Soc. Exch. Cl. Br. Isl.*, 627 (1917), comb. superfl.

Suffrutex, much branched from base; branches rather slender, outer arcuate-ascending usually with

long (over 0,5 mm), tubercle-based bristles, one or more from each tubercle, occasionally short, gland-tipped hairs present as well, sometimes (in more northerly and south-eastern plants) the tubercle-based bristles are displaced by a stellate-pubescence and minute fringed or stellate scales. *Stipules* narrowly to broadly ovate, rounded or cordate at base, often broad, oblique, amplexicaul or decurrent at base, acuminate to abruptly acuminate at apex. *Leaves* petiolate; blade narrowly oblong, 8–36 mm long, 2–10 mm broad, rounded at base, sometimes slightly narrowing towards rounded base and broadest near apex, margins sinuate-crenate to sinuate-dentate, slightly recurved, upper surface sparsely hairy with long tubercle-based hairs or sometimes subdensely stellate-pubescent with hairs short, nerves impressed, lower surface whitish tomentose, but thinly so on the prominent nerves; petiole 2–10 mm long, rarely up to 15 mm long. *Inflorescence* of long, interrupted, paniculate cymes, terminal on branchlets; peduncles and pedicels slender, 10–30 mm long, pubescent as on branchlets; bracts opposite, broadly ovate, cordate, abruptly acuminate, 3–5 mm long, 1,5–3 mm broad at base; bracteoles up to 3 at base of pedicels, narrowly ovate, lanceolate with acuminate apex or subulate, 1,5–3,5 mm long, 0,75–1,5 mm broad. *Calyx* flask-shaped, narrow at base, pubescence as on inflorescence and branchlets, glabrescent, about 5 mm long, lobed to above middle, lobes sparsely ciliate or densely and softly so in the eastern form, sinuses fairly wide. *Petals* "bright orange-yellow or orange-red", about 7 mm long, suborbicular in upper half, narrowed below into a claw with infolded margins, glabrous in specimens dissected. *Stamens* about 6 mm long, cohering at base around stipe; filaments hyaline, oblong-cuneate, minutely and sparsely pubescent on shoulders; anthers ciliate, overlapping the filaments at base. *Ovary* shallowly 5-lobed, stellate-pubescent on the sinuses, about 2 mm long, stipe 1 mm long; styles cohering, 4 mm long. *Capsule* shallowly 5-lobed, stellate-pubescent along sutures, minutely so between sutures, glabrescent, faded calyx persisting at base and obscuring stipe.

Found on hills and mountain slopes in river valleys. Recorded from Namaqualand southwards to the Clanwilliam and Worcester Districts (especially in the Hex, Krom and Olifants river valleys) then eastward to the George, Uniondale and Steytlerville Districts.

CAPE.—Clanwilliam: Brakfontein, *Ecklon & Zeyher* Enum. No. 400; Olifants River, *L. Bolus* 20328 (BOL); S. of Citrusdal, *De Winter & Verdoorn* 9056; *Schlieben* 12440. George: W.N.W. of Camfer Station, *Esterhuysen* 16790 (BOL); Zebra, *Compton* 24420. Laingsburg: Fissantekraal Valley, *Compton* 21118 (NBG). Namaqualand: *Scully* 198 (BOL); Skilpad, *Barker* 8621 (NBG); Kamieskroon, *Esterhuysen* 23602. Piketberg: Porterville, *Edwards* 188 (Z) and in BOL 28060. Steytlerville: W. of Wilgehof, *Oliver* 4572. Swellendam: Swellendam, *Ecklon & Zeyher* Enum. No. 343 (S). Uniondale: Kromme River Heights, *Fourcade* 2698 (BOL); Mannetjiesberg, *Oliver* 3600. Worcester: Hex River near De Doorns, *H. Bolus* 8007; Tweedside, *Marloth* 10802 (BOL); *Mauve & I. Oliver* 211.

This species is characterized by the narrowly oblong leaf-blade sometimes narrowing slightly towards the base, but with the base rounded, not cuneate into the petiole, the white-tomentose undersurface and the sinuate-crenate, slightly recurved margins which form a narrow dark rim around the undersurface, by the long, lax, terminal paniculate cymes with long slender peduncles and pedicels, and the usually broad-based stipules and bracts. A fourth characteristic, found on the types and other specimens from the western Cape, namely the tubercle-based, long, bristle-like hairs borne laxly on most parts of

the plant, seems to be replaced in specimens from northerly (Namaqualand) and more easterly regions by a denser stellate pubescence of short hairs (character displacement?).

H. muricata is close to the not very well known species *H. repetenda*, which is a more erect plant with usually broader, obovate or broadly oblong-ovate leaves cuneate in the lower third, not narrowly oblong and narrowed towards the rounded base as in *H. muricata*.

As in other species, a small-flowered twiggy form of *H. muricata* occurs occasionally. Examples are: Khamieskroon, *Esterhuysen* 23602 (BOL); Pakhuis Pass, *Esterhuysen* 21935 (BOL) and Khamiesberg, *Pearson* 6159 (SAM).

68. *Hermannia repetenda* Verdoorn in *Bothalia* 10: 77 (1969). Type: Cape, Cult. Hort. Hannover., *Schrader* s.n., (GOET., lecto.!, PRE, photo.!).

H. hirsuta Schrad. in *Schrad. & Wendl.*, Sert. Hannover. 10, t. 4 (1795); Willd., Sp. Pl. 3: 594 (1800); Reichb., Ic. Descr. Pl. Cult. t. 59, fig. 2 (1822); DC., Prodr. 1: 495 (1824); F.C. 1: 190 (1860), excl. syn., non Mill. (1768). Type: as above.

Suffrutex, erect, virgate, laxly branched above, ultimate branchlets ending in an inflorescence which often turns slightly aside with a younger branchlet developing below and overtopping it, sparsely pubescent with minute stellate hairs, sometimes with short, gland-tipped hairs intermingled, often also subsparingly hirsute with long, pointed, patent hairs about 1–1,5 mm long arising singly or 2 or more from a bulbous base, apparently caducous or readily broken off. *Stipules* acuminate to abruptly acuminate, ± 5 –12 mm long, base broad to subcordate sometimes very oblique and subamplexicaul, pubescence as on branchlets but sometimes denser. *Leaves* petiolate; blade fairly narrowly to broadly oblong, oblong-obovate or oblong-ovate, cuneate in lower third, 15–40 mm long, 7–20 mm broad, crenate except at cuneate base, 3-nerved at base, nerves impressed above, prominent beneath, subflabellately branched, upper surface finely stellate-pubescent and minutely papillose and usually sparsely to densely pilose with long, pointed hairs, undersurface usually, at least when young, whitish tomentose with fine stellate pubescence; petiole 3–15 mm long, pubescent. *Inflorescence* terminal, of lax, paniculate cymes; bracts 2- or 3-nate, occasionally the third a long, subulate bract, otherwise like stipules varying from ± 5 mm long and acuminate from a fairly broad base, to 14 mm long and abruptly acuminate from a broad, oblique subcordate, decurrent base; peduncles and pedicels with pubescence as on branchlets. *Calyx* lobed to above middle, about 6 mm long, sinuses broad, texture thin, minutely stellate-pubescent, densely so at base (on cultivated plants?), sometimes long, bulbous-based hairs and short, gland-tipped hairs present. *Petals* about 7 mm long, narrowed about midway into a claw, blade suborbicular, claw with inrolled margins obscurely ciliate. *Stamens* about 4 mm long, with filaments cohering at base, hyaline, oblong-obovate, 2,5 mm long, about 1 mm broad near apex, sparsely stellate on shoulders, anthers 2 mm long, ciliate, overlapping filament at base. *Ovary* 5-lobed, stellate-pubescent especially along the sutures, rays short, but with longer bristle-like hairs at apex; stipe 0,5 mm. *Capsule* about 6 mm long, minutely and finely stellate-pubescent between sutures, more coarsely so on sutures.

Apparently extensively cultivated in the gardens of Europe in the late 18th and early 19th centuries.

Very rarely found in the wild today. Recorded from the Piketberg, Clanwilliam and Graaff-Reinet Districts.

CAPE.—Clanwilliam: Wupperthal, *Mauve & I. Oliver* 93; N.E. of Pakhuis, *Acocks* 15050. Graaff-Reinet: Ouberg Pass, *Oliver* 5197. Piketberg: Piketberg, *Hafström & Acocks* 929; Rest Mtn, *Gillet* 3731 (BOL); Elandsberg, *Pillans* 7952 (BOL).

In the past this species was confused with *H. aspera* Wendl., a very distinct species differing principally in the inflorescence which in *H. aspera* is a fairly short, paniculate cyme, terminal on the short, lateral branchlets. In addition, *H. aspera* has crowded, sessile leaves strongly crisped on the margins.

In some respects *H. repetenda* resembles *H. multiflora* but differs in the fine stellate pubescence or hispid hairs on the calyx in contrast to the dense, brownish, stellate tomentum on the calyces of *H. multiflorum*.

Another related species is *H. muricata* (see under that species for distinguishing features).

Although *H. repetenda* is well represented in European herbaria, the specimens having been made from plants cultivated in gardens, especially in the Herrenhausen garden, Hannover, but very few, widely distributed present day records exist. This is apparently one of the many *Hermannia* species which is heavily cropped by browsing animals.

H. repetenda is characterized by the inflorescence which is a long, lax, paniculate cyme, terminal on the ultimate branchlets but usually turning aside while a lower branch develops and overtops it.

When the new name for this species was published in *Bothalia* 10: 77 the locality "Van Ryns Pass" was given, based on *De Winter & Verdoorn* 9018 collected there. This specimen has since been found to be *H. rigida* and, to date, *H. repetenda* has not been recorded from that locality.

69. *Hermannia rigida* Harv. in F.C. 1: 188 (1860). Type: Namaqualand, *Zeyher* 112b (1126 sphalm.) (S, holo.!, PRE, photo.!).

H. oligantha Salter in JI S. Afr. Bot. 12: 99 (1946). Type: Cape, Clanwilliam District, 8 km east of Graafwater, *Salter* 2750 (BOL, holo.!).

Shrublet, rigid, fairly laxly branched, virgate, up to about 1 m tall; branchlets pubescent with fringed scales, hairs short, intermixed with fairly long hairs grouped on tubercled bases, minute gland-tipped hairs usually present as well, apical portion of branchlets persisting as dry slender twigs. *Stipules* narrowly to broadly ovate-acuminate, often broad-based and abruptly long-acuminate above, tomentose at least dorsally and occasionally long hairs present as well, 3–8 mm long, 1–3 mm broad near base, on old wood only prominent scars left. *Leaves* petiolate, at first clustered on undeveloped shoots; blade obovate, oblong-cuneate, ovate-cuneate or suborbicular in young leaves, 5–30 mm long, 5–12 mm broad, crenulate except on cuneate base, somewhat crisped or plaited, at first tomentose on both surfaces with fairly long appressed hairs, undersurface whitish, older leaves subglabrescent, nerves impressed above, prominent beneath, somewhat flabellate; petiole 2–10 mm long. *Inflorescence* of 1- to 3-flowered cymes, more usually 1-flowered, arranged in lax, terminal racemes; peduncle aborted or abbreviated; pedicels fairly stout, 5–9 mm long; bracts ovate-acuminate (like the stipules), about 5 mm long; bracteoles subulate to lanceolate-acuminate, 3–7 mm long.

Calyx finely stellate-pubescent especially at base, sometimes long hairs present as well, 5–7 mm long, lobed to above middle, sinuses wide. *Petals* bright yellow fading reddish, about 10 mm long, oblong above, narrowed into a claw with infolded margins, glabrous except for minute stellate pubescence on margins of infolded lower portion. *Stamens* with oblong-obovate, hyaline filaments about 4, 5 mm long, minutely and sparsely stellate on shoulders; anthers about 2, 5 mm long, ciliate, overlapping filaments for about 1 mm. *Ovary* about 2, 5 mm long, 5-lobed, densely stellate-pubescent on angles and with long erect hairs at apices; stipe 0, 75 mm long; styles about 4 mm long. *Capsule* 5–8 mm long with persistent calyx at base, 5-angled, 5-umbonate, finely stellate-pubescent to glabrescent between sutures, more coarsely so on angles and at apex.

Found on rocky ridges, at the base of sandstone boulders, in red sandy soil, or in shale. Recorded from the Clanwilliam and Calvinia Districts and from Namaqualand.

CAPE.—Calvinia: upper part of Van Ryn's Pass, *De Winter & Verdoorn* 9018; *Ellis & Schlieben* 12464. Clanwilliam: Nardouw road, *Compton* 22822 (NBG); Pakhuis Pass, *De Winter & Verdoorn* 9044; *Oliver* in STE 33288. Namaqualand: Namaqualand, *Zeyher* 112b (in F.C. 1126 sphalm.); W. slopes of Kamiesberg, *Acocks* 19517 (leaves mostly young and suborbicular); S.E. of Kamieskroon, *Compton* 11106 (NBG); N. of Kamieskroon, *Anegas, Pearson* 6275 (SAM).

Characterized by the terminal pseudo-racemes of 1–3-flowered (mostly 1-flowered) cymes in which the peduncles are usually aborted or abbreviated and the pedicels stout and rigid.

Before seeing the type specimen kindly sent on loan from Herb. S, it was thought that *De Winter & Verdoorn* 9018 and 9044 could fall in the range of *H. repetenda*, but more material of both these species has shown them to be distinct. Among other details, the lax racemose cymes of *H. rigida* with aborted peduncles clearly differ from the paniculate cymes of *H. repetenda* with long, slender peduncles and pedicels.

Having studied the type specimen of *H. rigida*, it was found too that *H. oligantha* is that species. Of the five cited specimens the type, *Salter* 2750 (BOL) is not very typical being more twiggy with all leaves young and suborbicular but it falls within the range of variation of the species and includes the diagnostic inflorescence. The same applies to *Pillans* 7093 (BOL). The other three are typical *H. rigida*: *Schlechter* 8384 (fragment in BOL). *Pearson* 6275 (SAM) and *Compton* 1106 (NBG).

70. *Hermannia helicoidea* Verdoorn in *Bothalia* 11: 288 (1974). Type: Cape, Clanwilliam, Hex River valley, *Pillans* 9063 (PRE, holo.!, BOL!).

Suffrutex, much branched; branches slender, young branchlets pubescent with minute, fringed or stellate scales and occasionally with a few tufted hairs on a tubercled base, older glabrescent. *Stipules* broad, amplexicaul and decurrent at the base, rounded at apex with a mucro or abruptly attenuate with a cuspidate or caudate apex, sometimes shallowly 3-lobed, margins obscurely crenate or dentate, finely and densely stellate on upper surface, hairs short, whitish stellate-tomentose below, glabrescent, 1, 5–4 mm long, 2–6 mm broad at base. *Leaves* petiolate; blade narrowly to broadly oblong-cuneate, 3–10 mm long, rarely longer, 2–6, 5 mm broad in upper half, finely and densely stellate on upper surface, whitish stellate-tomentose below, margins somewhat irregularly crenate as well as undulate;

petiole 1–3 mm long. *Inflorescence* axillary or terminal on lateral branchlets, cymes scorpioid, usually curved in a helicoid fashion, with very slender, sparsely and minutely stellate-pubescent branches; peduncles up to 25 mm long; pedicels 1,5 mm long; bracts and bracteoles like the stipules but smaller, about 2 mm long, some appearing subulate from a broad base. *Calyx* campanulate, finely stellate-pubescent (hairs very short), about 4 mm long, 5-lobed to above middle, sinuses wide. *Petals* about 6,5 mm long, more or less orbicular in upper half, narrowed below into a claw with infolded margins. *Stamens* about 4 mm long with obovate-oblong, hyaline filaments which are overlapped by anther bases. *Capsule* about 4 mm long, stellate-pubescent, somewhat 5-lobed, calyx persistent at base.

Found on hills or mountain slopes in river valleys. Recorded from the Clanwilliam District in the Hex and Olifants river valleys.

CAPE.—Clanwilliam: without precise locality, *Stokoe* s.n.; hills in the Hex River valley, *Pillans* 9063; Olifants River valley, *Schlechter* 5092; north of Citrusdal, *L. E. Taylor* 1025 (MO).

Characterized by the monochasial, helicoid development of the slender, lateral cymes. In herbaria these specimens were mostly named *H. rigida*, which is a species of taller, more rigid and robust shrublets with inflorescences of short, 1- to 3-flowered cymes, more usually 1-flowered, arranged in lax terminal racemes, the peduncles usually absorbed and the pedicels fairly stout and rigid.

H. helicoidea resembles *H. muricata* superficially, but differs from it in leaf-shape and pubescence and in the inflorescence which is both terminal and axillary, and usually distinctly helicoid.

In *H. muricata* the leaves are narrowly oblong, rounded at the base and the margin sinuate-crenate to sinuate-dentate with the upper surface usually sparsely hairy with long tubercle-based hairs, rarely stellate-pubescent.

71. *Hermannia aspera* Wendl., Bot. Beobacht. 52 (1798). Type: Cult. Hort. Herrenh., type specimen not traced (see notes).

H. scabra sensu Jacq., Hort. Schoenbr. t. 127 (1797), as to figure, and excluding syn. *H. hirsuta* Schrad. (sphalm. Cav.); Willd., Sp. Pl. 3: 594 (1800), partly as to citation Jacq. t. 127 and "(aspera) Wendl. Obs. 52"; sensu DC., Prodr. 1: 495 (1824) as to syn. and citation Jacq. t. 127; sensu Reichb., Ic. Descr. Pl. 1, t. 59, fig. 1 (1822); sensu Eckl. & Zeyh., Enum. 44, No. 350 (1834), non Cav.

Shrub, stem single, erect, 40 cm–2 m tall, more or less rigid, ultimate branchlets short, fairly stout, very rough with tubercle-based, tufted bristles (long or short, 2 to many). *Stipules* about 1,7–7 mm long, rounded to broadly cordate at usually oblique base, decurrent on one side, abruptly narrowed into a linear-acute to subulate apical portion. *Leaves* sessile or subsessile, crowded, 1 or more at a node, different sizes at a node, size of leaf varies considerably on different plants too; blade oblong-cuneate, 5–30 mm long, 1–20 mm broad, rounded, subtruncate, lobed or emarginate at apex, rarely apiculate, broadly cuneate at base, incurved and crenate and crisped on margins, upper surface minutely papillose and scaly stellate-pubescent or with tubercle-based hairs, lower surface finely white stellate-tomentose between the veins and sparsely stellate on veins; midrib and about 3 suberect lateral veins prominent beneath; petiole 0–4 mm long. *Inflorescence* terminal on ultimate branchlets of simple or paniculate cymes, short, up to 30 mm long,

3 to 15-flowered; bracts like stipules but smaller, 2, 3 or 4 at a node; pedicels 4–8 mm long. *Calyx* submembranous with strong nerves, 5–6 mm long, lobed almost to middle, glabrescent except along nerves which are sparsely pubescent with bulbous-based hairs, lobes sometimes rather densely ciliate with soft hairs and hairy on inner face. *Petals* yellow turning red, 6–9 mm long, 4 mm broad in upper half, narrowed just below middle into a claw, margins of claw fairly broadly infolded. *Stamens* cohering or joined at base, free portion about 5 mm long; filaments hyaline, oblong-cuneate, obscurely hairy on shoulders; anthers pointed, ciliate. *Ovary* stellate-pubescent, shortly stipitate; styles about 3,5 mm long. *Capsule* small, 4–5 mm long, subglobose, densely stellate-pubescent (hairs longer towards apex), 5-umbonate.

Found in arid Fynbos, Karroid scrub and Renoster-veld in the south-western Cape. Recorded from Worcester northwards to Namaqualand (Kamiesberg) and through Swellendam and Montagu to Ladismith in the east.

CAPE.—Calvinia: Lokenberg, *Acocks* 17025; Botterkloof Pass, *Middlemost* 1609 (NBG). Ceres: On road between Koue Bokkeveld and Cedarberg, N. of farm Excelsior, *Taylor* 5900; N. of Pienaarskloof, *Acocks* 23689; Clanwilliam: Pakhuis Pass, *De Winter & Verdoorn* 9041; *Pillans* 7089 (BOL). Ladismith: Anysberg, *Esterhuysen* 17075; 25975 (BOL). Montagu: Kiesiesberg, *Lewis* in SAM 59090 (SAM); Baden, *Pillans* 7924. Namaqualand: Kamiesberg, *Coppejans* 1108 (STE). Giftberg, *Phillips* 7381 (SAM). Swellendam: Anysberg, *Stokoe* 8222 (NBG & BOL). Vanrhynsdorp: Bokkeveld Mts, *Marloth* 7580; Giftberg Pass, *Acocks* 14878. Worcester: Hex River, *H. Bolus* 11864.

This species is plentiful over the area of its distribution and is well represented in most herbaria, due, probably to its roughness and woodiness which renders it unpalatable to browsing animals. It is distinguished from others with somewhat similar leaves (having the lower surface finely white stellate-tomentose) in that the leaves are sessile or subsessile and crowded. Judging from specimens in the Leningrad and Vienna herbaria this species flourished for several years, at the turn of the 18th Century, in the botanic gardens of Europe. To date it has been wrongly identified in all herbaria as either *H. scabra* or *H. hirsuta*. Jacquin in Vienna published an excellent painting of this characteristic plant, in his Hortus Schoenbrunnensis, under the name *H. scabra* Cav., a wrong identification, for *H. scabra* Cav. is a distinct species (see note under that species). This mistake was subsequently recognized by several botanists, who then referred to it by the homonym *H. scabra* Jacq. A specimen of our species in the Leningrad Herbarium, of which there is a photograph in Pretoria (PRE Neg. No. 4576), is labelled *Hermannia scabra* Jacq. and in the same handwriting *H. aspera* Wendl. is given as a synonym. This led to the investigation of Wendland's name which was found to be the correct one for this species with sessile leaves. Unfortunately no type specimen has been traced to date, but the Leningrad specimen mentioned above was collected and labelled in the gardens of Göttingen at a time when Wendland was associated with that University and so may be looked upon as an authentic representative of his species.

The use of the name *H. hirsuta* stems from the mistaken conclusion that Wendland's species, *H. aspera*, was the same as that described by Schrad. (1795) as *H. hirsuta*, now named *H. repetenda* (see notes under *H. repetenda*). This species differs from *H. aspera*, among other things, in the longer and laxer inflorescence and the petioled leaves. It is not so densely leafy nor as rigidly woody and roughly pubescent and therefore more palatable. This may

account for its scarcity in comparison with *H. aspera*, in the veld as well as in herbaria.

Certain specimens collected in the Montagu District, where *H. disticha* occurs, appear to be a form or hybrid of *H. aspera* which is also recorded in parts of the district. The specimens are *De Winter & Verdoorn* 9088, *Compton* 18359 (NBG) and 18416 (NBG), *Lewis* in SAM 59089 (SAM), *Walgate* in BOL 23457 (BOL) and *Walgate* in BOL 23458 (BOL). All but the last do not have persistent white tomentum on the lower surface and so resemble *H. disticha*, and in all specimens the margin of the leaf is not so markedly recurved as in more typical *H. aspera*. All these are robust luxuriant plants and this suggests that they might be hybrids between *H. aspera* and *H. disticha* but nearest to *H. aspera*.

72. *Hermannia conglomerata* Eckl. & Zeyh., Enum. 44, No. 352 (1834); Harv. in F.C. 1: 194 (1860); Saund. Rep. Bot. 4: t. 217 (1871). Type: Cape, Uitenhage, "Sondags et Zwartkops Rivier", *Ecklon & Zeyher*, Enum. No. 352 (K; PRE, photo.!, PRE!; SAM!; LE!).

H. glomerata E. Mey. in Drège, Zwei Pfl. Doc. 191 (1843), nomen.

Suffrutex, suberect, with ascending branches, 10–60 cm tall, branchlets pubescent with long tubercle-based, few-rayed stellate hairs, with age hairs fall off and branchlets are rough with scattered tubercles. *Stipules* narrowly to broadly ovate-acuminate, cordate at base, about 8 mm long, with long, few-rayed stellate hairs. *Leaves* petiolate; blade subrotund, 1–2 cm diam., pubescent with long, few-rayed, stellate hairs, sparse and 1- to 2-rayed on upper surface, several-rayed and more copious on lower surface, margin crenate; petiole about 5 mm long. *Inflorescence* of sessile cymes crowded at ends of branches and branchlets, interspersed with leaves and bracts; bracts ovate-, or broadly lanceolate-acuminate, about 9 mm long and 3,5 mm broad near base; bracteoles linear-lanceolate, about 7 mm long and 1 mm broad near base. *Calyx* 6 mm long, 5-lobed to about midway, densely hispid, at least when young, with few-rayed, long, tubercle-based hairs. *Petals* about as long as calyx, strongly contorted and shortly exerted from the glabrous, more or less oblong calyx tube, obovate, rounded at apex, narrowing slightly at centre, lower half with margins narrowly inrolled and narrowing at base to a short claw. *Stamens* about 4 mm long; filaments hyaline, ± linear, narrowing towards base, glabrous in the specimens dissected, overlapped by anther bases; anthers shortly ciliate. *Ovary* about 2 mm long, 5-lobed, hirsute with long erect hairs.

Among karroid scrub on hillsides in dry river valleys. Recorded from Alexandria, Albany, Uitenhage and Riversdale (Fish River, Sundays River and Wyders River).

CAPE.—Albany: N.W. of Grahamstown, Fish River valley, *Acocks* 18397; *Schlechter* 6113. Alexandria: Addo Bush near Kenkelbosch, *Story* 2729. Port Elizabeth: Cape Recife, *Zeyher* 1990. Riversdale: Wyders River, *Muir* 978. Uitenhage: Sundays River, "Sondags and Zwartkoprivier", *Ecklon & Zeyher* Enum. 352.

A sheet with five specimens of this species in the Bentham Herbarium was photographed by De Winter. The specimens are labelled as follows: (1 & 2) Drège 1838, no locality, (3) *Schlechter* 6113, Fish River (4) *Cooper* 1995, western districts and (5) *Cooper* 2012, Natal. There is probably some mistake about the last mentioned locality. No Natal record exists. *Cooper* 2012 with the same label is in Z.

The species is characterized by the long spreading hairs, especially conspicuous on the young flowers and the glomerate inflorescence.

Drège 7268 and 7292, cited in *Zwei Documente* from Zuurberg as *A. glomerata*, are this species.

73. *Hermannia micrantha* Adamson in J1 S. Afr. Bot. 10: 123 (1944); Fl. Cap. Penins. 585 (1950). Type: Cape, Little Lion's Head, *Salter* sub *Adamson* 1901 (BOL!).

H. intricata Adamson in J1 S. Afr. Bot. 7: 198 (1941), non Engl. (1919). Type: as above.

Suffrutex small, usually less than 30 cm tall, much branched; branches slender, divaricate, roughly stellate-pubescent with rays often over 0,5 mm long, and with short, gland-tipped hairs intermingled. *Stipules* usually in pairs, ovate, acute, cordate or rounded at base, oblique, one side deeply cordate, 2–3 mm long, 1–1,5 mm broad, coarsely stellate-pubescent, scaly and occasionally with gland-tipped hairs intermingled. *Leaves* petiolate; blade light green on both surfaces, not whitish beneath, obovate-oblong, narrowing slightly at base, about 6–10 mm long, 3–8 mm broad, rarely larger, stellate-pubescent and scaly on both surfaces, and sometimes with minute gland-tipped hairs intermingled, margins crenate; petiole 2–5 mm long. *Inflorescence* of 1- to 2-flowered cymes, terminal or laxly racemose on slender ultimate twigs; peduncles vary in length, often 1 cm long; pedicels 1–2,5 mm long, stellate-pubescent and with minute gland-tipped hairs; bracts like stipules ovate-cordate, those at base of ultimate cyme usually smaller and 3-lobed. *Calyx* about 3 mm long, 5-lobed to the centre or slightly beyond, stellate-pubescent without, and with minute gland-tipped hairs intermixed, teeth about 1,5 mm long, acute. *Petals* lemon-yellow, about 5 mm long, more or less oblong, rounded at apex, narrowing slightly to middle with lower portion with inrolled margins, hardly clawed at base. *Stamens* 3,5 mm long, with broad, obovate-oblong filaments with a few hairs on shoulders; anthers 1,5 mm long, cells acute at apex, ciliate on margins. *Ovary* and style about 3 mm long; ovary stellate-pubescent with long bristles at apex; styles with a few short, sparse hairs. *Capsule* about 4 mm long and 4 mm broad, deeply 5-lobed, lobes keeled and apices projecting above by about one third, stellate-pubescent, especially on keels, with some rays over 0,5 mm long.

Found on dry southern and western slopes of Table Mountain, on or in the vicinity of Little Lion's Head.

CAPE.—Peninsula: Little Lion's Head, *Salter* sub *Adamson* 1901 (BOL); *Adamson* 2618; Table Mt., foot of cliffs at west end, *Esterhuysen* 19251; lower west slopes, *Pillans* 4264 (BOL).

This species is close to *H. alnifolia* but is distinguished by the leaves being green on both sides, obovate and broadly cuneate at the base and not suborbicular, the stellate pubescence coarser and interspersed with minute gland-tipped hairs. The capsule is more deeply 5-lobed with the apices longer (only different in degree).

In the Bolus Herbarium, the type specimen has the number 7417 added in pencil after *Salter's* name.

74. *Hermannia disticha* Schrad. in Schrad. & Wendl., Sert. Hannov. 26, t. 16 (1795–97); Reichb. Ic. Descr. Pl. Cult., t. 60 (1882); Harv. in F.C. 1: 188 (1860). Type: In herb Vahl, missit Schrader (C, lecto.; PRE, photo.!).

H. rotundifolia Jacq., Hort. Schoenbr. 63, t. 118 (1797).

Shrublet, erect, branched, 50–90 cm high; branchlets with long, tubercle-based, spreading hairs. *Stipules* deltoid to broadly ovate, acuminate, usually with a broad, cordate base, which is somewhat decurrent on the branch or stem, with single or few-rayed bulbous-based hairs, especially on dentate margin. *Leaves* distichously arranged, shortly petiolate; blade broadly ovate-oblong to obovate-oblong, 10×8–20×16 mm or sometimes longer, broadly cuneate or rounded at base, upper surface with long, bulbous-based hairs, which are single or few-rayed, lower surface with similar hairs but many-rayed or stellate from a bulbous base, at first densely so giving a whitish appearance to undersurface; margin distinctly crenate-dentate; petiole very short or 2–5 mm long. *Inflorescence* a few-flowered, fairly short, racemose or paniculate cyme terminal on ultimate branchlets; pedicels short or up to 5 mm long, pubescence as on branchlets; bracts lanceolate-acuminate to ovate-acuminate up to 6 mm long, the upper small and lobed, sparsely pubescent with long, bulbous-based hairs. *Calyx* 5-lobed to about middle, about 5 mm long, sparsely pubescent with long stellate hairs from a tubercled or scale-like base. *Petals* more or less oblong, about 7 mm long, abruptly narrowed about midway, upper half suborbicular, lower half with broadly infolded margins, obscurely ciliate and pubescent, narrowing at base into a claw about 1,5 mm long. *Stamens* with hyaline filaments which are oblong, slightly narrowing towards base, about 3 mm long, with a few hairs on shoulders; anthers about 3 mm long, cells pointed, ciliate along sutures. *Ovary* somewhat 5-angled, pubescent (hairs erect and long at apex), very shortly stipitate, stipe about 0,5 mm long; styles minutely pubescent, about 3,5 mm long. *Capsule* enclosed in the ± persistent calyx and corolla, about 2,5×2,5 mm, 5-lobed, 5-umbonate at apex, stellate-pubescent, hairs long in upper half and at apex. *Seed* reniform, suborbicular, tubercled, ±1 mm diam.

Recorded to date only from the rocky kloofs in the mountains of Montagu.

CAPE.—Montagu: Kloof near Montagu Baths, Page 25; *De Winter & Verdoorn* 9083; Kogmanskloof, *Acocks* 20347; Kleurkloof, *Compton* 5749 (NBG).

Characterized by the pubescence of long, patent, bulbous-based hairs, the broad, distichous leaves which are not persistently whitish pubescent on the lower surface and the short, ±4 cm long inflorescences.

On the labels in several herbaria the authors are given as "Schrad. & Wendl.", but in the original description and in the Index Kewensis Wendlan's name does not appear.

75. *Hermannia decipiens* E. Mey. ex Harv. in F.C. 1: 192 (1860); Phillips in Ann. S. Afr. Mus. 9: 337 (1917); E. Mey. in *Drège*, Zwei Pfl. Doc. 191 (1843), nomen. Syntypes: Cape, Zwarteberge, Klaarstroom *Drège* s.n. (S!; W!; Z!; LE!); Vrolyk, *Drège* 7277 (LE!).

Suffrutex up to 1,30 mm tall, branches pubescent with tufted or stellate hairs from a scaly base or on small raised tubercles, hairs long or sometimes short and dense. *Stipules* deciduous, lanceolate-acuminate to subulate, 4–6 mm long, up to 2 mm broad at base, stellate-pubescent, hairs long or short. *Leaves* sessile or subsessile, sometimes erect, imbricating, oblong, oblong-elliptic or oblong cuneate, 7–18 mm long, 4–7 mm broad, apex acute, rounded and mucronate or

truncate and lobed, densely but roughly stellate on both surfaces, sometimes thickly tomentose, hairs long or short, mostly yellowish; petiole 0–1 mm long. *Inflorescence* a short, few-flowered, simple or branched cyme, terminal or in axils of upper leaves of branchlets; pedicels 2–5 mm long; bracts subulate, 2–7 mm long, seldom reaching more than basal third of calyx. *Calyx* not inflated, campanulate, densely and coarsely pubescent with stellate and tufted hairs, hairs golden yellow, tube 4–6 mm long, lobes about 2 mm long, deltoid, acute. *Petals* 7–8 mm long, oblong in upper half, narrowed abruptly into a claw with inrolled margins, dorsally conspicuously stellate from lower portion of upper half almost to base of claw. *Stamens* about 4 mm long with broad hyaline filaments about 3 mm long; anthers ciliate, about 2 mm long. *Ovary* 2 mm long, 1,5 mm broad, 5-lobed, stellate-pubescent; styles 4 mm long, hairy at base; stigmasca pitate. *Capsule* enclosed by perianth, shortly exerted from calyx, about 5 mm long, subglobose, 5-lobed, stellate-pubescent; stipe short, up to 1 mm long.

Found in mountainous country from the Ladismith area along the Swartberg eastwards to Willowmore.

CAPE.—Ladismith: Seven Weeks Poort, *Marloth* 2978; *Phillips* 1400. Ladismith–Laingsburg: "Zwartberge, Klaarstroom, *Drège* s.n. Vrolyk, *Drège* 7277 (LE) Vleiland, *Acocks* 20497. Willowmore: Swanepoelspoortberg, *Marloth* 4127.

This species is closely related to *H. involucrata* having the same type of pubescence and leaf-shape and the same non-inflated calyx which is densely stellate-pubescent with yellow hairs. It differs from that species in the smaller leaves and flowers and the leaves being more erect and fairly closely appressed to the stem.

76. *Hermannia involucrata* Cav., Diss. 328, t. 177, fig. 1. (1788). Type: Cape, *Thunberg* s.n. in Herb. Cav., (MA, holo.; PRE, photo.!). (The specimen so named in the Thunberg herbarium (UPS, herb. No. 15484), does not agree, having an inflated calyx, but the one named "*H. salvifolia*" (*Thunberg* s.n. in UPS, herb no. 15492) appears to be this species.

H. chrysophylla Eckl. & Zeyh., Enum. 44, No. 346 (1834), pro parte, as to some specimens with non-inflated calices but labelled with Enum. No. 346 (PRE!; LE!; W!).

H. salvifolia sensu Cav., Diss. 328, t. 180, fig. 2, non Linn. f.

Suffrutex 60 cm to 1,3 m high, erect or straggling, branchlets with shiny, tufted hairs from a sessile, scaly base or a slightly raised tubercle, hairs long or short and give the new growth, leaves and calyx a golden hue. *Stipules* narrowly lanceolate, acuminate, subulate or linear-acute, 2,5–10 mm long, base 0,5–1,5 mm broad, roughly and subslaxly to densely stellate, incurved in upper portion. *Leaves* subsessile to shortly petiolate; blade strikingly variable in shape from broadly elliptic to elliptic or oblong-obovate, 10–37 mm long, 6–14 mm broad, acute and mucronate to broadly rounded and mucronate or broadest and toothed at subtruncate apex, roughly and subdensely or densely stellate-pubescent on both surfaces, hairs stiff and golden yellow, scattered among groups of hairs are minute, dark pustules; petiole 1–5 mm long. *Inflorescence* of short, few-flowered, branched cymes in axils of upper leaves, up to 2,5 cm long; peduncles short, up to 5 mm long, roughly stellate; bracts at base of pedicels subulate, up to 10 mm long, often reaching to top of calyx, roughly stellate, arcuate in upper portion; pedicels 1–2 mm long, roughly stellate. *Calyx* subcoriaceous with strong ribs, densely pubescent with stellate or tufted hairs from a scaly base, hairs shiny and giving calyx a golden hue, about 8 mm long, lobed in upper third or almost to middle,

tube cup-shaped, lobes cuspidate from a deltoid base. *Petals* yellow, about 10 mm long, oblong in upper half, narrowed into a claw with inrolled margins, apex rounded to subtruncate, recurved, dorsally finely stellate-pubescent in lower two-thirds. *Stamens* about 4–6 mm long with hyaline, obovate-oblong filaments; anthers about 2,5 mm long, ciliate. *Ovary* 5-angled, stellate at least on sutures; stipe 0,5–1 mm long; styles about 4 mm long. *Capsule* about 7 mm long, half exerted from persistent calyx, finely stellate-pubescent between sutures which are coarsely stellate-pubescent.

Found in gorges, kloofs and on mountain slopes in false Fynbos. Recorded from Ladismith, Uniondale and Willowmore eastwards to Uitenhage.

CAPE.—Humansdorp: Combrink, *Acocks* 13698. Steytlerville: Waaipoort, *Acocks* 16014. Uitenhage: Kantiens River, *Oliver* 1360; Melkhoutboom, *Long* 1387; "Langekloof & Winterhoek" *Ecklon & Zeyher* Enum. No. 346 (PRE; SAM; LE; W). Uniondale: Prince Alfred's Pass, *Acocks* 21116. Willowmore: Baviaanskloof, *Oliver* 4563.

Differs from the closely related and variable species *H. salviifolia* in that the calyx is not diaphanous nor urceolate. Characterized by the tufted, shiny hairs which give the vegetative parts a golden yellow hue, the subcoriaceous, strongly ribbed, thickly stellate-pubescent calyx and the petals which are dorsally, finely stellate-pubescent. Among the tufted hairs on the leaves and calyx are scattered minute pustules or glands that give the appearance of minute holes. This feature is shown very clearly as black dots on the plate in Cav., Diss. The leaves vary considerably in shape, occurring in at least two distinct shapes. The bracts are usually half as long to longer than the calyx.

In some specimens, e.g. *Dahlgren & Peterson* 26 and *Acocks* 16014, the pubescence is denser and shorter but still typical of the majority of specimens. This may be due to some foreign influence, but the main diagnostic characters are present.

77. *Hermannia pillansii* *Compton* in Trans. R. Soc. S. Afr. 19: 300 (1931). Type: Cape, Witteberg, Laingsburg Dist., *Compton* 2797 (BOL, lecto.!; K; PRE, photo.!).

Suffrutex, low, branching from base, young branches densely stellate-hirsute. *Stipules* narrowly to broadly ovate, acuminate, broad ones abruptly acuminate at apex and cordate at base, 4–6 mm long, 1–4 mm broad at base, densely stellate-pubescent. *Leaves* sessile, obovate-cuneate, up to 10 mm long, 5 mm broad near apex, crenate except on cuneate base, densely stellate-pubescent to tomentose on both surfaces with hairs both short and long. *Inflorescence* of 1- to 2-flowered cymes clustered at apices of ultimate branchlets; peduncles 4–8 mm long; pedicels short, 2–4 mm long; bracteoles narrowly ovate-acuminate, up to 6 mm long. *Calyx* 5 mm long, lobed to almost midway, densely stellate-hispid, hairs rather long, light yellow. *Petals* about 7 mm long, more or less oblong in upper third, narrowed into a densely ciliate waist and produced below into a claw with infolded margins. *Stamens* 4,5 mm long; filaments narrowly obovate, not or only slightly broader than anthers, hyaline, overlapped by anther bases, anthers 2 mm long, ciliate. *Ovary* subglobose, shallowly 5-lobed, 3 mm long whitish stellate-tomentose; stipe 0,5 mm long; styles 4 mm long. *Capsule* about 4 mm long, enclosed in the calyx, thinly whitish tomentose.

Found on mountains at 1 300 m or higher. Recorded from the Witteberg in the Laingsburg District.

CAPE.—Laingsburg: Wittebergen, *Compton* 2797 (BOL; K); 3159 (BOL); 12215 (NBG); foothills, *Marloth* 11424.

This species closely resembles *H. stipulacea*, but can be distinguished mainly by the leaves and stipules being densely and persistently pubescent on both surfaces instead of the very characteristic lax and distinct pubescence on those of *H. stipulacea*. In addition, the shape of the leaf is obovate-cuneate in *H. pillansii* and the flowers clustered in terminal cymes with rather short peduncles and pedicels.

Of the four syntypes, *Compton* 2797, 3159, 3299 and 3559, *Compton* 2797 is here selected as type because there is a duplicate of this specimen in K.

78. *Hermannia stipulacea* *Lehm. ex Eckl. & Zeyh.*, Enum. 44, No. 349 (1834); Harv. in F.C. 1: 192 (1860). Type: Cape, near mouth of the "Zwartkops" River, *Ecklon & Zeyher* Enum. No. 349 (K; PRE, photo.!; PRE!; W!; SAM!).

Suffrutex, erect or sprawling with ascending branches, branches laxly, rarely subdensely, stellate-pubescent, hairs few and long, rarely short from a scaly base. *Stipules* leaf-like, about half the size of leaves or over half, ovate-acuminate to ovate-lanceolate, cordate at base, from 3,5–11 mm long, 1–7 mm broad near base, laxly and distinctly stellate-pubescent. *Leaves* sessile or shortly petiolate, sometimes erect and somewhat imbricate; blade oblong, oblong-cuneate, sometimes narrowly so, 4–16 mm long, 2–6 mm broad, apex acute, rounded to broadly rounded or subtruncate, usually broadest near the apex which is often lobed, base rounded, laxly but distinctly and strongly stellate on both surfaces, hairs long; petiole up to 2 mm long. *Inflorescence* of 1- to 2-flowered cymes in axils of upper leaves and at the apices of the branchlets; peduncle from 3–20 mm long; pedicels 1–7 mm long; bracts usually 3, 1 long and 2 shorter (the much reduced leaf and 2 stipules), ovate, lanceolate or subulate, 1,5–6 mm long, 0,5–3 mm broad, stellate-pubescent as on leaves, at least along margins. *Calyx* about 6,5 mm long, lobed almost to middle, densely yellow scaly-tomentose and stellate-hispid, hairs long, lobes about 3 mm long, deltoid-acute. *Petals* about 9,5 mm long, subglobose in upper third, narrowed into a densely ciliate waist and produced into a claw with infolded margins. *Stamens* about 6 mm long, filaments hyaline, oblong-cuneate, ciliate on shoulders, overlapped by anther bases; anthers 3 mm long, acute, ciliate. *Ovary* oblong, about 2 mm long, shallowly 5-lobed, subglabrous or shortly stellate below, densely stellate at the apex of each locule, hairs long; stipe 0,5 mm. *Capsule* shortly exerted from persistent calyx, about 6 mm long, stellate-hairy.

Found in Coastal Renosterveld, on stony mountain slopes, in Fynbos and burnt patches. Recorded from Riversdale and Ladismith and eastwards to Port Elizabeth.

CAPE.—Humansdorp: Onzer, *Drège* 7276 (W); *Marsh* 1351. Ladismith: Buffels Kloof, *Esterhuysen* 13998. Montagu: between Scheepersrust and Barrydale, *Esterhuysen* 24603 (BOL). Mossel Bay: Cloete's Pass, *Acocks* 14636. Oudtshoorn: Meiring's Poort, *Esterhuysen* 24868 (BOL). Port Elizabeth: near "Zwartkops River" mouth, *Ecklon & Zeyher* Enum. No. 349. Riversdale: Soetmelks River, *Acocks* 22359; Onverwacht, *Muir* 1607. Uniondale: Noll's Halt, *Acocks* 16035; near Joubertina, *Thompson* 952; Die Hoek, *Esterhuysen* 10582.

Characterized by the leaf-like stipules and the sublux, stellate pubescence with stiff hairs. The densely lepidote-stellate calyx resembles the calyx of *H. involucrata* Cav. which has the same golden yellow hue.

Harvey cites a Drège specimen from the Orange River. This must be a mistake, for the Orange River is far outside the known area of distribution.

H. pillansii is closely allied to this species, but differs in the pubescence on the leaf (see under that species). Also, the hairs on the calyx are a lighter yellow, not so golden, and the stipules more acutely acuminate.

H. latifolia sensu Eckl. & Zeyh., Enum. 348 (non Jacq.) in SAM is *H. stipulacea* Lehm. ex Eckl. & Zeyh.

79. *Hermannia filifolia* L.f., Suppl. 302 (1781). Type: Cape, *Thunberg* s.n., Herb. No. 15473 (UPS, holo.; PRE, photo.!).

Suffrutex, straggling, with slender branchlets or erect and robust, often heavily browsed. *Stipules* leaf-like, somewhat shorter or longer and usually flatter than leaves. *Leaves* sessile, fascicled, at first crowded on abbreviated shoots, glabrescent, filiform to subulate, sulcate (ericoid), sometimes appearing narrowly linear or linear-spathulate on pressed specimens, firmly fleshy or succulent and glaucous, 4–20 mm long, apex acute or mucronate, not lobed, fascicles distant or crowded. *Inflorescence* of 1- or more-flowered cymes in axils of upper leaves and at apices of branchlets in racemose cymes. *Calyx* 4–6 (–10) mm, finely stellate-pubescent or rough with minute scales or tubercles. *Petals* strongly twisted, usually dark red, blade oblong, abruptly narrowed just below middle into a claw which is pubescent on edges. *Stamens* with more or less linear-oblong, hyaline filaments. *Capsule* from 6–12 mm long, 5-umbonate at apex, finely stellate-pubescent between sutures, more coarsely so on sutures and at apex. Fig. 1.2.

Key to varieties

- Leaves short, 4–15 mm long, or up to 20 mm long in var. *grandicalyx* but then much reduced towards the apices of flowering branchlets and there shorter than internodes:
- Calyx 4–6 mm long, leaves firm, internodes rough with minute scales or tubercles.....var. *filifolia*
 - Calyx about 10 mm long, markedly paler than petals, leaves sometimes succulent and glaucous, long internodes rarely minutely scaly, usually glabrescent and shiny.....var. *grandicalyx*
- Leaves long, up to 20 mm long and not much reduced towards apices of flowering branches, usually longer than internodes.....var. *robusta*

(a) var. *filifolia*

Verdoorn in *Bothalia* 10: 572 (1972).

Hermannia filifolia L. f., Suppl. 302 (1781); Cav., Diss. t. 180, fig. 3 (1788); Jacq., Hort. Schoenbr. t. 123 (1797); DC., Prodr. 1: 495 (1824); Eckl. & Zeyh., Enum. 47, No. 372 (1824), partly; Harv. in F.C. 1: 195 (1860). Type: as above.

H. passerinaeformis Eckl. & Zeyh., Enum. 47, No. 373 (1824). Type: Cape, Swellendam, Ecklon & Zeyher Enum. No. 373 (K; PRE, photo!, SAM!; W!; S!).

H. gilfillanii N.E. Br. in Kew Bull. 1906: 100 (1906). Type: Cape, Middelburg, Conway Farm, *Gilfillan* sub *Galpin* 5506 K, holo.; PRE, photo! PRE!).

H. filifolia var. *passerinoidea* Harv. (sic) in F.C. 1: 195 (1860). Syntypes: Cape, Swellendam, Ecklon & Zeyher Enum. No. 373; between Ecksteen and Stormvalley, Zeyher 2008 (S!).

Straggling plant with thin branchlets and small flowers 4–6 mm long borne in axils of upper leaf-clusters and in racemose cymes at apices of branchlets. Farther east in the Great Karoo bushes are a degree more robust and somewhat larger flowers are usually clustered only at apices of branchlets. The branchlets are rough with minute scales or tubercles. The specific epithet “*filifolia*” refers to the most diagnostic feature of species, the more or less subulate or

ericoid leaves, which however sometimes appear narrowly linear to spatulate on pressed specimens. *Leaves* clustered, sessile, about 4–15 mm long, glabrous or minutely scaly pubescent, acute at apex, sometimes ending in a single hair or subobtuse and mucronate. *Stipules* almost indistinguishable from leaves but a close examination shows stipules to be narrowly linear rather than subulate and usually with a broader base. *Calyx* usually about 5 or 6 mm long, finely stellate-pubescent or in some areas rough with minute scales or tubercles as in the related *H. flammea*. *Capsule* about 6 mm long.

Found on mountain slopes, in passes, on rocky hills, and sandstone ridges. Recorded from Worcester, Ceres and Swellendam in the Little Karoo and in the Great Karoo from Aberdeen, Graaff-Reinet and Cradock northwards to the Orange River, and just beyond to Bethulie in the Orange Free State.

CAPE.—Albert: Byrnavon, 50 km W. of Aliwal North, *Werger* 1111. Ceres: N. of Pienaarskloof, *Acocks* 23772. Cradock: Jakkalsfontein, *Acocks* 17505. Graaff-Reinet: Farm Rietvlei, *Galpin* 995; Farm Klipfontein, *Codd* 3529. Middelburg: Conway Farm, *Gilfillan* sub *Galpin* 5506; N. of Grootfontein, *Van Zinderen Bakker* 1100; N. of Middelburg, *Sidey* 476. Swellendam: near Barrydale, *Acocks* 20353; National Bontebok Park, *Barnard* 649. Venterstad: Oviston Reserve, *Van Schoor* ORFS-27; *Fourie* ORFS-11. Worcester: near De Doorns, *Bolus* 13077; Pienaarskloof, *Taylor* 6494.

O.F.S.—Bethulie: Tussen Riviere Game Reserve, *Roberts* 5511.

Occasional specimens have been found in some of the localities recorded for this variety which appear to be intermediates or hybrids.

(b) var. *grandicalyx* Verdoorn in *Bothalia* 10: 572 (1972). Type: Cape, Prince Albert, N. of Prince Albert Road, *Acocks* 17098 (PRE, holo.!).

H. linifolia sensu Eckl. & Zeyh., Enum. 371 (1834); sensu Harv. in F.C. 1: 195 (1860), non Burm. f.

The diagnostic feature of this variety is the large calyx, about as long as, and much paler than the usually dark red petals, being pale pink or more often cream-coloured, finely stellate-pubescent and lobed to just beyond the middle, lobes long-acuminate to apex. The fascicled leaves appear linear to linear-spathulate and plicate on pressed specimens but are described as subterete, sometimes firm in texture but often succulent and glaucous. Shoots from heavily browsed plants are characterized by having long, usually glabrous and shiny internodes and the flowers in fairly lax, terminal, racemose cymes. The capsule is larger than in the typical variety, up to 12 mm long.

Found along foothills, stony ridges and on steep shaly slopes or rocky outcrops. Recorded from the Little and Great Karoo, from Montagu eastwards through the northern areas of George to Steytlerville and northwards to Sutherland and Beaufort West.

CAPE.—Beaufort West: Vindragersfontein, *Acocks* 14328. George: Heims River, *Olivier* 3575. Ladismith: about 10 km E. by S. of Ladismith, *Acocks* 14611; Laingsburg: Whitehill, *Compton* 11212 (NBG); about 18 km W. of Laingsburg, *Acocks* 24351. Montagu: Jakkalsfontein, *Van Breda* 1238. Prince Albert: about 5 km N. of Prince Albert Road Station, *Acocks* 17098. Riversdale: N. of Waterval (near Ladismith border), *Muir* 3754. Steytlerville: Mt. Pellier, *Oliver* 4578. Klein Roggeveld, *Marloth* 9584. Uniondale: between Hotspring and Toorwater, *Oliver* 3648.

H. linifolia sensu Harv. in F.C. fits this variety and the two specimens cited, *Drège* 7285 (LE; W.), and *Ecklon & Zeyher* Enum. No. 371 (L; S; W), belong here. *H. linifolia* Burm. f. (1768) is synonymous with *Hermannia scoparia* (Eckl. & Zeyh.) Harv. (1860). Harvey recognized that his concept of *H. linifolia* was nearly allied to *H. filifolia* and the many specimens

examined since have shown that it is merely a variety of that species.

(c) var. *robusta* Verdoorn in *Bothalia* 10: 572 (1972). Type: Cape, Port Elizabeth, Glendinning Vale, 2,4 km N.W. of Donkin Memorial, *Olivier* 458 (PRE, holo.!).

H. filifolia sensu Eckl. & Zeyh., Enum. 47, No. 372 (1824), partly, as in BOL, non L.f.

This variety differs from the typical, principally in the longer, more crowded leaves, the usually larger flowers and the more robust plant. The plant can be up to 1 m tall and the branchlets are rough with minute scales or the tubercled bases of fallen hairs. The fascicled, ericoid leaves (appearing narrowly linear on pressed specimens) together with their leaf-like stipules are 10–20 mm long and are crowded on branches, usually longer than internodes and not much reduced towards the apices of the flowering branches. The flowers are somewhat larger than those of the typical variety but not quite as long as the majority of those of var. *grandicalyx*. From last-mentioned it can be distinguished mainly by calyx which is not quite as markedly paler than the petals and is rough with minute scales or tubercles, not finely stellate-pubescent.

To date found in disturbed areas and burnt patches in the Port Elizabeth and Uitenhage Districts.

CAPE.—Port Elizabeth: Glendinning Vale, 2,4 km N.W. of the Donkin Memorial, *Olivier* 458; 458a; Victoria Park, *Long* 792; Baakens River Valley, *Galpin* 9930; Patons Farm, *Long* 475; Earn Cliff, *Galpin* 6368. Uitenhage: Winterhoek Mountains, *Fries*, *Nordlindh* & *Weimarck* 1085; Groendal Wilderness area, *Scharf* 1018.

Ecklon & *Zeyher* Enum. No. 372 is obviously a mixed gathering, because of the two distinct localities mentioned and this is borne out by specimens in certain herbaria. In LE and BOL one of the specimens on the sheet with this label is var. *robusta* and must therefore be the Port Elizabeth gathering. On other sheets the specimens with this label are a form of var. *filifolia*. In S one of a mixture of specimens is var. *robusta* collected by *Ecklon* near the Lady Donkin Memorial. Specimen *Zeyher* 2004 in PRE is *H. filifolia* var. *robusta*, while in S it is *H. flammea*.

80. *Hermannia denudata* L.f., Suppl. 301 (1781). Type: Cape, *Sparrman* in Linn. Herb. Cat. No. 854.10 (LINN, holo.; PRE, photo.!).

Shrub virgate, 60 cm–2 m tall, vegetative parts totally glabrous or (var. *erecta*) at first rough with minute, fringed scales, occasionally intermixed with longer, fascicled hairs, glabrescent in parts. *Stipules* narrowly lanceolate-acuminate to ovate-acute, broad-based, sometimes oblique at base, from 3,5 to 17 mm long, 0,5 to 6 mm broad near base, several-nerved, glabrous or pubescent with fascicled hairs, sometimes glabrescent except on margins. *Leaves* shortly petiolate, suberect; blade of mature leaves (often many small leaves present on young shoots) lanceolate to more or less oblong, cuneate at base, coarsely dentate in upper half, from about 13 to 65 mm long, 5 to 14 mm broad, glabrous or with stellate or grouped hairs from a glandular base, glabrescent in part, apex acute, midrib prominent beneath; petiole 2–6 mm long. *Inflorescence* of 1- to 3-flowered cymes terminal and in axils of upper reduced leaves of ultimate branches; bracts like much reduced leaves and stipules, linear to subulate. *Calyx* glabrous or rough with minute, fringed scales, campanulate, about 4–6 mm long, 5-lobed to midway or almost midway.

Petals yellow to red and yellow, about 8 mm long, ovate-oblong in upper third, narrowed into a waist and produced below into a claw with inrolled margins. *Stamens* 4,5 to 5,5 mm long; filaments hyaline, obovate-cuneate, overlapped by anther bases. *Ovary* about 2,5 mm long, 5-angled, glabrous or stellate-tomentose. *Capsule* exerted from persistent calyx, up to 7 mm long, 5-angled with rounded umbos.

A distinct species, characterized by the virgate habit with more or less straight branches and suberect leaves which are distinctly but fairly laxly dentate in the upper half, the teeth more or less acute. The two varieties have restricted distributions, most surprisingly widely separated from each other.

Key to varieties

Vegetative parts entirely glabrous. Western Cape and Namaqualand.....(a) var. *denudata*
Vegetative parts rough with minute, fringed scales and tufted hairs from a glandular base, glabrescent in parts. Eastern Transvaal and Swaziland....(b) var. *erecta*

(a) var. *denudata*

H. denudata L.f., Suppl. 301 (1781); Cav., Diss. 6: 329, t. 181, fig. 1 (1788); Ait., Hort. Kew. ed. 1,2: 415 (1789); Jacq., Hort. Schoenbr. 65, & 122 (1797); Reichb., Ic. Descr. Pl. Cult. t. 59 (1822); DC., Prodr. 1: 495 (1824); Harv. in F.C. 1: 194 (1860). Type: Cape, *Sparrman* in Linn. Herb. Cat. No. 854.10 (LINN, holo.; PRE, photo.!).

The typical variety is distinguished mainly in that the vegetative parts are completely glabrous, but there are a few differences of degree which as a rule cannot be regarded as specific. The stipules of var. *denudata* may reach a size of 17×6 mm although they are often smaller. The largest stipule seen on var. *erecta* was 9×3 mm, but the majority measured only 8×1,5 mm. The leaves on the typical variety are usually slightly longer in proportion to width, for example a leaf 40 mm long may be 8 to 10 mm broad in this variety while in var. *erecta* a leaf of 30 mm long is usually 9 or 10 mm broad. The flowers in var. *denudata* are recorded as yellow whereas in var. *erecta* they are often red or partly yellow and partly red.

Harvey l.c. cites *H. quercifolia* Eckl. & Zeyh., Enum. No. 383 as a synonym in part of *H. denudata*. It has not been possible to verify this.

Found in arid Fynbos in the Western Cape and Namaqualand. Recorded from Clanwilliam, Namrhynsdorp, Calvinia and Namaqualand.

CAPE.—Calvinia: Boklanskloof, Lokenburg N., *Acocks* 19438; Ekerdam, *Taylor* 2747 (BOL). Clanwilliam: Cedarberg, Sanddrif, *Taylor* 7533; Nardouw, *Stokoe* 8224. Vanrhynsdorp: "Aties" (not located), *Pearson* in Percy Sladen Mem. Exped. 5387 (BOL); "Addies", *Zeyher* 115.

(b) var. *erecta* (N.E.Br.) B. Davy & Greenw. in Burt Davy, Fl. Transv. 1: 41 & 267 (1926). Type: Transvaal, Barberton, *Galpin* 1346 (K, holo.; PRE, photo.!).

H. erecta N.E. Br. in Kew Bull. 1897: 245 (1897).

Vegetative parts, including calyx, usually rough with minute, fringed scales plus grouped hairs from a glandular base, glabrescent in parts. *Stipules* 3,5×0,5 mm to 9×3 mm. The flowers are described as red, yellow or partly yellow and partly red.

Found on mountain tops, slopes, granite hillsides, in deep soil and semi-shade. Recorded from Lydenburg, Nelspruit, Barberton and across the border in Swaziland.

TRANSVAAL.—Barberton: Barberton, *Bayliss* BS/1535; *Rogers* 23867; *Galpin* 1346. Lydenburg: Erasmus Pass, *Strey* 3806. Nelspruit: E. of Nelspruit, *Marais* 275. Lowveld Botanic Garden, *Buitendag* 829; Nyamezane Bantu Trust, *Nel* 5; suburbs of Nelspruit, *De Winter* 9403.

SWAZILAND.—Mbabane: near Komati Bridge, *Compton* 28834.

81. *Hermannia flammea* Jacq., *Hort. Schoenbr.* 1: 69, t.129 (1797); Sims in Curtis's bot. Mag. 39: t.1349 (1811); DC., *Prodr.* 1: 495 (1824); Eckl. & Zeyh., *Enum.* 46, No. 367 (1834); Harv. in F.C. 1: 196 (1860). Type: Cape, Cult. Hort. Schoenbr. (W, lecto.!; PRE, photo!).

H. falcata Eckl. & Zeyh., *Enum.* 46, No. 365 (1834). Type: Cape, Uitenhage, "Winterhoeks et Van Stadensrivierberge", *Ecklon & Zeyher*, *Enum.* No. 365 (PRE!; W!).

H. polymorpha Eckl. & Zeyh., *Enum.* 46, No. 366 (1834). Type: Eastern Cape, "Adow", "Zuurberge", "Zwartkopsrivier", "Krakakamma" and Grahamstown, *Ecklon & Zeyher* *Enum.* No. 366 (PRE!; SAM!; W!).

H. orophila Eckl. & Zeyh., *Enum.* 47, No. 369 (1834); Harv. in F.C. 1: 191 (1860). Type: *Ecklon & Zeyher* No. 369 (PRE, lecto.!; SAM!), not *Ecklon & Zeyher* *Enum.* No. 369 (S), see note.

Suffrutex up to about 65 cm tall, sometimes taller, erect or diffuse, with slender, usually suberect branchlets, branchlets sparsely to densely pubescent with minute, fringed scales or coarse, stellate hairs, pubescence usually densest on pedicels. *Stipules* usually linear-oblong to oblong, mucronate; sometimes obovate, usually erect but sometimes falcate, 4–11 mm long, 1–2 mm broad, stellate, glabrescent. *Leaves* usually fascicled, subsessile or very shortly petiolate; blade broadest at or near apex, cuneate, from 5–25 mm long, 3–10 mm broad, lowermost sometimes larger, apex rounded or subtruncate with a small, slightly recurved mucro and usually 2- to 6-toothed, stellate-hairy becoming glabrous, sometimes stellate hairs persistent but then leaves broad, sometimes persistent on margins only, leaves often rough with scaly bases of the stellate hairs; petiole up to 2 mm long. *Inflorescence* of 1- to 2-flowered cymes arranged in fairly lax, terminal, racemose cymes or clustered at apex of branchlets; peduncles 2–4 mm long; bracts subulate, linear or obovate, about 3 mm long; pedicels 2–3 mm long. *Calyx* lobed to about middle; lobes oblong-deltoid, base broad, very shortly and broadly acuminate to apex which is often incurved at first and then at least some spreading, rough with fairly laxly stellate hairs or with minute scales fringed with short hairs. *Petals* red or yellow, "yellow red-brown", "orange-red", "yellow inside, maroon outside", strongly twisted in upper half, 8–9 mm long, about 5 mm broad at broadly rounded apex, narrowing about midway into a rather broad claw with infolded margins, densely stellate-pubescent along the edges of lower half. *Filaments* hyaline, linear-oblong, somewhat cuneate, about 3 mm long; anthers about 2 mm long, ciliate, shortly overlapping filaments at base. *Ovary* about 6 mm long, stellate-pubescent. *Capsule* long exserted from persistent calyx, about 8 mm long, 5 mm broad, densely stellate-pubescent, 5-umbonate at the apex, umbos stellate.

Found on mountain slopes, stony hills and in valley bushveld. Recorded from western coastal Renosterbosveld, in the Somerset West, Stellenbosch and Paarl Districts, and, more commonly, in the southern coastal belt from Swellendam eastwards through Port Elizabeth and Albany to Kentani.

CAPE.—Albany: near Grahamstown, *Schlechter* 2637; Aloe, *Drège* 3005. Alexandria: *Galpin* 10758; near Nananga Store, *Story* 1310. Bathurst: Hopewell, *Acocks* 11073; Port Alfred, *Bayliss* 2640. East London: Nahoon River, *Galpin* 3286; *Smith* 3762. Humansdorp: *Thode* A711; The Glen, *Burt Davy* 12084. Kentani: coast, *Pegler* 37; Kei Mouth, *Flanagan* 198. King Williams Town: *Tyson* 843. Knysna: Knysna, *Keet* 672. Mosselbay: *Rogers* 22791. Paarl: Paardekop, *Drège* 7305. Port Elizabeth: slopes "Winterhoeks & Van Stadensrivierberge" *Ecklon & Zeyher* *Enum.* No. 365; Zuurberg near "Zwartkops-

rivier & Krakakamma", *Ecklon & Zeyher* *Enum.* No. 366; Zuurberg Sanatorium, *Long* 731; towards Wittekop, *Rodin* 1034. Riversdale: *H. Bolus* 11219. Somerset East: Zuurberg Hotel, *Story* 2383; near Annsville, *Story* 177. Stellenbosch: near Hottentotsholland, *Ecklon & Zeyher* *Enum.* No. 399; Stellenbosch Mtn, *Bos* 133. Stutterheim; Commonage, *Acocks* 9536; *Rogers* 12715.

Characterized by the petals usually appearing darker than the calyx on dried specimens, and by the leaves being broadest at or near the apex with the majority toothed at the apex, usually long cuneate and subaxly pubescent with scales fringed with short hairs or coarse stellate hairs, usually glabrescent and rough with the bases of the hair-groups, or the stellate pubescence persisting on some broad-leaved forms or persisting on the margins only; calyx rough from the tubercled bases of the hairs, lobed to about midway, the lobes oblong-deltoid or deltoid from a broad base, often with the apical portion infolded at first and eventually at least some spreading. This feature gave rise to the description of the species *H. falcata*, now a synonym. The flowers are usually dark red, but a few yellow forms are recorded. Some specimens give the impression of being of hybrid origin. The leaves are usually in fascicles in the wild. The specimen figured in Hort. Schoenbr. and the pressed specimen in the Vienna herbarium show the leaves as not fascicled. This may be due to the plant being young. Other plants collected later in the same garden have fascicled leaves.

A specimen from the "Hortus Schoenbrunnensis" preserved in the National History Museum, Vienna, bearing the name *H. flammea*, agrees with Jacquin's description and plate and is therefore here selected as lectotype.

H. orophila Eckl. & Zeyh. is based on their No. 369, collected at "Hottentotsholland" (Stellenbosch) and "Zwarteberg et Klynriviersberge" (Caledon). Judging by three specimens seen with this number, none of which has a specific locality, there are two distinct entities involved. Two specimens, one in PRE and the other in SAM, are obviously conspecific with *H. flammea*, having the dark petals, the characteristic pubescence on the calyx and the fringed scales on the branchlets. The third sheet, in S, is a smaller plant with petals obviously yellow and the branchlets very rough with tubercle-based hairs, matching *H. rudis*. In the description of *H. orophila*, the only item which points to one or other of the two entities is the phrase "Flores purpureo-violacei," which applies to the PRE and SAM specimens and not to the S specimen. As the PRE specimen is in better condition than the one in SAM, the former is selected as the lectotype, and *H. orophila* is included in synonymy under *H. flammea*.

82. *Hermannia flammula* Harv. in F.C. 1: 196 (1860). Type: Cape, Caledon, *Zeyher* 2009, (K, lecto; PRE, photo.!; Z!; PRE!).

H. trifurca sensu Eckl. & Zeyh., *Enum.* 370, partly excl. Jacq. t. 125 (see Linnaea 19: 612 and fide Harvey, l.c. 196).

Suffrutex, erect, virgate, with slender branchlets leafy towards their apices, 25–60 cm tall, rarely 1 mm tall, branchlets pubescent with tubercle-based stellate hairs or fringed scales, intermixed with single, thin-walled, gland-tipped hairs. *Stipules* linear-oblong or very narrowly ovate-oblong, 2–8 mm long, 0.75–2 mm broad, stellate-pubescent with a few gland-tipped hairs intermixed. *Leaves* subsessile, petiole rarely up to 2.5 mm long; blade narrowly oblong-cuneate, usually folded, 7–15 mm long, rarely up to 22 mm long, 1.5–4 mm broad near apex, apex rounded,

mucronate or subtruncate and lobed, persistently stellate-pubescent on both sides, either coarsely so with hairs short or long, or densely so with long, thin-walled hairs (tomentose?), simple gland-tipped hairs usually intermixed. *Inflorescence* of 1- to 2-flowered cymes, one or two terminal on branchlets and appearing axillary when ultimate branchlets are very short; peduncles 1–4 cm long; pedicels unequal in a cyme, 2–8 mm long, densely and softly pubescent with gland-tipped hairs interspersed; bracts usually 3, linear to subulate, about 3,5 mm long and up to 0,5 mm broad, acute with a few erect hairs at apex. *Calyx* about 7 mm long, lobed to just beyond the middle, stellate-pubescent, densely and with more thin-walled hairs at the base, some hairs gland-tipped. *Petals* twisted, usually dark red, “claret red”, “deep maroon”, “deep port wine red”, “creamy yellow in lower half”, about 8 mm long, about 3,5 mm broad near the somewhat oblique apex, more or less oblong in upper third, then narrowed into a waist and produced into a claw with infolded margins and with stellate tomentum along sides. *Stamens* with hyaline, more or less narrowly oblong filaments which are somewhat longer than anthers and were glabrous in the specimens dissected, hooked at the point of attachment; anthers ciliate. *Ovary* densely stellate-pubescent, about 2,5 mm long; styles cohering about 2,75 mm long; stipe 0,75 mm long. *Capsule* 5–8 mm long, 5-umbonate at apex, stellate-pubescent especially along thickened sutures where stellate hairs are on tubercled bases.

Found on hill sides and mountain slopes to Coastal Renosterveld or Ngongoniveld. Recorded from Caledon District eastwards to George and, further inland, from Ladismith to Uniondale.

CAPE.—Bredasdorp: Klipdale, *Smith* 2584; 3198. Caledon: “Zwartberg”, *Zeyher* 2009a; Caledon, *Compton* 14708. Ladismith: Roodeberg, *Esterhuysen* 17190. Mossel Bay: W. of Mossel Bay, *Acocks* 15397. Riversdale: E. of Heidelberg, *Acocks* 21101; Milkwoodfontein, *Galpin* 3789. Swellendam: Voormansbosch, *Zeyher* 2009b; Zuurbraak, *Acocks* 14081. Uniondale: Joubertina, *Van Breda* 1189; Buffelsrivier below Kammanasieberg, *Oliver* 3623.

Characterized by the persistently stellate-pubescent, small leaves, the mixed pubescence, some stellate hairs with thick walls (hard looking) but mostly thin-walled (soft looking) and single hairs with gland-tips intermingled, the flowers usually dark red (with pale calyx), cymes 1-, 2- or 3-flowered, terminal on the branchlets (some flowering branchlets very short).

83. *Hermannia joubertiana* Harv. in F.C. 1: 196 (1860). Type: Cape, Bredasdorp, Soetendalsvallei, *Joubert* s.n. (S-Herb. Sond., holo.; PRE, photo.!).

Suffrutex, 30–90 cm tall, spreading or bushy, branchlets pubescent with fringed scales or stellate-pubescent, stellate hairs mostly tubercle-based, glabrescent but small tubercles persistent. *Stipules* narrowly oblong to ovate-oblong, 2–5 mm long, 1,5–2 mm broad at base. *Leaves* sessile, up to about 12 mm long, narrowly cuneate or spatulate, entire except sometimes at apex, broadest near apex, about 2,5 mm broad, usually plicate, apex obtuse, mucronate, rarely lobed or toothed, abaxial surface usually pustulate and with minute stellate hairs usually crowning the pustules, glabrous on inner face, midrib broad (translucent?). *Inflorescence* of 2- to 3-flowered cymes, cymes clustered at apices of branchlets and sometimes in axils of upper leaves; peduncles short, up to about 2 mm long, bracts linear, 2 mm long; pedicels 2–5 mm long, erect and cernuous only at apex, stellate-pubescent, sometimes densely so and

with gland-tipped hairs interspersed. *Calyx* about 4 mm long, lobed to or almost to middle, tube at first narrowed at mouth but eventually wide and shallow, lobes acute from a deltoid base, sinuses wide, coarsely stellate-pubescent outside, sometimes gland-tipped hairs present as well, rarely glabrescent. *Petals* red, partly yellow within, “dark red”, “bright red”, or “dark purple”, twisted, about 8 mm long, blade oblong, abruptly narrowed below middle into a claw with infolded margins, edges of claw thinly tomentose. *Stamens* about 4 mm long, anthers somewhat shorter than hyaline, more or less oblong filaments; filaments shortly overlapped by anther bases. *Ovary* about 2 mm long, shallowly 5-lobed and 5-umbonate at apex, stellate-hairy; stipe under 1 mm long; styles cohering, about 3 mm long; stigma capitate, usually conspicuous. *Capsule* about 4,5 mm long, stellate-hairy, bluntly 5-angled, 5-umbonate at apex; stipe 1 mm long, umbos 1 mm long.

Found on sandy flats and stabilized dunes in Coastal Fynbos. Recorded from Caledon through Bredasdorp to Mossel Bay.

CAPE.—Bredasdorp: S.W. of Bredasdorp, *Acocks* 15458; Caledon: Hermanus, *I. B. Walters* 282 (NBG). George: George, *Thorne* in SAM 51673 (SAM). Mossel Bay: N.E. of Mossel Bay, *Acocks* 15387. Riversdale: S. of Riversdale, *Acocks* 24097. Swellendam: Kleinfontein, between Brede and Duiwelshoek Riviere, *Zeyher* s.n. (SAM).

Characterized by the cuneate leaves usually folded and pustulate dorsally, sparsely stellate to glabrescent, hairs minute, apex mucronate, the average not toothed or lobed at the apex. The calyx is small and shallow with acute lobes and wide sinuses. Flowers usually red, small, petals about twice as long as the calyx.

84. *Hermannia scabra* Cav., Diss. 2, t. 182, fig. 2. (1788); DC., Prodr. 1: 495 (1824), partly excl. syn.; Harv. in F.C. 1: 191 (1860). Type: Cape, specimen in Herb. Lamarck s.n. (P, holo.; PRE, photo.!).

H. scordifolia sensu Eckl. & Zeyh., Enum. 43, No. 344 (1834).

H. denudata sensu Eckl. & Zeyh., Enum. 43, No. 345 l.c.

H. presliana Turcz. in Byull. mosk. Obshch. 32, 1: 259 (1859). Type: Cape: “Paarlberg”, *Zeyher* (sic) 7294 (for *Drège* 7294) (K; PRE, photo.!.; PRE!.; S! LE!, W!).

H. patula Harv. in F.C. 1: 187 (1860). Syntypes: Cape, mountain side near Tulbach, Ecklon & Zeyher Enum. No. 344 (S!); “Paarlberg”, *Drège* 7294.

H. pedunculata Phill. in Ann. S. Afr. Mus. 9, 3: 114 (1913), non K. Schum. Syntypes: Cape, Vanrhynsdorp, Giftberg, *Phillips* 7377–7379 (SAM!).

Suffrutex, low spreading bush to stiffly erect shrublet up to 60 cm tall; branches fairly finely stellate-pubescent with intermingled gland-tipped hairs to sparsely and harshly stellate-pubescent, the hairs appressed or spreading, 1 to few from a basal tubercle. *Stipules* ovate to oblong-ovate from a broad base, sometimes obliquely cordate at base, 2–6 mm long, 1,5–3 mm broad at base, sparsely stellate-pubescent. *Leaves* shortly petiolate; blade cuneate from near apex or from midway, 2,5–40 mm long, varying in width from 2–15 mm broad at or near apex, lobed in upper half or at apex only, sparsely and harshly stellate-pubescent, hairs often 1 from the tubercled base, especially on the margins, glabrescent especially on upper surface which is finely dotted with minute tubercles or glands; petiole 1,5–5 mm long. *Inflorescence* of long, leafless, racemose or paniculate cymes terminal on branchlets, cymes 1- or 2-flowered, internodes long, 10–44 mm long; peduncles 2–20 mm, stellate-pubescent; pedicels 2–10 mm long; bracts like stipules but reducing upwards,

lower ovate-cordate or oblique at base, about 8 mm long, reducing to very narrowly lanceolate bracts about 2 mm long, usually 3 at apex of peduncle, central the largest 4,5 × 3,5 mm, lateral 2,5 × 1,5 mm. *Calyx* 6 to 7 mm long, lobed to about midway, at first stellate-pubescent especially on nerves, usually coarsely so with hairs from a raised base, sometimes more finely stellate with intermingled gland-tipped hairs, with age becoming glabrescent and scarious; lobes deltoid often ciliate with long hairs; sinuses wide, at least in mature flowers. *Petals* bright yellow turning reddish brown with age, about 10 mm long, orbicular to oblong in upper third, narrowing into a waist which is pubescent, especially on margins which are usually densely fringed, produced below into a claw with infolded margins. *Stamens* about 7 mm long; filaments hyaline, obovate, pubescent on shoulders, overlapped at apex by anther bases; anthers ciliate. *Ovary* 5-lobed, 5-umbonate at apex, about 3 mm long, stellate especially on sutures; styles about 4 mm long. *Capsule* exerted from persistent calyx, about 6 mm long, 5-lobed and 5-umbonate at apex, stellate-pubescent, the hairs longer on the sutures.

Found in Fynbos and Renosterveld, on mountain slopes, in rocky crevices and stony plains. Recorded from Bellville and Paarl Districts northwards to Clanwilliam District.

CAPE.—Bellville: Visschers Hoek, *Compton* 13431 (NBG). Ceres: Ezelsfontein, *Esterhuysen* 20343. Clanwilliam: Blaauwberg, *Schlechter* 8466; near Olifants River, *Ecklon & Zeyher* Enum. 345 (S). Malmesbury: near Malmesbury, *Schlechter* 1633; near Hopefield, *Marloth* 8224. Paarl: "Paarlberg", *Drège* 7294; Wemmershoek Valley, *Esterhuysen* 17663. Piketberg: slopes adjoining the town, *De Winter & Verdoorn* 9062; Piekeniers Kloof, *Schlechter* 4341. Tulbagh: Tulbagh Road, *Rogers* 17055; 3,2 km N. of Hermon, *Marsh* 724. Vanrhynsdorp: Giftberg, *Phillips* 7377; 7379.

Characterized by the harsh, but fairly lax, stellate pubescence on the strongly cuneate leaves which vary considerably in size especially in width, and the lobing which is usually in the upper half but sometimes at the apex only. The calyx is sparsely stellate-pubescent at first, becoming glabrous and scarious as it matures. This may account for Turczaninow's description of his *H. presliana* as "calycibus inflatis", for on the specimen on which his description is based the calyx had reached the scarious stage. The lobes are deltoid, sometimes ciliate with long hairs and the sinuses wide.

In spite of the variation in pubescence and especially in the width of the leaves, the species is readily recognizable. This was confirmed when the specimens cited by Harvey under *H. patula* were found to include the wide range of leaf width reflected in the description above.

H. myrioclada Diels in Bot. Jb. 55: 359 (1919) may belong in *H. scabra* (see also Species Requiring Further Attention, p. 61).

The specimen figured by Jacq. in Hort. Schoenbr. t. 127 as *H. scabra* Cav. is *H. aspera* Wendl. (see note under that species).

Specimens of *Ecklon & Zeyher* Enum. No. 350 named "*H. scabra* Jacq. non Cav." are *H. aspera*, and the following are *H. scabra*: No. 344 (named *H. scordifolia*) and No. 345 (named *H. denudata*). A specimen of Enum. 351 (in SAM), labelled *H. biflora* Eckl. & Zeyh. is nearest *H. scabra*, but possesses characters reminiscent of other species, such as a densely pubescent calyx somewhat resembling that of *H. multiflora*.

Story 2990, which Pillans identified as "*H. citrusdalensis* Pillans sp. nov.", a name never published, falls within the range of variation of *H. scabra* Cav.

85. *Hermannia angularis* Jacq., Hort. Schoenbr. 1: t. 126 (1797); DC. Prodr. 1: 495 (1824); Harv. in F.C. 1: 197 (1860). Verdoorn in Flower. Pl. Afr. 41 t. 1604 (1970). Iconotype: Cape, cult., Hort. Schoenbr. 1: t. 126.

H. trifurca sensu Eckl. & Zeyh., Enum. 47, No. 370, partly; non L.

Suffrutex, 30–60 cm high, branching at base, branches spreading-ascending, reddish brown in parts, sub-branched, subdensely harshly stellate-pubescent, hairs short, 0,5–1 mm long, spreading or erect and then based on small tubercles, rarely glabrescent. *Stipules* narrowly ovate-lanceolate to linear-acute, with midrib usually obvious, 5–9 mm long, 1,5–3 mm broad near base. *Leaves* sessile to shortly petiolate, fascicled; blade obovate-cuneate, narrowly oblanceolate or linear-spathulate, 7–30 mm long, 3–12 mm broad, broadest at or near apex which is often truncate or rounded at 3- or more-toothed, sometimes entire and acute, upper and lower surfaces laxly stellate-pubescent, glabrescent, margins sometimes ciliate with stellate or tufted hairs. *In-florescence* terminal on ultimate branchlets, 1- or more 2-flowered cymes arising from a fascicle of leaves, stipules and bracts; peduncles 4–10 mm long, stellate-pubescent; pedicels 2–6 mm long, stellate-pubescent; bracts linear-acute, about 5 mm long, 1 mm broad, ciliate. *Calyx* parchment-like, 8 mm long, lobed to about midway, net-veined, glabrous except for stellate pubescence on margins of lobes, 5-angled, angles extending from sinuses to base of calyx, the portion between being concave. *Petals* about 9–10 mm long, twisted, the shortly exerted portion orange-red shading to lemon-yellow; blade broadly oblong, 6–6,5 mm long, 5–6 mm broad, abruptly narrowed into a usually short claw, claw about 3 mm long with broadly infolded margins, minutely papillose within. *Stamens* about 5 mm long; filaments hyaline, oblong-obovate to obtrullate, apparently glabrous, overlapped by filament bases; anthers 2 mm long, ciliate. *Ovary* 2 mm long, stellate-pubescent, shortly stipitate stipe 0,5 mm long; styles cohering in a column, 3,5 mm long. *Capsule* subglobose, about 6 mm diam., usually enclosed by persistent perianth, stellate-pubescent, hairs short from a scaly base except on sutures where they are slightly longer. Fig. 1.3.

Found in the south-western Cape, in mountain passes and at the coast from Somerset West eastwards to the George District.

CAPE.—Caledon: Houw Hoek Pass, *Marloth* 4806; *Schlechter* 7781. George: Herold's Bay, *Acocks* 21232. Knysna: Keurbooms River, *Hutchinson* 1373. Mossel Bay: Cloete's Pass, *Acocks* 14635. Paarl: French Hoek Pass, *Esterhuysen* 18886. Riversdale: Garcias Pass, *Acocks* 15433; *Galpin* 3787. Somerset West: Gordon's Bay, *H. Bolus* 8076. Stellenbosch: Sir Lowry's Pass, *H. Bolus* 9925. Swellendam: Appelkraal, *Zeyher* 2006; Hemel en Aarde, *Zeyher* 2007b. Worcester: Steynsberg, *Esterhuysen* 15597.

The distinguishing characters are found mainly in the flowers. The parchment-like calyx is distinctly 5-angled, the angles extending from the sinuses to the base of the calyx with the portion between being concave. The calyx is broad at the base and the lobes do not spread nor reflex at any time. The shortly exerted petals are strongly twisted and lemon-yellow grading into orange-red. Characteristic too is the blade of the petal which is broadly oblong and several times longer than the basal claw.

The great variation in leaf-shape and pubescence suggests that this species has crossed with related species in the same area, the characteristic calyx being a dominant feature. *Muir* 1456 (PRE), named "*H. glabricaulis* Pillans n. sp. (ined.)" could, for example, be of hybrid stock, with *H. filifolia* var. *grandicalyx* as one parent.

H. angularis sensu Eckl. & Zeyh., Enum. 356 and sensu Reichb., Ic. Descr. Pl. Cult. t. 68 fig. 1, is *H. hyssopifolia* L.

None of the Ecklon & Zeyher specimens named *H. trifurca* L. belongs to the Linnaean species. Some are *H. flammula* (e.g. *Zeyher* 2009 in PRE! and Z!) and others *H. angularis* (e.g. *Zeyher* 2006 and 2007 in PRE! and Z!).

86. *Hermannia rudis* N.E.Br. in J. Bot., Lond. 39: 398 (1901); Adamson in Adamson & Salter, Fl. Cape Penins. 585 (1950). Type: Cape Peninsula, near Simonstown, *H. Bolus* 4950 (K, lecto.; PRE!; BOL!).

H. rudis var. *exserta* N.E. Br. l.c. (1901). Type: Cape, Miller's Point, S. of Simonstown, *Wolley Dod* 2997 (K, holo.; PRE, photo.!).

H. orophila sensu Eckl. & Zeyh., partly, as to Ecklon & Zeyher Enum. 369 (S!; PRE, photo.!). non Eckl. & Zeyh. (see note under *H. flammula*).

Low suffrutex, branching at base, branches spreading, ascending, sub-branched, upper ultimate branches short, rough, fairly sparsely stellate-pubescent or hispid with a few stiff hairs from a raised tubercle. *Stipules* lanceolate to oblanceolate, narrowly ovate-oblong or ovate, acute, 3–7 mm long, 0.5–3.5 mm broad. *Leaves* sessile or with a petiole up to 7 mm long; blade obovate-cuneate, 10–25 mm long 6–15 mm broad, broadly rounded to subtruncate and coarsely toothed at apex, roughly stellate-pubescent on both surfaces, glabrescent, often hispid on margins with stiff hairs from a tubercle. *Inflorescence* of 1- to 2-flowered cymes in the axils of upper and sub-terminal leaves of branches and the many, short, lateral branchlets; peduncles and pedicels very short, rarely up to 3 mm long. *Calyx* often red (not visible in dried specimens), hispid, especially on veins, with tubercle-based hairs, 7–8 mm long, lobed to midway, lobes oblong and abruptly narrowed into an apicule which is incurved (calyx lobes look truncate). *Petals* twisted, "pink", "pale yellow", "yellow-orange", 7–8.5 mm long, scarcely or shortly exserted from calyx; limb oblong narrowing about midway and then produced below into a fairly broad claw with infolded margins, pubescent at middle on rim with tubercle-based hairs. *Stamens* with hyaline filaments, oblong, slightly narrowed to base, about 3.3 mm long; anthers 2 mm long. *Capsule* bluntly pentagonal, lobes rounded at apex, hispid with tufted hairs on angles and apex, finely stellate-pubescent or glabrescent between angles.

Found in Coastal Fynbos or Renosterbos, in dry sandy soil in rocky areas and on slopes, usually facing the sea. Recorded from a restricted area in the southern part of the Cape Peninsula and around False Bay with outliers farther east at Potberg, Swellendam District and near Caledon.

CAPE.—Caledon: Plat-se-Berg, *Esterhuysen* 12961; Kogelberg, *Pillans* 9817; *Boucher* 500; 1391; near Rooi Els, *Taylor* 4903. Peninsula: Cape Town flower show, *Marloth* 8814; Fish Hoek, *Adamson* 3028; Simonstown, *Bolus* 4950. Swellendam: Potberg, *Thompson* 1129 (STE).

This species is characterized by the rather coriaceous calyx, which is often red and has the tips of the lobes infolded giving them a truncate appearance. The

pubescence is harsh, mostly of tufts of stiff hairs on a raised tubercle. The flowers, which are very short stalked, grow in the axils of the upper and sub-terminal leaves and so appear to be in heads at the ends of the branchlets. The degree to which the corolla is exserted from the calyx varies and is not combined with any other difference. It may even be due to the age of the flower for, while the petals are still tightly rolled, they seem to be farther exserted. The variety *exserta* is therefore not upheld here.

87. *Hermannia abrotanoides* Schrad., Hort. Goetting. 17 t. 11 (1809); Harv. in F.C. 1: 204 (1860); M. Friedrich et al. in F.S.W.A. 84: 11 (1969). Iconotype: Schrad., Hort. Goetting. 17 t. 11 (1809). (Typotype not traced).

H. bipinnata Burch., Trav. 1: 310 (1822). Type: Cape, Prieska, Moddergat, *Burchell* 1627 (K, holo.; PRE, photo.!). PRE!; LE!).

H. multifida DC., Prodr. 1: (1824), nom. superfl.; Harv. in F.C. 1: 204 (1860). Type: as for *H. bipinnata* Burch.

H. halicacaba DC., Prodr. 1: 493 (1824); Harv. in F.C. 1: 204 (1860). Type: Cape, Prieska, Asbestos Hills, *Burchell* 2020 (K, holo.; PRE, photo.!). PRE!; LE!).

Subherbaceous perennial, a low, bushy, leafy plant with several to many slender stems from a woody base; stems and branches densely to subslaxly canescent with silvery strigose and appressedly stellate hairs, hairs fine and many from a central scale, minute glandular hairs often present. *Stipules* subulate and some upper ones linear-lanceolate, 3–10 mm long, subslaxly stellate-pubescent. *Leaves* basal and cauline, petiolate; blade 10–40 mm long, pinnately to palmately divided to midrib or almost so, pinnae divided again with ultimate lobes obtuse and decurrent, densely to subslaxly appressedly stellate-pubescent; petiole 5–40 cm long. *Inflorescence* of 1- to 2-flowered cymes, terminal on branchlets and in axils of upper leaves, forming lax, leafy, racemose cymes; flowers few and large; peduncles 5–20 mm long; pedicels 3–7 mm long; bracteoles subulate to narrowly deltoid, 1.5–5 mm long. *Calyx* inflated, subglobose, densely stellate-pubescent with appressed stellate hairs some of which are very shortly stalked and readily caducous, leaving glabrescent patches, green to papery, sometimes suffused with pink or purple, about 10 mm long when flattened, 5-lobed to less than halfway; lobes acute. *Petals* "golden yellow", "orange-red", yellow suffused in part with purplish pink, twisted, usually only shortly exserted from inflated calyx, about 11 mm long, subglobose in upper half, narrowed below into a rather broad claw which is incurved at base and has broad, infolded margins, margins minutely ciliate. *Stamens* about 8 mm long; filaments hyaline, more or less obovate, up to 4 mm broad at the shoulders. *Ovary* more or less globose, densely tomentose with short, light brown, stellate hairs; stipe under 1 mm long; styles 6 mm long. *Capsule* short, 5 mm long, more or less globose, overtopped by the persistent perianth.

Found on stony hills, in sand pockets between quartzite rock, on the edge of lime plateaux, among asbestos hills. Recorded from the Orange River basin in the Prieska and Kenhardt Districts northwards through Hay and Gordonia to South West Africa as far north as the Windhoek and Gobabis Districts. Also in Botswana.

CAPE.—Gordonia: Upington, *Van der Schijff* 8060. Hay: E. of Koegas, *Codd* 1244; Wolhaarkop, *Esterhuysen* 2438. Kenhardt: W. of Kenhardt, *Schlieben* 8833; S.E. of Pofadder, *Leistner* 2421. Prieska: near Asbestos Hills, *Marloth* 2022; *Burchell* 2020; Moddergat, *Burchell* 1627.

S.W.A.—Aroab: N. of Aroab, *Acocks* 18096. Gobabis: Witvlei, *Mason & Boshoff* 2513. Keetmanshoop: Klein Karasberg, *Dinter* 4857 (Z); *Galpin* 14172. Rehoboth: Farm Bergland, *Merxmüller* 835; between Göllschau and Windhoek, *Tölken & Hardy* 706. Windhoek: Finkenstein, *Seydel* 1748; Auasberge, *Dinter* 3498.

Resembles *H. comosa* in some respects but is readily distinguished by the consistently deeply divided leaves. *H. abrotanoides* is characterized by the silvery stellate pubescence, together with the inflated calyx which is appressedly stellate-pubescent, the hairs fine and many from a silvery central scale, some very shortly stalked as well and these are readily caducous. *H. pulverata* has the same silvery stellate pubescence and resembles *H. abrotanoides* in the divided leaves but it can be distinguished mainly by the calyx which is not inflated.

The type figure is of a plant originally from the Cape, grown in the Herrenhaus en Garden. No specimen of the plant figured has been traced. There is a specimen in S which can be looked upon as authentic. It came from Lehmann's herbarium labelled "Missit Wendland. Cult. horto Herrenhusiano". Unfortunately the specific name is given as "*abrotanifolia*" instead of "*abrotanoides*", evidently by mistake.

88. *Hermannia pulverata* Andr., Bot. Rep. 3: t. 161 (1801); DC., Prodr. 1: 496 (1824) (sphalm "pulverulenta"); Eckl. & Zeyh., Enum. 47 No. 375 (1834); Harv. in F.C. 1: 203 (1860). Iconotype: Cape, cult. Hammersmith, t. 161 in Andr. Bot. Rep. 3 (typotype not traced).

H. argentea Sm. in Rees, Cycl. 17 (1819); DC., Prodr. 1: 496 (1824); Eckl. & Zeyh., Enum. 47, (No. 376 (1834); Harv. in F.C. 1: 203. Type: Cape, cult. Leyden, *Smith* s.n. (BM, holo.; PRE, photo.!).

H. bolusii Szyszyl., Polypet. Thalam. Rehm. 19 (1887). Type: Orange Free State, Kanonfontein, *Rehmann* 3544 (Z, holo.!). PRE, photo.!).

H. cana K. Schum. in Bot. Jb. 10: 42 (1888). Type: Cape, between Kuruman and Boetsap, *Marloth* 947 (PRE!; SAM!).

Subherbaceous perennial, about 30 cm tall or, if protected, taller, stems 1 to several from a woody base (or many after being heavily grazed), erect or spreading-ascending, sparsely branched above, silvery canescent with strigose and appressed stellate pubescence, the stellate hairs from a central, silvery scale, often minute, gland-tipped hairs present. *Stipules* subfleshy, up to 10 mm long, ovate to ovate-oblong, broadly to narrowly so, often cordate at the base and oblique, silvery appressed stellate-pubescent. *Leaves* basal and cauline, petiolate; blade variable in shape and degree of lobing, broadly to narrowly ovate-oblong in outline, from coarsely lobed to pinnatifid, bipinnatifid or palmatifid, silvery stellate pubescent to thinly so, lobes obtuse and decurrent; petiole 2–12 mm long. *Inflorescence* of 1- to 2-flowered cymes, terminal and in axils of upper leaves, forming racemose cymes; peduncles suberect, 5–30 cm long, rarely longer, appressed stellate-pubescent and often with scattered, minute, gland-tipped hairs; pedicels short, 1–6 mm long, nodding; bracts like stipules but usually smaller; bracteoles usually 3, 1–2 mm long. *Calyx* up to 5 mm long, campanulate, thin-textured, silvery stellate without, and usually with scattered, minute, reddish, gland-tipped hairs, lobed to almost halfway, sinuses wide. *Petals* usually under 10 mm long, "khaki yellow", "indigo to cream", "dirty yellow turning golden brown", tightly curled (flowers appear half closed and truncate on dried specimens), orbicular to oblong-orbicular, narrowing in lower half to a claw with infolded margins, apparently

glabrous. *Stamens* about 5 mm long with hyaline oblong-obovate filaments glabrous in specimens dissected; anthers about 2–5 mm long, slightly shorter than filaments, ciliate. *Ovary* about 2,5 mm long, stellate-pubescent, 5-lobed; stipe short, up to 0,75 mm long; styles 4,5 mm long. *Capsule* up to 8 mm long, appressed stellate-pubescent especially along sutures, remains of perianth persisting at base only.

Found in karroid scrub, karroid broken veld and false upper karoo, in vleis, shaly river valleys and rocky kloofs. Recorded from Worcester eastwards to Alexandria and northwards through Calvinia and Griqualand West through the Cape midlands to Fauresmith and Rouxville in the southern Orange Free State.

CAPE.—Alexandria: Addo Elephant Park, *Barnard* 558. Barkly West: Holpan, *Acocks* 109. Calvinia: Calvinia, *Schmidt* 165. Graaff-Reinet: Graaff-Reinet, *Thode* A549. Hanover: Hanover, *Sim* sub *Galpin* 5968. Hay: between Campbell and Griquatown, *Acocks & Hafström* H 1043. Herbert: Robenfontein, *Werger* 1430. Kimberley: Blaauwbosdrift, *Acocks* 1146. Laingsburg: S.S.E. of Laingsburg, *Acocks* 20503. Mossel Bay: Karoo, "Gauritzrivier", *Ecklon & Zeyher* Enum. No. 375 (S). Middelburg: near Schoombie, *Schweickerdt* 1270; Grootfontein, *Theron* 1182. Oudtshoorn: Oudtshoorn, *Rogers* 4651. Pearston: Wildebeestkuil, *Hobson* 60. Port Elizabeth: "Coegariver", *Ecklon & Zeyher*, Enum. No. 376 (S). Prieska: Vogelstruisbult, *Bryant* J. 294. Prince Albert: Prince Albert Road, *Bayliss* 2443. Richmond: Vlakplaats, *H. Bolus* 13773 (Z). Robertson: Robertson, *Van Breda & Joubert* 1923. Steytlerville: De Weg, *Oliver* 4579. Uniondale: Toorwater, *Oliver* 3657. Willowmore: S.W. of Willowmore, *Bayliss* 4924. Worcester: Hex River Valley, *Marloth* 6192.

O.F.S.—Fauresmith: Koksfontein, *Henrici* 2814. Trompsburg: Riet Poort Noord, *Verdoorn* 2198. Rouxville: Nieuwejaarspruit, *Ecklon & Zeyher* s.n.

Characterized by the silvery, scaly pubescence which forms a complete, smooth covering on the stems in the lower parts and consists of strigose and stellate hairs, the stellate hairs radiating from a central silvery scale. In most upper parts the silvery stellate hairs and scales are less dense and often scattered, and minute reddish gland-tipped hairs are present as well. The leaves, like those of several other species, especially among species that were formerly in the genus *Mahernia*, vary considerably in the degree of lobing. In some specimens the leaves are merely coarsely lobed while in others, or even on the same plant, they can be deeply lobed. In this species they vary from subentire to coarsely lobed to pinnatifid, bipinnatifid or palmatifid.

Andrews, when describing this species, referred to it as the "powdered *Hermannia*".

89. *Hermannia procumbens* Cav., Diss. 329, t. 177, fig. 2 (1788). Type: Cape, "Groenekloof infra Leeuwestaart", *Thunberg* s.n. (MA, holo.; PRE, photo.!). UPS, Herb. No. 15490, PRE, photo.!).

Suffrutex, stems one to many from a woody base, decumbent, slender, sparingly branched at base and sometimes with a few, short, ascending branchlets produced in axils of leaves along the trailing stem, new growth with appressed stellate pubescence, glabrescent, upper internodes long. *Stipules* ovate-oblong, ovate-lanceolate, semi-orbicular, 2–45 mm long, 1,5–2,5 mm broad, broadly acuminate to abruptly narrowed into an acumen, occasionally rounded at apex. *Leaves* usually solitary at a node, upper distant, petiolate; blade 10–35 mm long, varying in shape and degree of lobing, from oblong-cuneate and coarsely lobed to bi- or tri-pinnatifid and then fragile, fairly sparsely stellate-pubescent, glabrescent; petiole 3–15 mm long. *Inflorescence* of

few-flowered, leafless, racemose cymes, terminal on ascending branches and branchlets; flowers secund and often crowded at apex; pedicels short, up to 5 mm long. Calyx 5–7 mm long, from broadly campanulate (sub-inflated) and about half as long as petals to narrowly campanulate (not at all inflated) and more than half as long as petals, lobed to above the middle, lobes either broad-based and rounded with an acute apex, or deltoid to narrowly deltoid from a narrow base, glabrescent, sometimes with minute hairs persisting on margins and apex of lobes. *Petals* strongly twisted, 8–11 mm long, 3–5 mm broad in upper half, evenly narrowing into claw or broadest on one side and sometimes auricled on one side, claw about as long as upper portion, apparently glabrous or rarely a few hairs on inrolled margins. *Stamens* about 6.5 mm long, with narrow to fairly broad, obovate-cuneate, hyaline, glabrous filaments about 4 mm long; anthers 3 mm long, ciliate. *Ovary* about 2.5 mm long, densely stellate-pubescent, 5-lobed; stipe 4–5 mm long. *Capsule* up to 8 × 7 mm, 5-lobed, stellate-pubescent, subglabrescent, with the persistent calyx surrounding base.

Found on the Cape Peninsula and up the coast from Malmesbury District to near Lamberts Bay in the Clanwilliam District.

For key to subspecies see key to species (pp. 3–7).

(a) subsp. *procumbens*

De Winter in *Bothalia* 11, 3: 264 (1974).

H. procumbens Cav., Diss. 6: 329, t. 177, fig. 2 (1788); Thunb., Diss. Herm. 15 (1794); Fl. Cap. 507 (1823); Eckl. & Zeyh., Enum. 41, No. 329 (1834); Harv. in F.C. 1: 185 (1860). Adamson in Adamson & Salter, Fl. Cap. Penins. 584 (1950). Type: Cape, "Groenkloof infra Leeuwestaart", Thunberg s.n. (MA, holo.; PRE, photo.; UPS, Herb. No. 15490; PRE, photo.).

H. leucanthemoides Presl. Bot. Bemerk. 22 (1845). Syntypes: *Ecklon* in Herb. U.I. 395 (PRE!; S!; W!); *Drège* pl. cap. b. spei.

H. zeyheriana Presl, Bot. Bemerk. 22 (1845); Walp., Ann. 1: 108, as *zeyheri* (1848–49). Type: *Ecklon & Zeyher* Enum. No. 329 (S!; LE!; MO!; BOL!).

Characterized by the decumbent habit with one to several slender stems from a woody base, the lower leaves oblong-cuneate and fairly coarsely lobed, the upper often narrowly oblong and lobed down to half the breadth of the leaf or in specimens from northern areas even deeper, but not to the midrib (pinnatifid), the subsparse, appressed, stellate pubescence of the young growth, the inflorescence of few-flowered, leafless, racemose cymes terminal on the ascending branches and branchlets, flowers secund and often crowded at the apex, the broadly campanulate (subinflated?), glabrescent calyx usually about half as long as the petals and lobed to above the middle and the lobes broad-based.

Recorded from the Cape Peninsula, around Table Bay and one record from near Bok Point in the Malmesbury District.

CAPE.—Bellville: Melkbosstrand, *Dahlstrand* 1044; about 45 km N. of Cape Town on Mamre road, *Lewis* in SAM 65979. Malmesbury: near Bok Point, Compton 9410 (NBG). Peninsula: Milnerton, *Adamson* 2605 (BOL); near Greenpoint, *Ecklon* in Herb. U.I. 395.

Presl, when describing *H. leucanthemoides* and *H. zeyheriana*, stated that *Drège* 2316 (W!; LE!) and 7310 (W!; LE!) were the true *H. procumbens* Cav. He then described *Ecklon & Zeyher* Enum. No. 329 as *H. zeyheriana* Presl and *Ecklon* in Herb. U.I. 395 as *H. leucanthemoides* Presl. Several sheets in different herbaria of *Ecklon & Zeyher* Enum. No. 329 (MO!; BOL!; S!; LE!) and *Ecklon* in Herb. U.I. 395 (S!; W!) have been seen and they are true *H. procumbens*

Cav. The *Drège* specimens seen by Presl are correctly cited by Harv. in F.C. 1, No. 2316 (W; LE) under *Mahernia pulchella* (L.f.) Cav. and No. 7310 (W; LE) under *Mahernia linearis* Harv. Sheets of these *Drège* numbers have been seen in W and LE and they are not *H. procumbens* Cav.

Previously subspecies *procumbens* had only been recorded from around Table Bay which is some distance from the southernmost record of subsp. *myrrhifolia*. But in 1940 a specimen of typical *H. procumbens*, Compton 9410, was collected at the 7th Gate to Bok Point, which lies in the heart of the distribution area of subsp. *myrrhifolia*. This supports the decision to regard these elements only as subspecies. It may be due to cultivation or chance that more specimens of both subspecies have not been recorded from the intervening gap. In habit and inflorescence the two subspecies are the same and both show a tendency to turning blackish in parts on pressed specimens. For the features in which they differ see subsp. *myrrhifolia*.

(b) subsp. *myrrhifolia* (Thunb.) De Winter in *Bothalia* 11: 264 (1974). Type: Cape, Swartland, Thunberg Cat. No. 15487 (UPS, holo.; PRE, photo.).

H. myrrhifolia Thunb., Diss. Herm. 16 (1794); Fl. Cap 508 (1825). Type: as above.

H. pinnatisecta Salter in Jl S. Afr. Bot. 12: 102 (1946). Type: Cape, Malmesbury, Mamre Hill, Compton 14928 (NBG, holo.);—var. *auriculata* Salter l.c. 103 (1946). Type: Cape, Malmesbury, Ysterfontein, Compton 17374 (NBG, holo.).

This subspecies differs from the typical subspecies mainly in the leaves and calyx. The leaves are pinnatisect with pinnae pinnately lobed, some lobes decurrent (they are never oblong and coarsely lobed with upper narrow and pinnatifid as in subsp. *procumbens*). The calyx is usually narrowly campanulate in subsp. *myrrhifolia* and slightly more than half the length of petals whereas in subsp. *procumbens* it is broadly campanulate and about half as long as petals. This subspecies is on the whole more fragile than the typical, especially the leaves; the internodes appear longer and the tendency to turn blackish on pressing is more apparent.

Found along the Cape west coast from Malmesbury District to Clanwilliam. Recorded from the Swartland, especially near Saldhana Bay and northwards to Lambert's Bay.

CAPE.—Bellville: Monte Vista, *Esterhuysen* 32491a. Clanwilliam: Van Putten's Vlei, *Gillett* 4058; Zuurfontein, *Schlechter* 8549. Malmesbury: Swartland, Thunberg s.n. (S); Mamre Hill, Compton 14928 (NBG); Ysterfontein, Compton 17374 (NBG); near Darling, *Schlechter* 5339 (SAM).

Records of this subspecies are found in very few herbaria. This is probably owing to the fragile nature of the plant and to the extensive cultivation in the Swartland, Malmesbury district, which is evidently its main distribution area. It would seem that Thunberg's species was lost sight of by most reviewers, possibly because the name was misapplied by Ecklon & Zeyher. Their No. 407, mentioned in the Enumeration under the name *Mahernia myrrhifolia* (Thunb.) Spreng., is not this species but *H. diffusa* (= *H. pilosula* Harv.).

So it happened that Salter came to describe the species *H. pinnatisecta*. His specimens exactly match the type of *H. myrrhifolia* Thunb.

90. *Hermannia confusa* Salter in Jl S. Afr. Bot. 12: 99 (1946); De Winter in *Bothalia* 11, 3: 263 (1974); Verdoorn in Flower. Pl. Afr. 43, t. 1718 (1976). Type: Cape, between Caledon and Babylon's

Tower, *Ecklon & Zeyher* Enum. No. 374 (BOL, holo.!; S!; LE!; SAM!).

H. tenuifolia sensu Eckl. & Zeyh., Enum. 47, No. 374 (1834); sensu Harv. in F.C. 1: 203 (1860), non Sims.

H. coronopifolia sensu Eckl. & Zeyh., Enum. 47 No. 377 (1834), non Link. (S!; SAM!).

Mahernia pinnata sensu Eckl. & Zeyh., Enum. 52: 408 (1834), non L. (S!, poor specimen).

Suffrutex, erect, becoming much branched and sprawling with age, up to 60 cm tall, branched from base; branches and branchlets rather slender with fairly sparse, appressed, stellate hairs and long, pointed hairs spreading from a minute, bulbous base, minute, gland-tipped hairs also sometimes present, the long hairs caducous. *Stipules* 2–6 mm long, ovate to narrowly ovate, often broad and oblique at base, the auricles somewhat thickened. *Leaves* 10–25 mm long, one or more at a node, pinnately lobed to bi-pinnately lobed above, narrowing into a petiole-like base up to 1 cm long, sparsely stellate-hairy. *Inflorescence* of 1- to 2-flowered cymes arranged in slender, leafless, lax, racemose cymes terminal on branchlets, cymes 1 to 2 at a node; peduncles 1–4, 5 cm long, sparsely stellate-pubescent, glabrous or with minute, gland-tipped hairs, usually straight and suberect, usually shorter than internodes; pedicels short, 3–4 mm long, cernuous; bracts like stipules, narrowly ovate to ovate with a broad attachment, shallowly cordate or often oblique with one side deeply cordate, auricles somewhat thickened, acute or acuminate, glabrous or with a few long hairs which fall readily; bracteoles small and often united at base, 1,5–2,5 mm long. *Calyx* campanulate, lobed to almost middle, about 6 mm long, glabrous; lobes acute. *Petals* bright yellow turning red-orange with age, strongly twisted, about 10 mm long, the sub-orbicular upper half oblique at base where it narrows into a long claw with infolded margins, minutely pubescent in central area on inner face. *Stamens* about 6 mm long with obovate hyaline filaments, pubescent on shoulders which are overlapped by anther bases. *Ovary* about 3 mm long, 5-angled, stellate-hairy; stipe up to 1 mm long; styles about 8 mm long. *Capsule* 6–7 mm long, 5-lobed, shortly exerted from the persistent calyx, stellate-pubescent at least on sutures and at apex; styles fairly persistent.

Found on river flats and mountain slopes. Recorded quite frequently from Caledon eastwards to Swellendam and northwards through Robertson, Worcester and Stellenbosch to Piketberg and in eastern Clanwilliam.

CAPE.—Caledon: Zwarteberg, *Schlechter* 5557; Hartebeesrivier, *Zeyher* 2001; *Ecklon & Zeyher* Enum. 374 (LE; W). Ceres: Ezelsfontein, *Esterhuysen* 20359. Clanwilliam: Bergvalley, *Oliver* 3893. Piketberg: Piqueniers Kloof, *Schlechter* 4940. Robertson: near Warsbek, *Van Breda & Joubert* 2006. Stellenbosch: Stellenbosch, *Ecklon & Zeyher* Enum. 408 (S). Swellendam: Hesquaspoort, *Acocks* 22391. Tulbagh: Tulbagh Road, *Schlechter* 8995. Worcester: Hex River, De Doorns, *H. Bolus* 13076.

In the past this species has very generally been named *H. tenuifolia* Sims. In 1946 Captain Salter pointed out that the specimens cited by Harvey in the Flora Capensis, together with a number of more recently collected examples, differ from Sims' species. Sims states in the text of the Botanical Magazine t. 1348 (1811) that the plate had been prepared some years before from a plant believed to have been in the possession of the late Mr Curtis. No specimen was preserved and, since it has not been exactly matched with any known South African species, *H. tenuifolia* Sims is now considered an insufficiently known species.

H. confusa differs from its nearest relative, *H. procumbens* subsp. *myrrhifolia*, in its erect habit and its inflorescence of lax racemose cymes with long, suberect peduncles which are usually somewhat shorter than the internodes. It is also characterized by the fairly shallow, glabrous calyx with the petals exerted from the tube by more than half, often showing the claw with its stellate hairs.

In his original description of *H. confusa* Salter did not clearly indicate *Ecklon & Zeyher* Enum. No. 374 as the holotype. He did, however, mention this specimen first and added BOL in brackets after it. In the rest of the work Salter always indicated in brackets behind the first cited specimen that it is the type and also the herbarium in which it is housed. It is thus assumed that the omission of the word type is merely an error.

91. *Hermannia macra* *Schltr.* in Bot. Jb. 55: 362 (1919); M. Friedrich et al. in F.S.W.A. 84: 16 (1969). Syntypes: Namaqualand, I'us, *Schlechter* 11403 (PRE!; Z!; W!; S!; LE!); Keuzabies, 18/6/1898, *M. Schlechter* s.n. or sometimes given as No. 106 (K!; PRE!; Z!; LE!; S!).

H. rhopalostylis K. Schum. & Schltr. ined., name on some herbarium specimens of *Schlechter* 11403 and *M. Schlechter* 106.

H. paniculata E. Mey., nomen in Drège, Zwei Pfl. Doc. 191 (1843) (W!).

Suffrutex, stems several to many from a woody base, sparingly branched near base; branches sparsely to very sparsely and minutely appressed stellate-pubescent, the hairs radiating from central scales or glands, scattered minute papillae sometimes present, glabrescent, sometimes central scales or glands persistent. *Stipules* small, narrowly ovate to ovate-deltoid, broad at base, 1,5–2 mm long, stellate-pubescent and sparsely ciliate with long, pointed hairs, glabrescent. *Leaves* mostly basal, sparse and reduced above, petiolate; blade more or less oblong from narrowly to broadly so, or ovate-oblong, coarsely and unevenly lobed, sometimes deeply so but never to midrib, lobes usually broad and obtuse, not or occasionally lobed again, 3-nerved at base, nerves suberect, appressed stellate-pubescent on both surfaces, glabrescent; petiole 5–25 mm long. *Inflorescence* of 1- to 2-flowered cymes arranged in erect, terminal, leafless, racemose or paniculate cymes; peduncles 20–30 mm long, glabrescent; bracteoles like small stipules, usually 3; pedicels 2,5–6 mm long, stellate-pubescent with minute, scattered glands or papillae. *Calyx* campanulate, about 4,5 mm long, lobed to almost middle, teeth deltoid and sinuses wide, stellate-pubescent and with minute, scattered scales or papillae, glabrescent in upper half only, lobes ciliate with slightly longer stellate hairs. *Petals* yellow to orange-red, about 5,5 mm long, suborbicular in upper half, usually broader than long, narrowed into a fairly broad claw with inrolled margins, appears glabrous but sometimes with minute hairs. *Stamens* about 5 mm long, with obovate, hyaline filaments; anthers almost as long as filaments, overlapping them at base, acute, ciliate. *Ovary* about 2,5 mm long, stellate-pubescent on sutures, papillate between; stipe about 0,5 mm long; styles 3 mm long, persistent, often appearing subclavate at apex. *Capsule* about 6 mm long and almost as broad, shallowly 5-lobed, stellate pubescence sometimes persisting on sutures, papillose between hairs, persistent styles still united and appear subclavate at apex (hence the abandoned manuscript name *rhopalostylis*).

Found on sandy flats and in dry river beds in the drainage basin of the lower Orange River. Recorded from Namaqualand and in South West Africa in the Warmbad and Lüderitz Districts.

CAPE.—Namaqualand: I'us, *Schlechter* 11403; Keuzabies, *M. Schlechter* 106; S. of Goodhouse, *Schlieben* 9100.

S.W.A.—Lüderitz: Sendelingsdrift, *Merxmüller & Giess* 3261. Warmbad: Sperlingspütz, *Giess, Volk & Bleissner* 7012; Witpüts, *Merxmüller & Giess* 3635.

Closely related to *H. paucifolia* and differs mainly in the shape and lobing of the leaf and size of the flowers. In *H. macra* the flowers are small, the majority up to 6 mm long on dried specimens, whereas in *H. paucifolia* they are up to 10 mm long. The leaves in *H. macra* are more or less oblong, from narrowly to broadly so, and coarsely and unevenly lobed, rarely deeply lobed but not to the midrib, whereas in *H. paucifolia* the leaves are ovate and the lobing is usually to the midrib so that most of the lower leaves are palmatisect. Both these species are characterized by being fairly small, 30–50 cm tall, with several stems from a woody base and with leaves mostly basal and an inflorescence of practically leafless, glabrous, racemose or paniculate cymes. The styles which cohere and persist, appear subclavate and this probably accounts for the unpublished specific name *H. rhopalostylis*. The name "*macra*", the "Meagre *Hermannia*" was chosen instead when the species was published in 1919.

92. *Hermannia juttae* *Dinter & Engl.* in *Bot. Jb.* 55: 356 (1919); *M. Friedrich et al.* in *F.S.W.A.* 84: 16 (1969). Type: South West Africa, Büllspoort, Rehoboth, *Dinter* 2098 (SAM!).

H. rehobothensis *M. H-Friedrich* in *Mitt. bot. StSamml., Münch.* 1: 346 (1953); *M. H-Friedrich et al.* in *F.S.W.A.* 84: 16 (1969), in syn. Type: South West Africa, Rehoboth, *Volk* 2520.

Subherbaceous, stems several to many from a woody base, erect, sparingly branched just above base, densely stellate-pubescent at base with long white hairs, branches sparsely and inconspicuously stellate-pubescent, often with scattered, very minute glands, especially in upper portion. *Stipules* ovate-lanceolate to linear-lanceolate, somewhat acinaciform, 5–20 mm long, stellate-pubescent. *Leaves* petiolate, mostly basal with 1 or 2 distant leaves on lower half of branches; blade oblong-lanceolate to narrowly lanceolate, coarsely crenate or toothed, 20–60 mm long, 8–15 mm broad, occasionally luxuriant plants with larger leaves (*Giess* 13555), stellate-pubescent, at first densely so with long matted white hairs, later sparsely so with shorter, appressed hairs, nerves prominent below, usually 3 from base; petiole 7–27 mm long. *Inflorescence* of 1- to 2-flowered cymes, arranged in erect, leafless, lax, terminal, racemose cymes; cymes 1 to 2 at a node; peduncles suberect, 15–35 mm long, appearing glabrous but usually with scattered, minute, sessile glands; bracts like stipules, though somewhat smaller, bracteoles often 3, 1.5–5 mm long; pedicels slender, 5–15 mm long. *Calyx* 8–9 mm long, campanulate, wide at mouth, thin becoming papery, appears glabrous but has minute scattered glands and occasionally a few stellate hairs, toothed in upper half, sinuses wide. *Petals* golden yellow becoming orange-red with age, 8–9 mm long, oblong-orbicular in upper half, narrowing into a fairly broad claw with narrowly infolded margins, glabrous in specimens dissected. *Stamens* 8 mm long with obovate-oblong, hyaline filaments; anthers acute, ciliate, slightly longer than filaments. *Capsule*

about 8 mm long, enclosed in faded petals and calyx, 5-lobed, stellate-pubescent; style persistent.

Found "on the flats", in deep sandy soil, "among Acacias", "among Mesembryanthemum". Recorded from the Rehoboth and Maltahöhe Districts in South West Africa.

S.W.A.—Maltahöhe: form Schwarzkuppe, *Giess, Volk & Bleissner* 5215. Rehoboth: Büllspoort, *Dinter* 2098 (SAM); *Strey* 2085; *Liebenberg* 5106; *Dinter* 8321 (S; PRE); Jorro Flats, *Strey* 2339; Naukluft, *Hardy* 1960.

A low, subherbaceous plant with many short, erect, thin, pubescent stems from a woody base, sparsely branched just above the base. Characterized by the basal leaves with only one or two above the base in the lower half of the plant, and the leafless upper half which bears the comparatively large flowers in lax racemose cymes, the calyx, which is campanulate, with a wide mouth and appears glabrous although minute glands and occasional stellate hairs may be present.

93. *Hermannia paucifolia* *Turcz.* in *Byull. Mosk. Obshch.* 31: 218 (1858); *Harv.* in *F.C.* 1: 203 (1860); *M. Friedrich et al.* in *F.S.W.A.* 84: 19 (1969). Type: Cape, Bitterfontein, *Zeyher* 118 (K; PRE, photo!; PRE; Z!; LE!; and in W! as "*Mahernia bipinnata* L."; in S! as "*H. dissecta* *Harv.*").

H. chrysanthemifolia *E. Mey.* ex *Harv.* in *F.C.* 1: 204 (1860). Type: Namaqualand, Kaus Mts, *Drège* s.n. (W!; LE!).

H. paucifolia var. *intermedia* *Kuntze* ex *K. Schum.* in *Verh. bot. Ver. Prov. Brandenb.* 30: 233 (1888); in *Engl., Monogr. Afr. Pfl.* 5: 55 (1900). Type: no type designated but several specimens cited in 1900, among them *Schenck* 342 (Z!) and 124 (Z!; PRE!).—var. *chrysanthemifolia* (*E. Mey.* ex *Harv.*) *Kuntze* ex *K. Schum., l.c.* (1888); in *Engl. l.c.* (1900).

H. dissecta *Harv.* ms. in syn. in *F.C.* 1: 204 (1860). Type: as for *H. paucifolia* *Turcz.*

Suffrutex, stems several to many, bushy, from a woody base, branched at base and sparingly above, branches glabrous or with a few hairs or minute glandular hairs, rarely finely stellate-pubescent. *Stipules* small, broadly ovate to ovate-lanceolate, 1–3.5 mm long, glabrous or subslaxly pubescent, some hairs on margins long. *Leaves* mostly basal with a few distant and somewhat reduced leaves above, petiolate; blade 15–30 mm long, usually palmatisect with segments pinnately and unevenly once or twice lobed, lobes mostly rounded at apex, leaves rarely ovate and palmately nerved with margins shallowly to deeply lobed, upper and lower surface glabrous or sparsely to densely stellate-pubescent with minute stellate hairs, upper surface sometimes glabrescent; petiole 10–35 mm long. *Inflorescence* of 1- to 2-flowered racemose or paniculate cymes, terminal on main branches and on a few lateral branches which arise from distant upper, much reduced leaves; peduncles suberect, up to 16 mm long; bracts short and broad, often united at base, about 1 mm long; pedicels 2–3 mm long, often minutely glandular-pubescent. *Calyx* campanulate, wide at the mouth, about 6.5 mm long, lobed almost to middle, minutely stellate-pubescent, glabrescent with only a few minute glandular scales at base. *Petals* yellow to orange, at some stages red, about 10 mm long, the upper third oblong-orbicular, narrowing into a long claw with inrolled margins, rounded or slightly lobed where blade narrows into claw, appears glabrous but sometimes minute stellate pubescence and papillae obvious on inner face of claw. *Stamens* united at base around stipe, about 7 mm long with oblong hyaline filaments narrowing slightly to base; anthers ciliate 4 mm long, about as

long as filaments and shortly overlapping them at base. *Ovary* about 4 mm long, entirely stellate-pubescent or only on sutures, papillate between, sutures narrowing slightly to base; stipe 1 mm long; styles about 5 mm long, exerted and persistent, appearing slightly clavate at apex. *Capsule* 7–10 mm long, minutely papillose between sutures, sometimes stellate on sutures and at apex, persistent calyx and stamens at base obscuring stipe, persistent styles at apex.

Found in the western mountainous karoo, the arid upper karoo, Namaqualand and south-western South West Africa. Recorded from Victoria West westwards to Calvinia and northwards to Namaqualand and the Lüderitz District in South West Africa.

CAPE.—Calvinia: Hantam, *Marloth* 5634; on road to Williston, *Story* 4270; Brandvlei, *Comins* 679. Namaqualand: Oograbies Poort, *H. Bolus* in Herb. Nor. Austr.-Afric. 440; Kaus Mts, *Drège* s.n. (LE; W). Vanrhynsdorp: Bitterfontein, *Zeyher* 118. Victoria West: Hutchinson, *Acocks* 9631. Williston: Matjiesfontein, *Foley* 160; Victoria West station, *Smith* 2452.

S.W.A.—Lüderitz: Aus, *Dinter* 6072; *Marloth* 5079; between Tsirub and Grasspoorte, *Schenck* 124 (PRE; Z); Gobaxab, between Aus and the Orange River, *Schenck* 342 (Z); Klinghardt Mts, *Dinter* 3884.

Characterized by the mainly basal leaves, ovate in outline and often deeply palmatisect, and the almost leafless, terminal, paniculate cymes. Closely related to *H. macra*. For distinguishing features see under that species. The distribution of these two species overlap and some specimens appear to be intermediate. For the present the treatment in F.S.W.A. is followed here and the two species are kept separate. *Dinter* 3884, which in F.S.W.A. is doubtfully included in this species because of the shallowly lobed, densely stellate leaves, matches a specimen from Grootderm collected by Pillans (No. 5324), with the note "luxuriant growth result of growing in deep sand in a watercourse". Among the specimens examined these two gatherings are linked to the palmatisect leaves by *Schenck* 342 (Z) which has intermediate leaves, some shallowly, and others on the plant fairly deeply lobed. *Dinter* 3884 and *Pillans* 5324 are therefore here included in *H. paucifolia*.

The type gathering, *Zeyher* 118, is represented in several herbaria. All those seen are poor specimens. It is not known which, if any, of these specimens was seen by Turczaninow.

Drège specimens in LE and W which are this species have, evidently in error, the specific name written as "*chrysanthemoides*" on the label.

According to Veterinary Services, Onderstepoort these plants cause excessive purging in animals. Common names are Skitterybossie, Purgurbossie, Scholtzbossie and Governmentsbossie. In the Agricultural Journal (1893), it is claimed that it is used to cure Bushman of a craving for drink.

SPECIES REQUIRING FURTHER ATTENTION

1. *Hermannia bracteosa* Presl, Bot. Bemerk. 21 (1844).

The sheet of *Drège* 7267 in PR comprises two elements. The specimen on the left is *H. mucronulata* Turcz., and from the description in Bot. Bemerk. it is clear that this is the specimen that Presl referred to as *H. velutina* Eckl. & Zeyh. The specimen on the right which is considered to be the holotype of *H. bracteosa* Presl, does not agree with any species known to me. The leaves are velvety as in *H. velutina*, but the inflorescences matches *H. salviifolia* var.

grandistipula Harv., which has coarsely stellate leaves. This seems to point to the holotype being of hybrid origin.

2. *Hermannia incisa* Willd., Sp. Pl. 3: 599 (1800).

The type specimen of this species is in the Botanical Museum, Berlin-Dahlem. A photograph of the type specimen was sent to this Institute and later a flower and upper leaf was sent on loan. It appeared that in all probability the species was conspecific with *H. procumbens* Cav. and matched fairly well *Lewis* in SAM 65979 under *H. procumbens* subsp. *procumbens*. However, it seems wise to investigate further, especially since the procumbent habit is not mentioned and cannot be judged from the specimen. The sign on the specimen indicated that it was woody but not necessarily procumbent.

3. *Hermannia myrioclada* Diels in Bot. Jb. 55: 359 (1919).

Type: Cape, Cedarberg, *Diels* 862 (B, holo.†). From the description this species may be synonymous with *H. scabra*.

4. *Hermannia polymorpha* Eckl. & Zeyh.

The specimen figured in Refug. Bot. 3: 195 together with a specimen in LE labelled "Ex horto bot. Petropolitana 66.5" and named *H. polymorpha* Eckl. & Zeyh. were most puzzling. In 1975 a specimen from Kew was brought to my notice. It matched the above and was said to have appeared spontaneously in the Royal Botanic Gardens, Melbourne, Australia. That means no original locality was known for any of these and since they did not match any of the thousands of southern African species examined, it seemed probable that South Africa was not the country of origin. In 1976 a specimen from the Bolus Herbarium, that had been overlooked when the collection from that herbarium was sent on loan to this Institute, was received here. It matches the above specimens and is labelled *Gillett* 1452 from "Avontuur, edge of Plateau, above Bidou River, Knysna". It may be a good species near *H. angularis* or a sport or form of that species.

5. *Hermannia urceolata* Pillans MS.

Pillans evidently originally intended naming this species *H. hollandii*, but the name is scored out in his manuscript and "urceolata" written in its place. The specimens cited are as follows: "Port Elizabeth Drive, Cape Road, St. Alban's Farm, *Holland* 4062 (type in Bolus Herb.); 15th Mile Cape Road, *Long* 5056; without precise locality, *Cruden* 465; *Bolus* 3055; Baakens River Valley, *Kensit* 2". These sheets have been seen in the Bolus Herbarium. The number of *Long*'s specimen is mistakenly printed as "5056", which is the genus number. The correct number is *Long* 1302. *Cruden* 465 and *Kensit* 2 have been found to be *Hermannia suavis*. Although *Pillans*'s MS species resembles both *H. suavis* and *H. salviifolia* var. *grandistipula* in the urceolate calyx with rather long, white, stellate hairs and in the general leaf shape and size of stipules, it differs from both in the distinct stellate pubescence on the lower surface, with the hairs long, whitish and multicellular, giving the leaves a fringed look around the margin when viewed from above. To date, field observations have not been carried out in order to establish whether it is a distinct species.

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UITTREKSEL

Waarnemings van die genus as geheel word gedoen en die subgenus *Hermannia* word omskrywe. Spesies in Suidelike Afrika wat onder hierdie subgenus sorteer word in besonderhede hersien. 'n Sleutel tot hierdie 93 spesies word verskaf en 'n aantal pentekeninge illustreer sommige van die diagnostiese kenmerke wat in die sleutel gebruik word.

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