Gnidia kraussiana
(THYMELAEACEAE)

NOMENCLATURE:

Accepted Name: Gnidia kraussiana Meisn.

Approved by: GMC

References: See Bibliography*

Synonyms: Lasiosiphon krausii (Meisn.) Meisn.
L. kraussianus (Meisn.) Burtt Davy
L. kraussianus var. villosus Burtt Davy
L. hoepfnerianus Vatke ex Gilg
L. affinis Kotschy & Peyr
L. kerstingii Pearson
L. guineensis Chev.
Gnidia hoepfnerianus (Vatke) Gilg
G. djurica Gilg
G. usingensis Gilg

Identification: All vouchers for general samples and re-collections were annotated by Bo Peterson.

FRACTIONATOR:

Farnsworth.

DESCRIPTION: Perennial herb arising from a swollen, fleshy, root. Stems several to many, erect or ascending, usually pubescent and from 15-30 cm. tall but occasionally glabrous (green to reddish), simple and 6 cm. or less high. Leaves usually elliptic but sometimes linear, ovate or obovate, 1-5 cm. long and 5-25 mm. wide. Pubescence variable, glabrous to densely bluish or yellowish or rusty tomentose. Flowers yellow, to orange-yellow, the calyx tube stout or slender bearing a dense brush of erect white or yellowish-white hairs below the articulation, the petals very thinly membranous, oblong emarginate or ± deeply bisected, 1/3 - 1/2 as long as the calyx lobes.

ECOLOGY: Fire-maintained grasslands in upland areas, particularly in places that were recently burned.

COMMENTS: Herbarium records would appear to be of little value in identifying areas where G. kraussiana might occur in abundance. More useful would be information on where burning is frequently practiced such as it appears at Mufindi, Tanzania. Other potential upland areas might be found in Natal, western Mocambique, Malawi, northern Nigeria and Cameroun.

G. kraussiana is extremely variable. Upon one's first encounter with this plant in the field, two or more species or varieties might be thought as occurring together. With a single population one can find purple- to green-stem glabrous plants, plants sparsely to densely pubescent and the pubescence varying from silvery to bluish or from rusty to white in color. Bo Peterson indicated that this variation is found throughout its range.

G. kraussiana is also recognized as belonging to the genus Lasiosiphon. Separation of the two genera weigh solely on the number of floral parts; 5-merous in Lasiosiphon and 4-merous in Gnidia. To Bo Peterson, this character seems less important when other related genera like Englerodaphne are considered. Peterson (1959) has proposed to lump Englerodaphne, Lasiosiphon and Arthrosolen with Gnidia. His view has been followed by Aymonin (1966) for relevant taxa in the Flora of Cameroun. However, botanists at Pretoria prefer to split the genus Gnidia, following the earlier views of Pearson and Wright.

The distribution of activity according to the narrow taxonomic view is interesting. All H & M active plants, thus far, fall into Englerodaphne and Lasiosiphon. Activity in Gnidia is limited to two species designated as N.R.

About 25 species might be recognized in Lasiosiphon; about five in Madagascar and the remainder concentrated in South Africa with one extending to India. Similarly, Gnidia may include 80 African-Madagascan species with a center in South Africa.

The family, Thymelaeaceae, centers in the southern hemisphere, particularly South Africa and Australasia. Raven and Axelrod (1974) believes the family originated in West Gondwanaland - also their suspected origin of Angiosperms.

USES: Regarded as exceedingly poisonous. Decoctions have been used to bathe wounds and bruises. Also reported to be a remedy for snakebites and sore throats.

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REFERENCES: Other:

Peterson, Bo, 1974. Letter to R.E. Perdue, Jr., dated February 19. (Comments on variation of Gnidia kraussiana).

_____ Letter to R.W. Spjut dated March 25 (Comments on Variation of G. kraussiana)

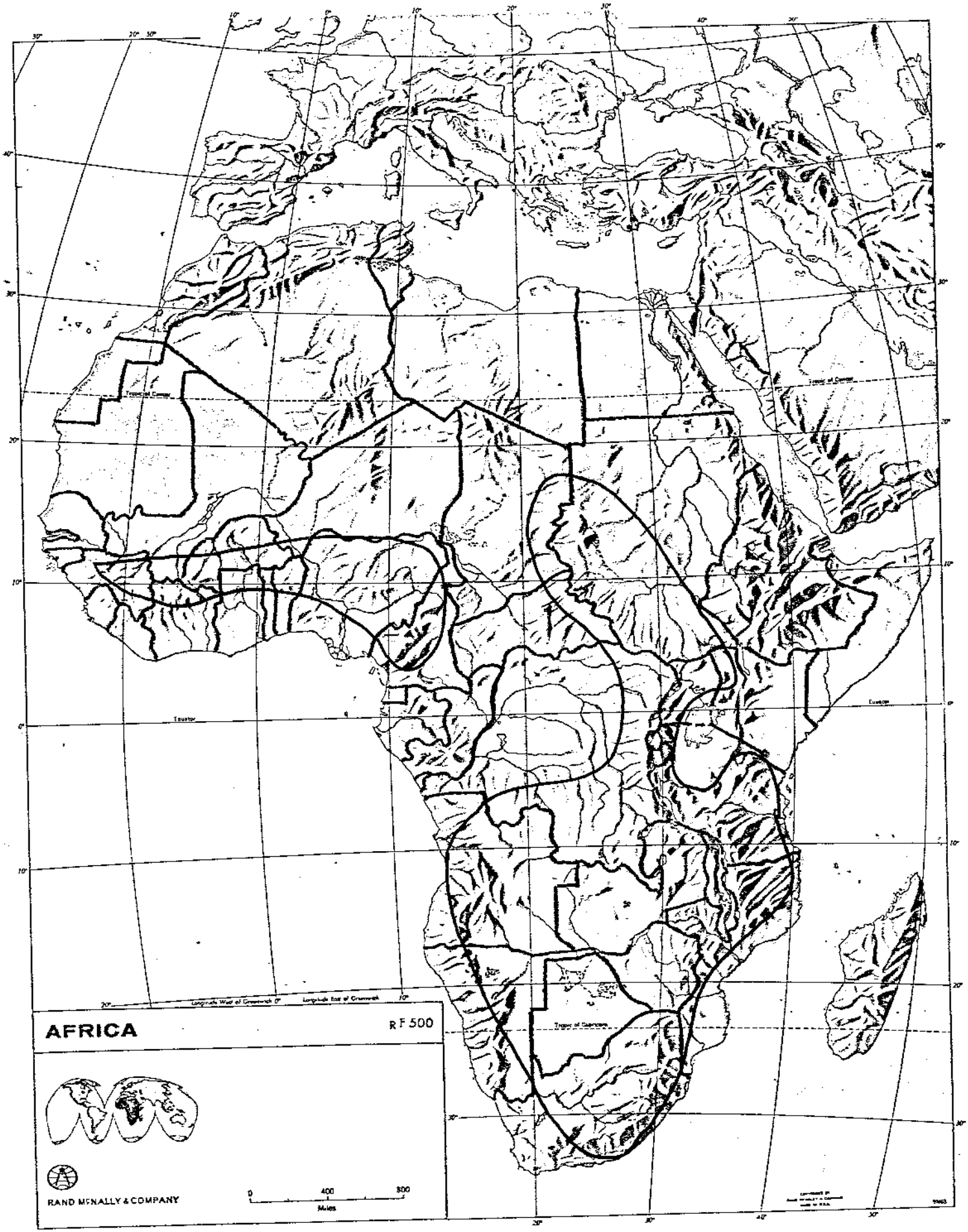
Spjut, R.W., 1974. Memorandum dated March 26 to Dr. Perdue, "Identification of Gnidia sp. (Kenya) and other species of Gnidia - from telephone conversation with Dr. Bo Peterson in Sweden". ("The polymorphic forms of G. kraussiana found in Mufindi, Tanzania also occur elsewhere in tropical Africa and South Africa").

_____ Memorandum dated January 31 to Dr. Perdue, "Plant Collections of Gnidia from Mufindi, Tanzania."

_____ Memorandum dated January 21 to Dr. Perdue, "Thymelaeaceae" (cites nomenclature under which subject species was tested).

PREPARED BY: R. W. Spjut DATE: August 9, 1977

Gnidia kraussiana



CLASS _____

NAME _____

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
NORTHEASTERN REGION
Beltsville, Maryland 20705

January 31, 1974

Subject: Plant Collections of Gnidia from Mufindi, Tanzania

To: Robert E. Perdue, Jr., Chief
Medicinal Plant Resources Laboratory

Populations of Gnidia, which resembled G. kraussiance, in Mufindi were common and extremely variable as to pubescence, color, height, and length and shape of leaves. I could not identify any character or combination of characters that could be used consistently to segregate these plants; thus, a few collections for cancer represent a polymorphic collection of individuals. A few populations of Gnidia observed seemed to be consistent or showed little morphological variation (ex. SPJ-3491). Also, each of the variable populations of Gnidia seemed to have their own characterization (based upon my intuition). Gnidia collected from different localities, which are represented by a different collector's number, should be treated as separate collections for fractionation but recognized as possibly the same species.

As for the voucher specimens, those specimens with the same numbers and different letters do not represent different collections for cancer, nor were they intended to represent different species, but rather a documentation of the variation I observed of similar species or one species in any particular locality. In general, the more variation observed, the more letters used, and the lowest and highest letters used represent the least common types. The letter 'A' was used for all glabrous types and all other letters in sequence represent pubescent types. Glabrous types were rarely seen - about one in several hundred or more plants - except in one locality in which about 50 percent of the population consisted of glabrous types and variation of these was indicated by two letters (ex. AA, AB, AC).

Not all localities of Gnidia were sampled for the cancer program, but all locations where I observed Gnidia, specimens were made in order for possibly a better comprehension of Gnidia in Mufindi, and possibly future taxonomic evaluation. The morphological variation in Gnidia seems to strongly suggest hybrid swarms.

Richard Spjut

Richard W. Spjut, Botanist
Medicinal Plant Resources Laboratory

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Göteborg 25.III.1974

Dear Mr Spjut,

The Thymelaeaceae-material from Tropical East Africa (58 mounted + 1 unmounted specimens), that I received from you on loan on March 21st, have today been returned to you by air.

I am very grateful to you for letting me see this valuable material - the more since I had so far never seen any of your collections before.

The specimens of Gnidia kraussiana were very variable with regard to pubescence, length and width of the leaves. The species is very polymorphic and it is not possible to separate it into subspecies and varieties.

Higgins No. 11741, the name of which was particularly asked for, is Gnidia lamprantha Gilg. Other specimens of the same species in this sending is Perdue 9365 and Spjut 3134.

The unmounted specimen (No . 3908) is Synaptolepis Kirkii Oliv. Unfortunately label is missing for th is specimen, and I am gratefully looking forward to receiving all available data regarding this collection. On several specimens of this species I have previously noticed glands on the pedicels, but I have never before seen these glands in such abundance - nor have I seen them on tubes or sepals of the flowers.

Thank you very much as well for the 11 specimens of Gnidia, that we received as a gift to our herbarium.

To which collection belongs the wood-sample?

With best regards

Yours sincerely

(B.Peterson)

Curator

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Gnidia

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January 28, 1976

Richard W. Spjut, Botanist
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U.S. Department of Agriculture
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Beltsville, Maryland 20705

Dear Mr. Spjut:

In reply to your letter to Dr. Farnsworth of January 6, 1976:

Gnidia kraussiana

All of the samples of Gnidia kraussiana (PR-40807-40810) were highly active. PR-40807 was the least active. However, it appears that none of these samples was active as PR-23223 from the original collection.

Hypoxis goetzei

PR-40814	low activity

Hypoxis spp.

PR-40811	inactive
PR-40812	low activity
PR-40813	moderate activity
PR-40815	low activity
PR-40816	moderate activity

We hope this information is useful to you.

Sincerely yours,

Geoffrey A. Cordell

Geoffrey A. Cordell, Ph.D.

GAC/sam

cc: N.R. Farnsworth, Ph.D.