

Gnidia subcordata
(Englerodaphne subcordata)
(THYMELAEACEAE)

NOMENCLATURE:

Current Accepted Name: Gnidia subcordata Meisn.

Approved by: GMC

References:

Synonyms: Englerodaphne subcordata (Meisn.) Engl.
E. leiosiphon Gilg

Identification:

FRACTIONATOR:

Kupchan

DESCRIPTION: Deciduous shrub; stems weak, sometimes scandent, slender, diffusely branched above; usually from 6-12 feet tall. Bark dull grey and fibrous. Leaves opposite, about the size of a thumbnail, ovate or elliptic to suborbicular, 1/2 - 1-1/2 inches long and 1/2 - 3/4 inch wide. Flowers in ebracteate clusters, 4-merous, creamy-white, soon deciduous; calyx tube with a few silky hairs on the outside, otherwise glabrous, about 1/3 inch long; calyx lobes oblong and obtuse; petal segments 8, triangular-oblong, with one or two irregular serrations, more than 1/2 as long as the calyx lobes. Ovary shortly stalked, densely hirsute with long erect, white silky hairs.

ECOLOGY: Margins of semideciduous forests such as at Karurua Forest near Nairobi (Croton megalocarpus, Strychnos henningsii, Cassine buchananii, Calodendron capense, Fagara, Apodytes, and Brachylaena), or of sclerophyll scrub forests such as at Narok, Kenya (Grewia similis, Rhoicissus revoilii, Euclea divinorum, Rhus natalensis, Maytenus heterophylla, Scutia myrtina, Teclea nobilis, Myrsine africana, Tarchonanthus camphoratus and Juniperus procera).

In secondary forest such as on Bara and Sagalla Hills (Teita Hills), above 4500 feet with: Coleus barbatus, Dalbergia lactea, Heteromorpha arborescens, Cassia didymobotrya, Grewia similis, Vangueria spp., Dovyalis abyssinica, Abutilon spp., Vitex strickeri, Acokanthera longiflora, Cluytia abyssinica, Lantana sp., Trema guineensis, Turraea holstii, Maesa lanceolata and Buddleja sp.

Rocky places along stream banks, on slopes, especially escarpments in bushland, sclerophyll, and dry and wet deciduous forests. Usually from elevations 4500-8000 feet with a climate of at least one dry season.

COMMENTS: G. subcordata and two other species, G. pilosa and G. ovalifolia, have been segregated from the genus Gnidia. There is still disagreement on the status of Englerodaphne. Dr. Bo Peterson (1959) has proposed to lump Englerodaphne with Gnidia while other botanists at Pretoria and Kew have kept these separate. Englerodaphne is easily distinguished from Gnidia by the membranaceous leaves and lack of floral bracts ("involucre"). Additionally, in my field observations, I noted that the flowers of Englerodaphne are quickly deciduous whereas in Gnidia the flowers are long-persistent. The reasons for separating these genera appear to outweigh those for lumping them.

G. subcordata shows a definite disjunct distribution between South and East Africa. But, it appears that this species is common only in Kenya, especially on the Kikuyu Escarpment as observed by Perdue (1974) and Spjut (1973). Two other related species are endemic to South Africa.

Spjut also has observed G. subcordata on small escarpments along the Nairobi-Kericho and Nairobi-Narok roads, on rocky soil of sclerophyll forest around Narok, edges of deciduous forests near Nairobi and along rocky stream banks near Thika. It was most common around Narok, but not to the extent as that seen on the Kikuyu Escarpment. Stephen Muchai reported to have found a fair abundance within the Karurua Forest area.

Samples have been collected from Narok, Karurua and Ngong Forests.

Other Kenya locations of G. subcordata were sent to us by Drs. Peterson and Brenan. In eastern Africa the range of G. subcordata extends to Karamoja (Uganda), Didinga Mts. (Sudan) and to Mt. Kilimanjaro area (northern Tanzania).

USES: A closely related species, G. ovalifolia (Meisn.) Phill has been reported as poisonous to livestock.

ACTIVITY DATA IN SPECIES OF Gnidia:

*G. cuneata	PS	M		Wall
G. cluytioides	PS	N.R.		
*G. glauca	PS	L-H		Wall, Kupchan
G. kraussiana	PS	H	Montanic Acid α-Monoglyceride B-Sitosterol Miscellaneous	Farnsworth
*G. lamprantha	PS	DK	Gnidicin Gnididin Gniditrin	Kupchan
*G. latifolia	PS	DK		Kupchan
G. mollis	PS	N.R.		
*G. polycephala	PS	M		Farnsworth
G. subcordata	PS			Kupchan

*Closely related species.

REFERENCES: Literature:

- Andrews, F.W., 1950. The Flowering Plants of the Anglo-Egyptian Sudan. Sudan Govt.; p. 148.
- Burt-Davy, J., 1926. A manual of the Flowering Plants and Ferns of the Transvaal and Swaziland, South Africa. London, Part I: 204.
- Dale, I.R., 1939. The woody vegetation of the Coast Province of Kenya. Imp. For. Inst. Paper No. 18: 1-28 (cf. p. 13).
- _____ & P.J. Greenway, 1961. Kenya Trees and Shrubs. Robert MacLehose & Co. Limited, Univ. Press, Glasgow, p. 555.
- Domke, W., 1934. Untersuchungen über die systematische und geographische Gliederung der Thymelaeaceen. Bibl. Bot. 27(3): 95, Stuttgart.
- Engler, A. & K. Prantl, 1895. Die Natürlichen Pflanzenfamilien III; p. 284.
- Gilg, E., 1921. Thymelaeaceae. In Engler, "Pflanzenwelt Afrikas"; 3(2): 639.
- _____, 1894. Thymelaeaceae africanae. Bot. Jarb. 19: 274.
- Gillett, J.B. & P.G. McDonald, 1970. A Numbered Check-list of Trees, Shrubs and Noteworthy Lianas Indigenous to Kenya. Govt. Printer, Nairobi.
- Lucas, G. Ll., 1968. Conservation of Vegetation in Africa South of the Sahara: Kenya. Acta Phytogeogr. Suecia 54: 151-163. (Listed in the Kakamega Forest).
- Meissner, C.F., 1840. Synopsis Thymelaeacearum, Polygonearum et Begonianarum. Linnaea 14: 430.
- Monod, T., 1971. Remarques sur les symétries floristiques des zones sèches nord et sud en Afrique. Mitt. Bot. Staatssmml. München 10: 375-423 (cf. p. 407).
- Palmer, E. & N. Pitman, 1972. Trees of Southern Africa. A.A. Balkema/Cape Town, p. 1583.
- Pearson, H.H.W., 1910. In W.T. Thiselton-Dyer, "Flora of Tropical Africa." L. Reeve & Co., London, Vol. 6(1): 238.
- Peterson, B., 1959. Some Interesting Species of Gnidia. Botaniska Notiser 112(4): 465-480.

REFERENCES: Literature Continued:

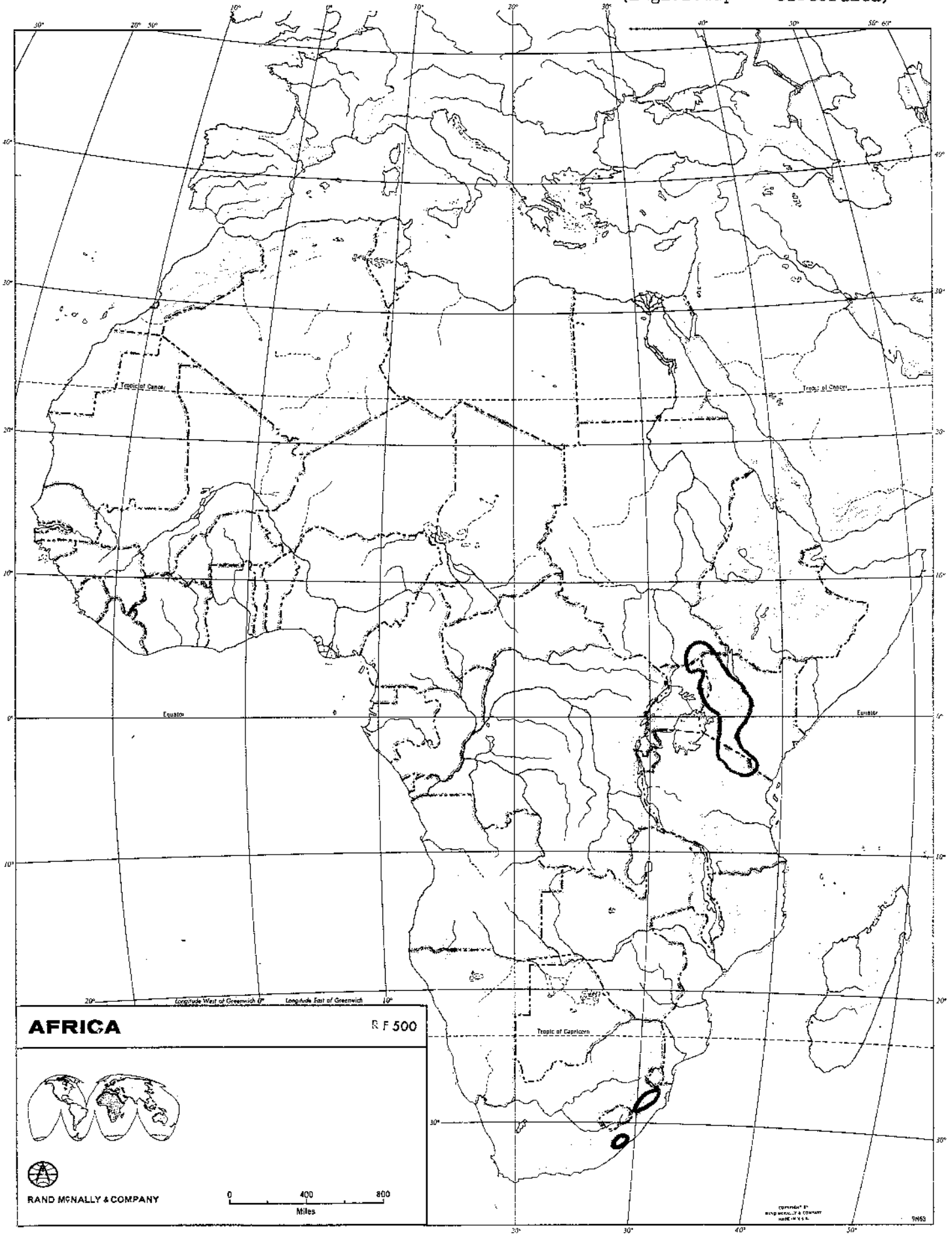
- Phillips, E.P., 1951. The genera of South African flowering plants. ed. 2. Bot. Survey S. Afr. Memoir 25: 530.
- _____, 1944. Notes on some genera of the Thymelaeaceae. J. S. Afr. Bot. 10: 65.
- Watt, J.M. & M.G. Breyer-Brandwijk, 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, LTD., p. 1022.
- Wood, J.M., 1908. Revised list of the flora of Natal. Trans. S. Afr. Phil. Soc. 18: 121-280 (cf. p. 219).
- Wright, C.H., 1915. Thymelaeaceae. In W.T. Thiselton-Dyer, "Flora Capensis." L. Reeve & Co., London; Vol. 5(2): 78-79.

REFERENCES: Other:

- Perdue, Jr., R.E., 1975. Memorandum dated January 2 to POSI file: "Mezerein." (Active agents believed to be similar to those found in Daphne).
- _____, 1974. Letter to Dr. Bo Peterson, Sweden, dated June 28. (Remarks on Perdue's observations of G. subcordata on the Kikuyu Escarpment).
- _____, 1974. Letter to Dr. Bo Peterson dated March 1. (Remarks on Spjut's observations of G. subcordata on the Kikuyu Escarpment).
- _____, 1973. Handwritten notes on telephone conversation with Dr. Bo Peterson, dated November 9. (General distribution and taxonomic relationships of G. subcordata).
- _____, 1973. Handwritten notes on telephone conversation with Dr. Brennan at Kew, dated November 9. (Brennan regarded subject species as Englerodaphne. A few specific locations in Kenya are recorded).
- Peterson, B., 1973. Letter to R.E. Perdue, Jr., dated November 23. List of locations in Kenya for G. subcordata is attached.
- Spjut, R.W., 1976. Memorandum dated November 19, to POSI file. "Observations on Gnidia subcordata."
- _____, 1974. Memorandum dated January 21 to Dr. Perdue. "Thymelaeaceae." (Cites nomenclature under which subject plant was tested).

PREPARED BY: R. W. Spjut DATE: July 25, 1977

Gnidia subcordata
(Englerodaphne subcordata)

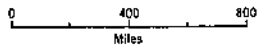


AFRICA

R F 500



RAND McNALLY & COMPANY



Copyright ©
Rand McNally & Company
MADE IN U.S.A.

9N63

CLASS _____

NAME _____

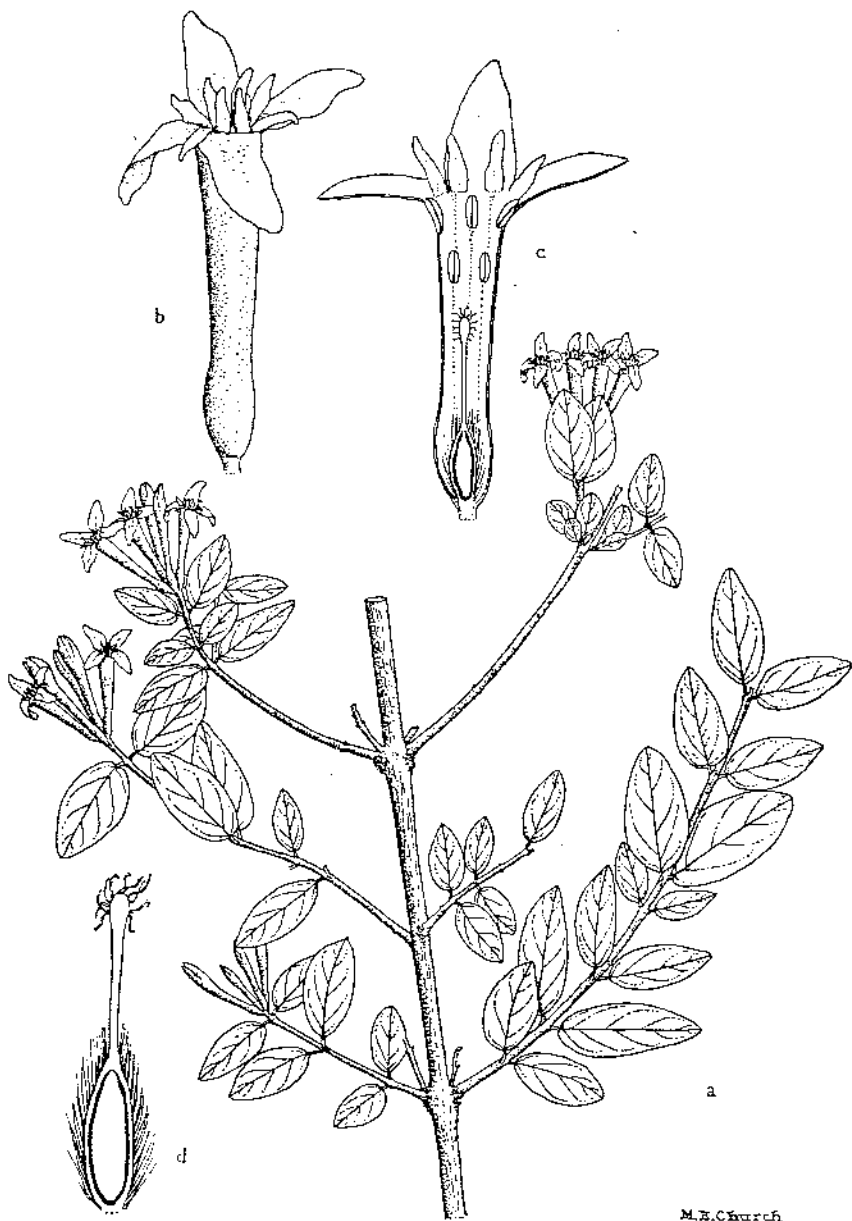


Fig. 102. *Englerodaphne subcordata* (Meissn.) Engl.

a: flowering branchlet ($\times 1$). b: flower ($\times 3$). c: L.S. flower ($\times 3$).
d: L.S. gynoecium ($\times 6$).
All from Eggeling 6819.