

NEW SPECIES AND SUBSPECIES OF COMBRETUM
FROM SOUTHERN TROPICAL AFRICA

by

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Combretum apiculatum Sond. in *Linnaea* 23:45 (1850).

subsp. leutweinii (Schinz) Exell, stat.nov.

Combretum leutweinii Schinz apud De Wild. & Dur. in *Bull.Herb.Boiss.* 2, 1:878 (1901).

S.W.Africa: Gröotfontein: Otavi, Dinter 5356 (Z); Guchab-Berge, Rehm s.n. (M); Rietfontein, Rehm s.n. (M) pro parte; Auros, Volk 790 (M). - Otjiwarongo: Waterberg, Dinter 413 (Z); Waterberg, Giess 2184 (M); Kl. Waterberg, Volk 558 (M), 1033 (M), 2515 (M); Waterberg, de Winter 2812 (K,M,PRE).

The two Dinter specimens cited are the syntypes of *C. leutweinii*.

This subspecies, which is apparently confined to SW.Africa, can be separated from the typical subspecies as follows:

Leaves glabrous or only very sparsely pubescent even when young; scales 50-75 μ in diam.:subsp. apiculatum

Leaves tomentose when young and remaining pubescent even when old; scales 60-100 μ in diam.:
. subsp. leutweinii

Combretum psidioides Welw. in *Ann.Conselh.Ultram.:* 249 (1856).

subsp. dinteri (Schinz) Exell, stat.nov.

Combretum dinteri Schinz apud De Wild. & Dur. in *Bull.Herb.Boiss.* 2, 1:877 (1901).

Combretum quirirensense Engl. & Diels in *Warb., Kunene-Samb.-Exped.Baum:* 318 (1903).

Angola: Bié: R. Cuiriri, Baum 722 (BM, type number of C. quirirensis). -- Cassuango: Cuiriri, Gossweiler 2742 (BM); between Luasenha and R. Cuartiri, Gossweiler 4039 (BM). -- Huila: near Mpupa, A. Powell Cotton 2060 (BM).

S.W. Africa: Ovamboland: Oshikango, near Ondipa Mission Station, de Winter & Giess 6999 (M); Ombalambuenge, Ondonga, Rautanen 235 (Z, syntype of C. dinteri). -- Grootfontein N.: dunes N. of Bumbi, Merxmüller & Giess 1858 (M); Runtu, Merxmüller & Giess 1873 (M); Andara, Merxmüller & Giess 2068 (M); 5 miles W. of Runtu, de Winter 3726 (K); near Andara Mission Station, de Winter & Wiss 4267 (K,M,PRE). -- Grootfontein: Omuramba, S. of Mavanze, Merxmüller & Giess 2149 (M); N. of Gautsche Pan, Story 6461 (K,M,PRE); N.W. of Grootfontein on road to Tsumeb, de Winter 2900 (K,M,PRE); 64 km S.E. of Ondangua, near Omuramba, de Winter & Giess 6961 (K,M); 5 miles E. of Oshikango, de Winter & Giess 6999 (K). -- Otjiwarongo: Waterberg Plateau, Dinter 580 (Z, syntype of C. dinteri); Kl. Waterberg, Volk 1014 (M); Waterberg Plateau, de Winter 2798 (K, M,PRE).

Southern Rhodesia: Western Division: Gwaai, Davies 459 (BM,SRGH); about 80 km N. of Bulawayo, Keay 21306 (BM), 21307 (BM); Bulawayo, Orpen 22/51 (BM,SRGH); about 100 km N.W. of Bulawayo, Wall 707 (BM).

subsp. kwinkiti (De Wild.) Exell, stat.nov.

Combretum kwinkiti De Wild. in Ann.Mus.Cong.5, 3:237 (1910).

The syntypes are Gillet 430 (BR), 435 (BR), 1554 (BR), 2207 (BR); Vanderyst s.n. (BR). It is some twenty years since I saw these actual specimens but I noted at the time that the Vanderyst specimen is the same as Vanderyst 16648 (BM) cited below.

? Combretum puetense Engl. & Diels, Mon.Afr. Pflanz.3:46 (1899).

The type, Descamps s.n. (BR). The epithet is older than kwinkiti but the type is so insufficient that it seems better to choose C. kwinkiti, which is well authenticated, as a basis for the subspecies.

Congo: Bas Congo, Callens 984 (BM); Mpueto, Descamps s.n. (BR); Kiyaka, Devred 2410 (BM); Dibaya, Liben 2904 (BM); Tumba, Liben 2523 (BM); Gandajika, Liben

3536 (BM); Kamina, Quarré 2893 (BM); Kwango, Vanderyst 16648 (BM), s.n. (BR).

Angola: Congo: Zombo Plateau, Dawe 136 (BM,K). --
Lunda: Dundo, Gossweiler 13635 (BM), 13750 (BM), 14190 (BM), 14190b (BM).

The typical subspecies occupies a wide belt stretching across southern tropical Africa from Angola and S.W. Africa in the west to Tanganyika and Mozambique in the east. Subsp. *kwinkiti* occurs to the north of subsp. *psidioides* in northern Angola and the Congo. Subsp. *dinteri* is found to the south of subsp. *psidioides*, mainly on the Kalahari Sand, in S.W. Africa, southern Angola and western S. Rhodesia. Both subsp. *kwinkiti* and subsp. *dinteri* overlap to a considerable extent the area of the typical subspecies and a few (but not many) intermediates are to be found. There is the usual tendency for the leaves to increase in size and to become relatively longer and narrower towards the north of the area, presumably due to increased rainfall, but this phenomenon is of little taxonomic importance and can be seen in many genera of quite different families. The three subspecies can, however, be separated by fairly clear-cut indumentum characters which seem to be reasonably constant. These are indicated below:

Subsp. kwinkiti: lower surface of leaf glabrous on the reticulation, shortly tomentose to pubescent in the inter-reticular spaces.

Subsp. psidioides: lower surface of leaf pubescent to densely pubescent on the reticulation, more sparsely so or almost glabrous in the inter-reticular spaces.

Subsp. dinteri: lower surface of leaf shortly tomentose both on the reticulation and in the inter-reticular spaces.

Combretum wattii Exell, spec.nov.

Frutex c. 4 m altus, ramulis cinereis primo dense tomentosus mox glabrescentibus apice volubilibus. Folia opposita vel subopposita petiolata, petiolo ad 8 mm longo tomentoso, lamina chartacea vel subcoriacea suborbiculari ad 4 x 4 cm, apice obtusa vel rotundata vel nonnunquam emarginata, basi rotundata vel truncata,

costis lateralibus utrinsecus 3-4 supra prominulis subtus conspicuis, supra subtusque primo tomentosa demum pubescenti vix conspicue lepidota. Flores 5-meri pro genere magni subsessiles in spicas breves laterales dispositi. Receptaculum superius crassiusculum campanulatum, ad 12 x 9 mm, fulvo-tomentosum, inferius subcylindricum, 5-6 mm longum, fulvo-tomentosum. Sepala late triangularia, 4,5 x 4 mm, tomentosa. Petala elliptica vel late elliptica, 12 x 6,5-8 mm, dense fulvo-tomentosa, apice rotundata, basi brevissime unguiculata. Stamina 10, ad receptaculum sub disci margine libero inserta, 5 longiora 23 mm longa, 5 breviora 21 mm longa, antheris subcylindricis 3,5 x 1,8 mm. Discus crassiusculus campanulatus, 6 x 5 mm, glaber, margine crenulato brevi libero. Stylus 25 mm longus, glaber. Ovula 4, funiculis 1,5 mm longis. Fructus breviter stipitatus, stipite ad 5 mm longo, ambitu suborbicularis, ad 3,5 cm in diam., alis chartaceis ad 13 mm latis, tomentosis vel dense pubescentibus, corpore dense tomentoso.

S.W. Africa: Kaokoveld: Kaoko Otavi, Wasserstelle, fr. 21.I.1958, Merxmüller & Giess 1392 (BM,M); Grasflächen um die Quelle Kowares, st. 2.II.1958, Merxmüller & Giess 1555 (BM,M); sine loco, fr. 1955/56, Koenen 63 (M); Kaoko-Otavi, fl. 1939, F.S. Watt in Herb.SW.Afr.Admin. 1766 (M, holotypus); Gross-Ombathu, near water-holes in dolomites, fl. & fr. XI.1954, F.S. Watt in Herb.SW.Afr.Admin. 1767 (M); dry gravelly water-course, 5 miles S. of Kunene at Otjinungua, on road to Orupembe, st. 8.V.1957, de Winter & Leistner 5760 (M,PRE).

"Strauch, 3-4 m hoch, mit lianenartigen Endzweigen" (Merxmüller & Giess); "Very dense tangled shrub with branches often drooping and occasionally twining at the ends; leaves grey-green" (de Winter & Leistner).

This species may belong to Sect. *Trichopetalae* Engl. & Diels but differs considerably from all the other species in that section by its relatively large, apparently somewhat fleshy flowers. The latter shrink somewhat on drying and the dimensions given in the description are taken from a flower resuscitated by boiling. One feature is unusual and suggests that this species may have to be placed in a separate section. The filaments are inserted inside the upper receptacle at the point where the very short margin of the disk becomes free from the receptacle so that the

bases of the filaments seem to be inserted in little pockets formed by the crenulations of the margin of the disk. This type of insertion differs considerably from that usually found in species of Sect. *Trichope-talae*, where the stamens are usually inserted in two series well above the margin of the disk and is much more like the insertion in some of the supposedly more 'primitive' species, such as *C. celastroides* Welw., where the upper receptacle is short and flat. A similar insertion is found, however, in some tropical American species, as for example, in Sect. *Combretum* (Sect. *Eucombretum* G. Don), where the upper receptacle is considerably evolved. In neither of these cases, however, is there any apparent close affinity with *C. wattii*.

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