A preliminary report on the genus Commiphora in South West Africa

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ABSTRACT

The genus *Commiphora* which is represented by at least 24 species in South West Africa, forms an important component of the flora of this country. Twelve species, mainly from the north-western part of South West Africa, a number of which are endemic to this area, are described. A description is given of the habit, appearance of the bark, morphology of the stems, leaves and fruit of each species. Photographs serve to illustrate the text. The geographical distribution of each species is given in detail.

I INTRODUCTION

The genus *Commiphora* Jacq. belongs to the family Burseraceae. This family consists of 16 genera (Lam, 1932) and 600–700 species, which are mainly concentrated in tropical regions of America, Africa and Asia. Since ancient times, the resins and gums which occur in members of the Burseraceae, have been known to mankind. Frankincense from the genus *Boswellia* and myrrh from *Commiphora* are of biblical fame.

Commiphora is the largest genus of the Burseraceae and the only genus represented in South Africa and South West Africa. It includes more than 200 species which occur mainly on the continent of Africa and surrounding islands. Only eight species are found in Arabia and West India.

The genus *Commiphora* forms a very important component of the flora of South West Africa due to the large number of species being well represented and widely distributed over this geographical area. The majority of species are adapted to arid areas and rocky places are favoured by most species.

A few species grow in the Namib Desert itself, but it is especially on the edge of the Namib or Escarpment Zone (Vegetation Type 4; Giess, 1971), that a large number of species are well represented. This area stretches from Neisip in the south, past Naukluft and Usakos to the Brandberg in the north. The genus is, however, as well represented in the Kaokoveld, especially in the western mountainous areas east of the northern Namib. This area reaches from the Brandberg, past Welwitschia and Sesfontein to the Kunene River in the north. Throughout the rest of the Mopane Savanna (Vegetation Type 5; Giess, 1971), *Commiphora* species are to be found on mountains, kopjes and stony outcrops, with only a few species occuring on the planes in the mopaneveld itself. It is noteworthy and interesting that many of the species which occur in the western zone of the country as described above, are endemic to South West Africa. It has also been established that three of the four species growing on the mountains near the Orange River, are endemic to this area.

The species represented in the eastern part of South West Africa, are also found in South Africa. Such species occur in the Mountain Savanna and Karst-

veld (Vegetation Type 6; Giess, 1971) near Tsumeb, Grootfontein and Otavi. This is also true of the Tree Savanna and Woodland (Northern Kalahari). Camelthorn Savanna (Central Kalahari) and Mixed Tree and Shrub Savanna (Southern Kalahari), respectively Vegetation Types 11, 12 and 13 (Giess, 1971).

The following species of *Commiphora* have been recorded from South West Africa and South Africa:

From SW Africa

1. *C. anacardiifolia* Dinter & Engl.
2. *C. crenato-serrata* Engl.
3. *C. dinteri* Engl.
4. *C. discolor* Mendes
5. *C. giessii* Van der Walt
6. *C. glaucescens* Engl.
7. *C. kraeuseliana* Heine
8. *C. multijuga* (Hiern) K. Schum.
9. *C. oblanceolata* Schinz
10. *C. saxicola* Engl.
11. *C. virgata* Engl.
12. *C. wildii* Merxm.

From SW Africa and outh Africa

13. *C. africana* (A. Rich.) Engl.
14. *C. angolensis* Engl.
15. *C. capensis* (Sond.) Engl.
16. *C. cervifolia* Van der Walt
17. *C. edulis* (Klotzsch) Engl.
18. *C. glandulosa* Schinz
19. *C. gracilifrondosa* Dinter ex Van der Walt
20. *C. merkeri* Engl.
21. *C. mollis* (Oliv.) Engl.
22. *C. namaensis Schinz*
23. *C. pyracanthoides* Engl.
24. *C. tenuipetiolata* Engl.

From South Africa

25. *C. harveyi* (Engl.) Engl.
26. *C. marlothii* Engl.
27. *C. neglecta* Verdoorn
28. *C. schimperi* (O. Berg) Engl.
29. *C. woodii* Engl.
30. *C. zanzibarica* (Baill.) Engl.

(Another species, *C. mossambicensis* [Oliv.] Engl. has been collected in the Caprivi strip).

The major contributions to the present knowledge of the genus *Commiphora* in South West Africa were made by Engler (1931), Wild 1959), De Winter (1968), Merxmüller (1968) and Giess (1971). The above mentioned species no. 13-24 have been described in detail in a previous publication (Van der Walt, 1973b). It is the aim of this paper to increase the knowledge of the genus by a delimitation of the 12 South West African species which do not occur in South Africa.

Material of each of the species was collected in their natural habitat, in the course of three collecting trips which were undertaken recently. Specimens of these species, housed in the National Herbarium Pretoria, as well as in the South West Africa Herbarium, Windhoek, were studied. The habit, stems, bark, leaves and fruit of each species are described, but the flowers have not been studied at this stage. The synonyms as designated by Merxmüller (1968) are listed, although the type specimens have not been examined. The geographical distribution of each species is given according to the grid reference system of the Botanical Research Institute, Pretoria. Herbaria where these specimens are housed, are mentioned in brackets after the collector's number. The international abbreviations applicable to the National Herbarium, Pretoria (PRE); the South West Africa Herbarium, Windhoek (WIND); the Government Herbarium, Stellenbosch (STE); the Compton Herbarium, Cape Town (NBG) and the Botanische Staatssammlung, München (M), are used.

II DESCRIPTION OF THE GENUS COMMIPHORA

Commiphora Jacq. in Hort. Schoenbr. 2: 66. t.249 (1797)

Dioecious or polygamous but rarely monoecious many-stemmed shrubs or shrubs with the trunk branching repeatedly above soil level or trees with a single main stem of variable height; bark often peeling or flaking in papery pieces or strips; resin ducts secreting an odoriferous resin occuring in the phloem; wood relatively light and consisting mainly of septated fibres; branchlets often spine-tipped, glabrous, pilose or tomentose. *Leaves* petiolate but rarely sessile or subsessile, alternate, usually grouped at the end of the branches, simple, unifoliolate, trifoliolate or impari-pinnate, margins of leaflets usually crenate, serrate or lobed but seldom entire, glabrous, pilose or tomentose, leaflets dorsiventral or isobilateral; petioles of a few species with medullary vascular bundles. *Flowers* unisexual rarely bisexual, perigynous or hypogynous, male flowers usually larger than female flowers, appearing before or with the leaves and occasionally after the leaves in axillary simple or compound dichasial cymes, in paniculate cymes or singly in clusters. *Pedicels* of variable length, glabrous or pilose to tomentose. *Calyx* infundibuliform, campanulate or broadly campanulate with 4 valvate persistent lobes, usually yellowish-green or reddish-green, glabrous, glandular or pilose to tomentose, in perigynous flowers continuous with hypanthium, in hypogynous flowers inserted on receptacle. *Petals* 4, usually yellow to green, apex incurved, glabrous or occasionally pilose on outside.

Disk in perigynous flowers adnate to hypanthium, cylindrical, rarely fleshy, sometimes lobed; in hypogynous flowers not adnate to calyx or corolla, intrastaminal, cylindrical, usually with 4 large lobes but in some species with 8 lobes, lobes bifid or not bifid; disk in male flowers usually more fleshy than in female flowers, glabrous or occasionally pilose. *Stamens* 8 or in a few species 4, obdiplostemonous, 4 antisepalous stamens longer than other 4; filaments subterete but lower part usually flattened and broadened, inserted on the outside or on top of disk; anthers introse and adnate; staminodes in

female flowers. *Gynoecium* rudimentary in male flowers; half inferior in perigynous flowers and superior in hypogynous flowers, usually glabrous but occasionally glandular or pilose: ovary ovoid, 2-locular with 2 epitropous ovules per loculus; style of variable length but usually relatively short; stigma capitate, obscurely 2-4-lobed. *Fruit* an ovoid, ellipsoid or subglobose drupe, usually asymmetrically flattened; exocarp relatively thin, glabrous but occasionally pilose; mesocarp usually fleshy, consisting of spongy tissue with resin ducts; exocarp and mesocarp splitting in ripe fruit into 2 longitudinal valves (4 valves in a few species outside our area): endocarp forming a crustaceous or bony putamen and usually also a pseudaril; putamen ellipsoid or subglobose, irregularly flattened, smooth or rugose, usually enclosing one fertile loculus and a much smaller abortive loculus: seed with a straight embryo, cotyledons much folded; pseudaril clasping putamen, usually red or yellowish, usually fleshy but in a few species thin or membranous or absent, cupular with short lobes or arms or with 2-4 relatively long arms or covering almost whole putamen without distinct arms.

III DESCRIPTION OF THE TWELVE SPECIES

3.1 *Commiphora anacardiifolia* Dinter & Engl. in Bot. Jahrb. 48: 475 (1912); Merxm., Prod. Fl. S.W. Afr. 23: 75 (1968)

Dioecious tree 5-10 m tall with a single trunk; bark peeling in large, yellow-brownish, papery pieces to expose a pale green underlayer. Branchlets obtuse, covered with a papery bark except for the youngest ones which are pubescent to densely pubescent. Leaves relatively large (7-20 × 5-14 cm), borne in clusters at apex of branchlets, simple, dark green, sessile, narrowly to broadly elliptic, pilose, margin entire, apex obtuse, base cuneate. Fruit red when ripe, ovoid, c. 1,5 × 0,8 cm; pseudaril yellow to orange, cupular with 2 short lobes on seam of putamen. (Plates 1-3.)

This species has a restricted distribution in South West Africa. So far it has only been collected on the fringes of the Namib Desert in the Kaokoveld, from the Sanitatas area in the north to Twyfelfontein in the south.

Also recorded from Angola.

1812(Saniratas): 9,5 km E of Omutati (-DB). *Giess & Leippert* 7401 (WIND). 1813(Ohopoho): 17 km W of Otju (-AC), *De Winter & Leistner* 5671 (PRE; WIND); *Merxmüller & Giess* 1434 (WIND). 1913(Sesfontein): 37 km E of Sesfontein on Otjovasandu road (-BD). *Van der Walt* 246 (PRE; WIND; STE). 1914(Kamanjab): near Kowares (-AB), *Esterhuyse* 402 (WIND). 2014(Welwitschia): 138 km E of Torra Bay (-AC), *De Winter & Hardy* 8203 (PRE; WIND); Twyfelfontein (-CB), *Meyer* 1150 (WIND).

Plate 1. *Commiphora anacardiifolia* 37 km E. of Sesfontein (height ± 6 m).

Plate 2. Close-up view of the bark of *Commiphora anacardiifolia*.

Plate 3. Leaves of *Commiphora anacardiifolia*.

Plate 4. *Commiphora crenato-serrata* near Okorosawe, Kaokoveld (height ± 5 m).

C. anacardiifolia is a graceful tree with a round spreading crown; its attractive papery bark being typical of a commiphora, but the leaves are relatively large, a feature not typical of the genus. The midrib and larger secondary veins of the leaves are exceptionally broad and conspicuous. It has been noted that the leaves of the male trees are larger than those of the female trees, but this phenomenon must still be further investigated.

3.2 *Commiphora crenato-serrata* Engl. in Bot. Jahrb. 19: 140 (1894); Merxm., Prod. Fl. S.W. Afr. 23: 75 (1968)

Dioecious tree with a single trunk, 3–10 m tall; bark light grey to pale brown, pitted, smooth, not peeling; branchlets obtuse, conspicuously scarred, youngest branchlets with large, brown glandular hairs. Leaves impari-pinnate, 3–7-jugate but usually 5–6-jugate, with large glandular hairs especially on the petiole but otherwise glabrous, 10–25 cm but usually c. 15 cm long; petiole 4–8 cm but usually c. 6 cm long, petiolules slender, 0,5–2 cm long; leaflets narrowly lanceolate but more often lanceolate, margins crenate-serrate, apex acuminate, base truncate; terminal leaflet 5–10 × 2–3,5 cm but usually c. 6,5 × 2,5 cm; lateral leaflets 4 × 1,3–9 × 3 cm but usually c. 6 × 2 cm. Fruit ovoid, much apiculate, c. 2 × 1 cm, reddish-brown; pseudaril orange-red, cupular, covering lower 1/3 of putament, with 2 short lobes on seam of putamen. (Plates 4–6.)

Plate 5. Close-up view of the bark of *Commiphora crenato-serrata*.

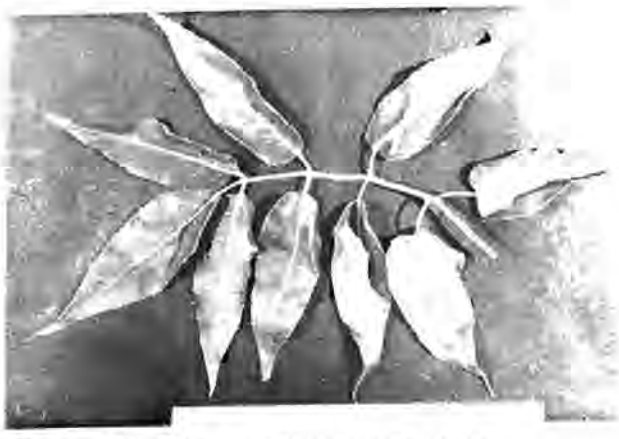

Plate 6 A leaf of *Commiphora crenato-serrata*

C. crenato-serrata is apparently endemic to South West Africa and occurs in the Kaokoveld from Fransfontein in the south to the Swartbooisdrif area in the north. It is also common in rocky outcrops on the dolomite ridges near Otjovasandu in the Etosha National Park (Joubert, 1971).

1713(Swartbooisdrif): 15 km W of Otjangosemo (-AD), *Van der Walt & Giess* 293 (PRE; WIND; STE; 1813(Ohopoho): 4 km N of Ohopoho (-BB), *Van der Walt & Giess* 285 (PRE; WIND; STE); 5 km S of Okorosawe (-BB), *Van der Walt & Giess* 287 (PRE; WIND; STE), 1914(Kamanjab): 27 km N of Otjovasandu (-AB), *Van der Walt* 249 (PRE; WIND; STE); near Otjovasandu (-AB), *Joubert* 130 (WIND); Farm Hazeldene (-BC), *De Winter & Leistner* 5121 (WIND), 1915 (Okaukuejo): Farm Teschendorf (-CC), *Walter* 1011 (WIND) 2015(Otjihorongo): Farm Hilldown (-AA), *Hardy* 2082 (PRE); 25 km N of Fransfontein (-AA), *Van der Walt* 258 (PRE; WIND; STE); Farm Pamela (-AB), *Giess, Volk & Bleissner* 6093 (PRE; WIND).

This species does not have the typical commiphora habit, and is often confused in the field with *Kirkia acuminata* which it resembles superficially. This may be the reason why it has not been collected more often. Although it occurs generally in the northern part of the Kaokoveld, it has only been collected there recently for the first time.

C. crenato-serrata is a fine tree, distinguishable at a distance by its whitish-grey bark. The trees bear large quantities of fruit from December to April. A whitish coloured resin with an aromatic odour is exuded when fresh leaves or branchlets are picked.

3.3 *Commiphora dinteri* Engl. in Bot. Jahrb. 44: 151 (1910); Merxm., Prod. Fl. S.W. Afr. 25: 76 (1968)

Dioecious, many-stemmed and much-branched shrub, 0.5–3 m tall and up to 2.5 m in diameter; bark yellowish-green to greyish-brown with dark spots, smooth and not peeling. Branches relatively thin, branchlets glabrous. Leaves trifoliolate, glabrous, 0,8–4 cm but usually 2–2.5 cm long; petiole 0.2–1.8 cm but usually 0.8–1 cm long; leaflets subsessile, apex obtuse, seldom truncate or retuse, base cuneate, margins crenate-serrate but usually finely crenate-serrate; terminal leaflet obovate 0.6–2.2 × 0.4–1.5

Plate 7 *Commiphora dinteri* near Karibib (height ± 1.75 m).

Plate 8. Close-up view of the stems of *Commiphora dinteri* illustrating the bark.

cm but usually c. 1,4 × 1 cm; lateral leaflets broadly elliptic, 0,4–1.2 × 0,2–0,9 cm but usually c. 0,9 × 0,6 cm. Fruit ellipsoid, apiculate, c. 1.1 × 0.8 cm; pseudaril red, cupular with 2 long arms on seam of putamen and 1 short arm on less convex face of putamen. (Plates 7–10.)

This species is endemic to South West Africa and grows in the Namib Desert itself or on its fringes, from the Karibib area southward to the Zaris Mountains near Maltahöhe. It has also been collected as far east as Rehoboth. The species usually occurs on stony hillsides or mountain slopes.

2115(Karibib): Black Range (-CC), *Van der Walt* 207 (PRE; WIND; STE); 16 km W of Usakos (-CD), *De Winter* 6035 (PRE; WIND); 3 km W of Karibib (-DD), *Van der Walt* 201 (PRE; WIND; STE). 2215(Trekkopje): Farm Nudis (-BC), *Walter* 1182 (WIND). 2316(Nauchas): Gamsberg Plateau (-AD), *Merxmüller & Giess* 935 (PRE; WIND); Farm Weissenfels (-AD), *Walter* 1719 (WIND); 2317 (Rehoboth): near Rehoboth (-AC), *Strey* 2612 (PRE). 2416 (Maltahöhe): Zaris Mountains (-CD), *Basson* 204 (PRE); *Van der Walt* 267 (PRE; WIND; STE).

Herbarium specimens of *C. dinteri* and *C. capensis* having only leaves and no flowers or fruit, could be confused because of the degree of resemblance in their leaf appearance. The stems of *C. dinteri*, however, are much thinner and more plentiful than those

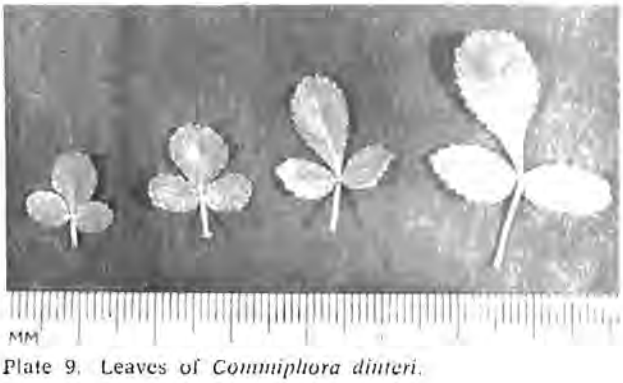

Plate 9. Leaves of *Commiphora dinteri*.

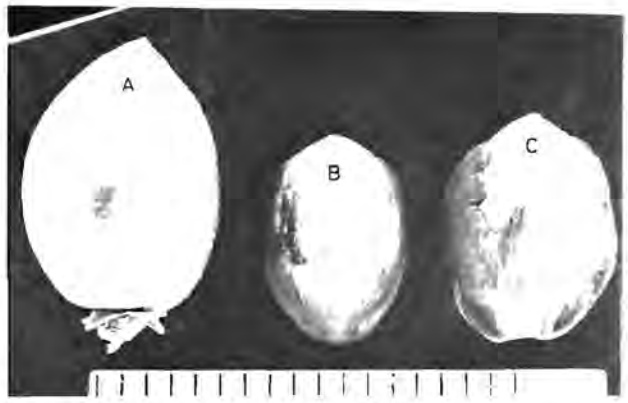

Plate 10. Fruit of *Commiphora dinteri*.
A, Side-view of fruit; B, View of the more convex face of putamen with pseudaril; C, View of the less convex face of putamen with pseudaril.
(scale in mm).

of *C. capensis*. The fruit of *C. dinteri* has a pseudaril which is entirely lacking in *C. capensis*.

Specimens have been collected of a commiphora (*De Winter & Leistner* 5737) growing at the Orupembe waterhole in the Kaokoveld, the leaves of which resemble those of *C. dinteri* to a certain extent, but being relatively larger. This problem still has to be investigated.

3.4 *Commiphora discolor* Mendes in Bol. Soc. Brot. sér. 2,41: 155 (1967); Merxm., Prod. Fl. S.W. Afr. 23: 76 (1968)

Dioecious tree with a single trunk, 3–9 m tall; bark yellowish-white, peeling around the stem in papery trips; branchlets glabrous, occasionally spine-tipped. Leaves dark green, glabrous, shiny, on the younger branchlets usually trifoliolate with 2 much smaller lateral leaflets, on the older branchlets lets, on the older branchlets usually unifoliolate; trifoliolate leaves 3,3–8,3 cm long, petiole 0,3–1,3 cm but usually 6–8 mm long, leaflets sessile, elliptic to broadly elliptic, margins crenate-serrate, subentire but seldom entire, apex acute, base cuneate, terminal leaflet 2,8–7 × 1,3–4,7 cm, lateral leaflets 1,4–3,2 × 0,7–1,5 cm; unifoliolate leaves 3–6 × 2,5–4 cm, broadly elliptic to suborbicular, margins crenate-serrate but often subentire or entire, apex acute or more often truncate, base truncate or cuneate, petiole 1–3 mm long. Fruit subglobose, c. 9 × 9 mm; pseudaril with 4 arms of equal length reaching almost to apex of putamen. (Plates 11–13.)

This newly described species is apparently restricted to the north-western part of the Kaokoveld and Angola. In South West Africa it has only been collected near Otjangasemo and at Ombepera where it grows on rocky kopjes and mountain slopes.

1712(Posto Velho): Ombepera (-DB), *De Winter & Leistner* 5490 (PRE). 1713(Swartbooisdrif): 15 km W of Otjangasemo (-AD), *Van der Walt & Giess* 291 (PRE; WIND; STE).

The distinguishing features of this species are the yellowish-white, papery back which peels around the stem, and the shiny, unifoliolate or trifoliolate leaves. The leaves are designated as unifoliolate because of the apparent articulation which exists in the

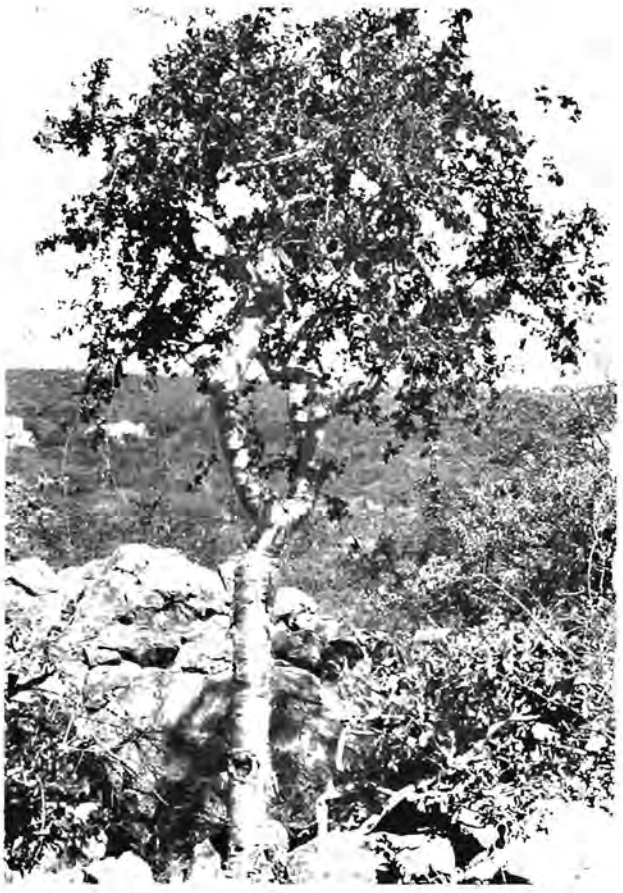

Plate 11. *Commiphora discolor* near Otjangasemo, Kaokoveld (height ± 3,5 m).

Plate 12. Close-up view of the bark of *Commiphora discolor*.

Plate 13. Leaves of *Commiphora discolor*

petiole. Mendes (1967) mentions instances of a climbing habit in his description of this species.

3.5 *Commiphora giessii* Van der Walt in Dinteria 9: 23—25 (1973)

Dioecious, much-branched shrub, 1,5–3 m tall and 2–5 m in diameter; bark reddish-brown, shiny, usually not peeling, with numerous white, small, lenticular lenticels; many branches of ±2,5 cm in diameter sprouting forth from ground level, young branchlets very slender and often drooping. Leaves trifoliolate, glabrous, 1–7 cm but usually 2–3 cm long; petiole up to 2,5 cm but usually less than 1 cm long; petiolules usually less than 1 mm long; leaflets elliptic to narrowly obovate, apex acute or obtuse, base cuneate, margins entire, terminal leaflet 1–4,5 × 0,5–2,5 cm but usually c. 2 × 1 cm, lateral leaflets 1–3,5 × 0,5–1,5 cm but usually c. 1,5 × 0,7 cm. Fruit irregularly obovoid or subglobose, markedly asymmetrical, c. 6 × 5 mm; pseudaril light red, forming 4 thin arms of equal length reaching almost to apex of putamen. (Plates 14–16.)

This recently described, endemic species has only been collected in the vicinity of Sesfontein and Sanitatas. It is very common north-west of Sesfontein where it grows on the slopes of the mountains, on the kopjes and also in the valleys. This area is warm and arid with an average annual rainfall of ±250 mm.

1812(Sanitatas): 3 km W of Okonjombo (-BD), *Giess & Leippert* 7418 (WIND); between Otjikongo and Sanitas, *Merxmüller & Giess* 1446 (M). 1913(Sesfontein): 23 km NW of Sesfontein on Purros road (-AB), *Van der Walt* 242 (PRE; WIND; STE; M); 16 km NW of Sesfontein on Purros road (-AB), *De Winter & Leistner* 5713 (PRE).

A detailed study of the structure of the leaves, flowers and fruit reveals the close relationship between *C. giessii* and *C. virgata*. The differences between these two species are discussed in the paper in which *C. giessii* is described (Van der Walt, 1973a).

The habit of *C. giessii* is very characteristic and in this respect it differs completely from *C. virgata*. It is almost impossible, however, to distinguish be-

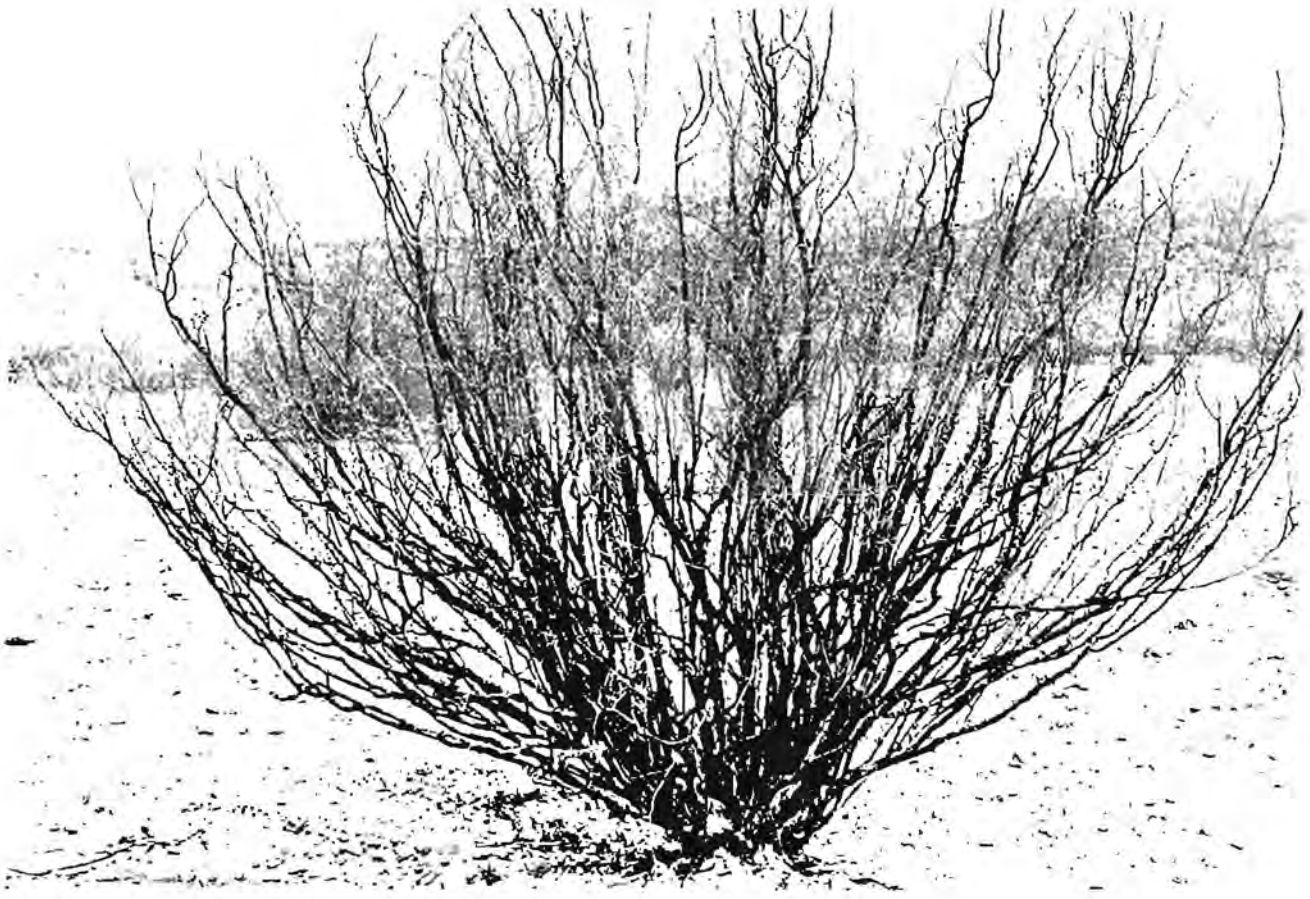

Plate 14. *Commiphora giessii* 16 km N.W. of Sesfontein (height 2 m).

Plate 15. Close-up view of the stems of *Commiphora giessii* illustrating the bark.

Plate 16. Leaves of *Commiphora giessii* (scale in mm).

tween the leaves of the two species, and this may be the likely reason why *C. giessii* had not been described before.

The reddish-brown bark of *C. giessii*, as a rule, does not peel off. It has been observed, however, that occasionally the bark of thicker stems near ground level, does peel off in reddish-brown papery pieces.

3.6 *Commiphora glaucescens* Engl. in Bot. Jahrb. 10: 285 (1888); Merxm., Prod. Fl. S.W. Afr. 23: 76 (1968)

(= *C. pruinosa* Engl.)
(= *C. hereroensis* Schinz)

Dioecious tree with a single trunk up to 8 m tall, or a shrub 1–2 m tall with a short trunk branching above ground level into thick ascending or decumbent stems, but usually a small tree 2–5 m tall and trunk up to 1,5 m long; bark yellowish brown to reddish-brown or pale grey, peeling in papery pieces or in thick discoid flakes to expose a greenish underlayer; branchlets glabrous, pilose or densely pilose. Leaves simple, glaucous or pale green, glabrous, sparsely pilose or densely pilose, 1,5—10 × 0,8–6 cm but usually c. 4 × 2,5 cm, elliptic, broadly elliptic, seldom obovate, margin entire, apex usually truncate, seldom retuse or acute, base truncate or cuneate, petiole up to 4 mm but usually less than 1 mm long. Fruit ellipsoid, laterally flattened, c. 1,1 × 0,6 cm; pseudaril red, cupular with 4 short lobes, covering lower ¼ of putamen, 2 lobes on seam of putamen slightly longer than 2 on flattened faces of putamen. (Plates 17–20.)

Plate 17. *Commiphora glaucescens* near Otjangasemo, Kaokoveld (height ± 8 m).

Of the 12 species described in this paper, *C. glaucescens* has the widest geographical distribution and occurs the farthest eastward. It has been collected from Grootfontein in the east to near the West Coast, and from Maltahöhe in the south throughout the Kaokoveld northward to the Angola border.

This species grows in the Etosha National Park, being well represented in the vicinity of Otjovasandu. It has also been collected in the Namib Desert Park and Mountain Zebra Park.

Also recorded from Angola.

1713(Swartbooisdrif): 15 km W of Otjangasemo (-AD), *Van der Walt & Giess* 292 (PRE; WIND; STE). 1714(Ruacana Falls): near Ruacana Falls (-AD), *De Winter & Giess* 7103 (PRE; WIND). 1813(Ohopoho): near Ohopoho (-BB), *De Winter & Leistner* 5913 (PRE); *Merxmüller & Giess* 1513 (PRE; WIND); *Smuts & Pole Evans* 2252 (PRE; WIND); near Orumana (-BB), *Gibson* 122 (WIND). 1814(Otjitundua): 32 km NE of Ohopoho (-AA), *Van der Walt & Giess* 280 (PRE; WIND; STE); 64 km N of Osondeka (-CA), *Giess* 9270 (WIND); 56 km N of Otjovasandu (-CD), *Van der Walt & Giess* 275 (PRE; WIND, STE). 1914(Kamanjab): 27 km N of Otjovasandu (-AB), *Van der Walt* 250 (PRE; WIND; STE), near Otjovasandu (-AD), *Van der Walt* 254 (PRE; WIND; STE); Farm Franken (-DB), *Schwerdtferger* L/120 (WIND). 1915(Okaukuejo): Farm Otjitambi (-CC), *Walter* 1028 (WIND). 1917(Tsumeb): 21

Plate 18. *Commiphora glaucescens* near Etis (height ± 1.5 m).

Plate 19. Close-up view of the bark of *Commiphora glaucescens*.

km S of Tsumeb (-BD), *De Winter* 3683 (WIND), near Otavi (-CB), *Dinter* 5276 (PRE); Elephantenberg (-CB), *Kinges* 2948 (PRE). 1918(Grootfontein): near Grootfontein (-CA), *Schoenfelder* 58 (PRE); *Le Roux* 351 (WIND). 2014(Welwitschia): Welwitschia (-BD), *Giess, Volk & Bleissner* 6129 (WIND). 2015(Otjihorongo): 4 km SE of Ugab Bridge (-CC), *Van der Walt* 231 (PRE; WIND; STE). 2016(Otjiwarongo): 7 km NW of Outjo (-AA), *Van der Walt* 236 & 256 (PRE; WIND; STE); Farm Graslaagte (-DB), *Walter* 306 (WIND). 2114(Uis): Tsisab Ravine Brandberg (-BA), *Van der Walt* 226 (PRE; WIND; STE); *Carr* B2 (PRE); *Giess* 3687 (PRE; WIND). 2115(Karibib): Klein Spitskoppie (-CC), *Van der Walt* 208 (PRE; WIND; STE); Farm Goabeb (-CD), *Giess, Volk & Bleissner* 5884 (PRE; WIND); Ameib (-DC), *Hardy* 2052 (PRE); near Karibib (-DD), *Van der Walt* 202 (PRE; WIND; STE); *Wedermann & Oberdieck* 2417 (PRE). 2215(Trekkopje): Tinkas River Namib Desert Park (-CD), *Jensen* 208 (WIND). 2216(Otjimbingwe): 35 km S of Otjimbingwe (-CA), *De Winter* 2638 (PRE; WIND). 2314(Sandwich Harbour): E of Hotsas (-B), *Jensen* 83 (PRE). 2316(Nauchas): Farm Djab (-AB), *Giess & Hübsch* 11608 (WIND); *Merxmüller & Giess* 909 (PRE; WIND); *Schwerdtferger* 4289 (WIND). 2415(Sossusvlei): 18 km S of Solitaire (-BB), *Van der Walt* 268 (PRE; WIND; STE). 2416(Maltahöhe): Mountain Zebra Park (-AA), *Benseler* s.n. (WIND); Swartpoort (-AB), *Van der Westhuizen* 48 (WIND); Farm Bullspoort (-AB), *Hardy* 1970 (WIND); Farm Friedland (-CB), *Walter* 2098 (WIND).

C. glaucescens is a very striking and attractive commiphora; the blue-green leaves contrasting well against the reddish-brown bark.

It has been noted that differences in habit, colour of the bark, relative size and degree of hairiness of the leaves occur among representatives from different geographical areas. It may be justifiable to distinguish two varieties.

C. glaucescens of the southern and eastern areas is a small tree with glabrous leaves. In the drier west the growth habit is that of a shrub, with spreading procumbent branches and the leaves small and glabrous. In the Kaokoveld to the north, the single-boled tree attains a considerable height, the leaves being relatively much larger and very hairy.

Judging by trees in the Otjovasandu area, it may be that elephants and other game browse on the young shoots and branches.

3.7 *Commiphora kraeuseliana* Heine in Senckenberg biol. 37: 493 (1956); Merxm., Prod. Fl. S.W. Afr. 23: 77 (1968)

Dioecious shrub with many relatively thin and slender stems sprouting forth from the very short trunk above ground level, stems ascending or spreading almost decumbent; bark grey-brown or yellowish, peeling at the base of the stems in papery pieces; branchlets relatively short, stout, glabrous, scarred and with clusters of feathery leaves at the apex. Leaves impari-pinnate, 6–8-jugate, 3–7 cm but usually 4–6 cm long, glabrous, petiole 0,5–2,5 cm but usually c. 1 cm long, leaflets sessile, linear, subterete, margins entire 1–2,5 cm but usually c. 1,5 cm long, 0,5–1 mm in diameter, terminal leaflet usually shorter than lateral leaflets. Fruit subglobose to ellipsoid, laterally flattened, c. 2 × 1,8 cm; pseudaril absent. (Plates 21–23.)

C. kraeuseliana is endemic to South West Africa and occurs on rocky hillsides and stony slopes in the Namib Desert. It has only been collected in the vicinity of the Brandberg, west of Welwitschia and in the north-western region of the Kaokoveld.

1812(Sanitatas): Anabib near Orupembe (-BA), *Story* 5729 (PRE; WIND); Orupembe (-BA), *De*

Plate 20. Leaves of *Commiphora glaucescens*.

Plate 21. *Commiphora kraeuseliana* near the mouth of the Tsisab Ravine, Brandberg (height ± 1,5 m).

Winter & Leistner 5733 (PRE; WIND); 17 km E of Orupembe (-BD), *De Winter & Leistner* 5719 (PRE; WIND). 2013(Unjab Mouth): Farm Driefontein (-BD), *Giess, Volk & Bleissner* 6156 (WIND). 2014(Welwitschia): 8 km W of Petrified Forest (-BC), *Ihlenfeldt, De Winter & Hardy* 3194 (PRE); *Van der Walt* 260 (PRE; WIND; STE); Twyfelfontein (-CB), *Giess, Volk & Bleissner* 6213 (WIND). 2114(Uis): Tsisab Ravine Brandberg (-BA), *Merxmüller & Giess* 1611 (WIND); *Carr* B1 (PRE); *Giess* 3692 (PRE; WIND); *Meyer* 1141 & 1142 (WIND); *Liebenberg* 5005 (PRE; WIND); *Van der Walt* 228 & 262 (PRE; WIND; STE); Numas Ravine Brandberg (-BA), *Giess* 3649 (PRE; WIND).

This interesting species was named in honour of the German paleobotanist, Professor R. Kräusel.

These plants, having a very characteristic growth form, must have been observed by many visitors where they grow at the mouth of the Tsisab Ravine, leading to the famous Bushmen painting of the White Lady of the Brandberg. Their feathery leaves are atypical of a commiphora. A very unpleasant odour is exuded when fresh branchlets or fruits are picked.

This is the only *Commiphora* species known of which the seeds are eaten by natives. As in almonds, the putamen is cracked open to expose the seed.

3.8 *Commiphora multijuga* (Hiern) K. Schum. in Just's bot. Jber. 27,1: 470 (1901); Merxm., Prod. Fl. S.W. Afr. 23: 77 (1968)

Dioecious tree, usually with a single trunk, 3–8 m tall; bark purplish-grey or dark grey, smooth, not peeling but in some cases cracked on the trunk; youngest branchlets sparsely pilose or pilose. Leaves impari-pinnate, 4–10-jugate but usually 6–8-jugate, pale green, 6–25 cm but usually 10–15 cm long; petiole slender, pilose or sparsely pilose, 1,5–4 cm but usually 2,5–3 cm long; petiolules slender, sparsely pilose, up to 1,5 cm but usually c. 1 cm long; leaflets drooping, irregularly elliptic, broadly elliptic to rotund but acuminate at both ends, apex acute, base cuneate, margins entire, glabrous or sparsely pilose on larger veins, 1,2–2,5 × 1–2 cm but usually

Plate 22. Close-up view of the stems of *Commiphora kraeuseliana* illustrating the bark.

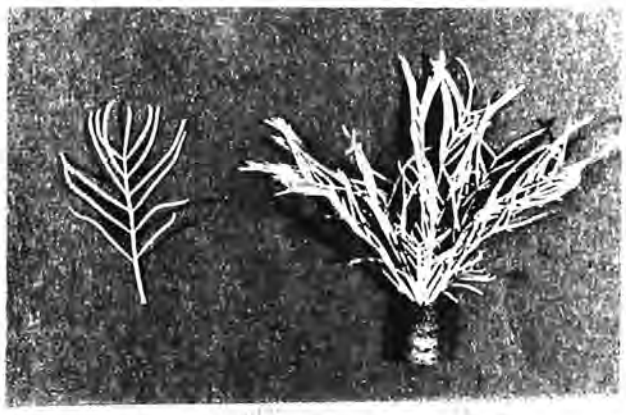

Plate 23. Leaves of *Commiphora kraeuseliana* (scale in mm).

c. 1,8 × 1,3 cm (excluding petiolules), terminal leaflet usually smaller than lateral leaflets. Fruit subglobose and irregularly flattened, c. 1,5 × 1,5 cm; pseudaril red, 4 very fleshy arms of ± equal length reaching almost to apex of putamen. (Plates 24–26.) This species occurs mainly in the Kaokoveld from Welwitschia northward up to the Kunene River, and is particularly common in the vicinity of the Ruacana Falls.

Also recorded from Angola.

1713(Swartbooisdrif): 17 km S of Epupa Falls (-AA), *Giess* 9547 (WIND). 1714(Ruacana Falls): near Ruacana Falls (-AC), *De Winter & Giess* 7102 (PRE; WIND). 1813(Ohopoho): 27 km W of Kaoko-Otavi (-AB), *Van der Walt & Giess* 297 (PRE; WIND, STE); 11 km W of Ohopoho (-BB), *De Winter & Leistner* 5233 (PRE; WIND); Okarosawe (-BB), *Merxmüller & Giess* 1383 (PRE; WIND), 4 km N of Ohopoho (-BB), *Van der Walt & Giess* 286 (PRE; WIND; STE). 1913(Sesfontein), 23 km NW of Sesfontein (-AB), *Van der Walt* 245 (PRE, WIND, STE); 37–40 km E of Sesfontein (-BD), *Van der Walt* 247 & 248 (PRE, WIND; STE). 1914(Kamanjab): NW of Kamanjab (-DB), *Van Niekerk* A 187B (PRE); 22 km S of Kamanjab (-DD) *Van der Walt* 257 (PRE; WIND; STE); 59 km S of Kamanjab on Farm Blydskap (-DD), *De Winter* 3107 (PRE). 2014(Welwitschia): 38 km W of Welwitschia (-BC), *De Winter & Hardy* 8133 (WIND). 2015(Otjihorongo): 56 km SE of Kamanjab (-AA), *Van der Walt* 259 (PRE; WIND; STE).

C. multijuga is distinguished by its typical pale greenish leaves which contrast well against the purplish-grey or dark grey bark. The graceful compound leaves with drooping leaflets and characteristic elliptic form, are also very aromatic. Large quantities of colourless, pungent and sticky resin exude when the twigs are cut.

3.9 *Commiphora oblanceolata* Schinz in Bull. Herb. Boiss. sér. 2.8: 633 (1908); Merxm., Prod. Fl. S.W. Afr. 25: 77 (1968) pro parte

Dioecious shrub, 1–2,7 m but usually 1–1,5 m tall, trunk very short, branching above ground level into thick succose appearing stems; bark grey to dark grey, smooth, not peeling, branchlets glabrous but youngest ones glandular. Leaves trifoliolate, glandular, 1–6,7 cm but usually c. 1,7 cm long, petiole 0,3–2,5 cm but usually c. 0,5 cm long, leaflets sessile or subsessile, narrowly oblanceolate to oblanceolate, apex obtuse, base cuneate, margins finely serrate-

Plate 24. *Commiphora multijuga* between Kamanjab and Welwitschia (height ± 6 m).

dentate but in some cases almost entire, terminal leaflet 0.7–4.2 × 0.3–0.9 cm but usually c. 1.2 × 0,4 cm, lateral leaflets 0.8–4.3 × 0.3–0.9 cm but usually c. 1,4 × 0.4 cm. Fruit subglobose, c. 9 × 8 mm pseudaril apparently absent. (Plates 27–29.)

C oblanceolata is one of the endemic species which is apparently restricted to the north-western part of South West Africa. It occurs on the slopes of the arid mountains near the Swakop River where it has been collected on the Farm Palmenhorst and east of the Welwitschia Flats in the Namib Desert Park. It is also recorded from the northern part of the Kaokoveld in the Swartbooisdrif area, but it is suspected to occur southward in the Kaokoveld.

1713(Swartbooisdrif): between Swartbooisdrif and Epupa (-BA), *Rycroft* 2490 (WIND; NBG), 16 km W of Enyandi (-BA), *Giess* 9342 (WIND), 2214 (Swakopmund), Farm Palmenhorst (-DB), *Merxmüller & Giess* 1751 (PRE; WIND), *Kers* 1122 (WIND); *Van der Walt* 272 (PRE, WIND; STE)

Plate 25. Close-up view of the bark of *Commiphora mutujuga*.

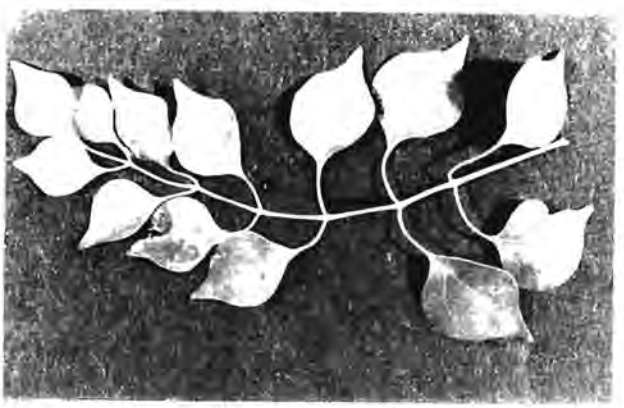

Plate 26. View of *Commiphora mutujuga*.

Plate 27. *Commiphora oblanceolata* on Farm Palmenhorst near Swakopmund (height 1 m).

Plate 28. Close-up view of the stems of *Commiphora oblanceolata* illustrating the bark.

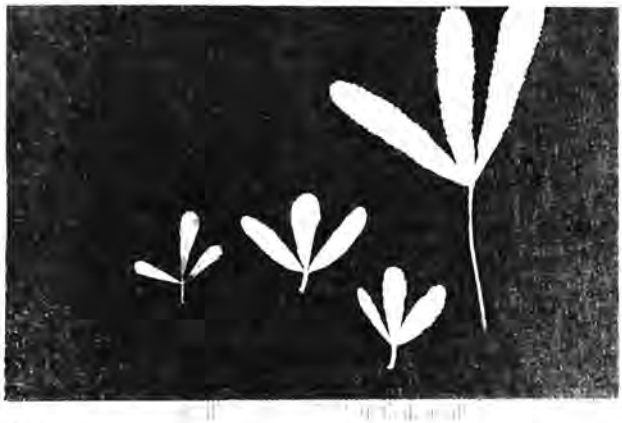

Plate 29. Leaves of *Commiphora oblanceolata*.

2314(Sandwich Harbour): E of Welwitschia Flats, *Jensen* 320 (PRE).

The habit of *C. oblanceolata* is very typical for the shrubby commiphoras growing in the warm and dry semi-desert conditions in South Africa and South West Africa. Diagnostic features of this species are the greyish to dark-grey bark which does not peel off, and the presence of four stamens in the flower. *C. gracilifrondosa* Dinter ex Van der Walt which was formerly regarded as conspesific with *C. oblanceolata* (Van der Walt, 1971), has this feature of the presence of four stamens in common with *C. oblanceolata*. Generally the genus *Commiphora* has eight stamens.

The leaves of specimens collected in the northern Kaokoveld are decidedly larger than those of the specimens from the vicinity of Swakopmund. Due to this feature, Merxmüller (1968) held the opinion that the specimens were of different species. It has been observed, however, that the leaves of several species of *Commiphora* occuring in the northern Kaokoveld, are larger in this area than elsewhere.

3.10 *Commiphora saxicola* Engl. in Bot. Jahrb. 10: 283 (1888); Merxm., Prod. Fl. S.W. Afr. 23: 78 (1968)

(= *C. dulcis* Engl.)

Dioecious, low-growing shrub, 0,2–2,5 m tall, with a short trunk branching above ground level in thick, often decumbent stems, or small tree up to 4 m tall and trunk up to 1,5 m long; bark grey, finely pitted, smooth, not peeling; branchlets glabrous but youngest ones glandular. Leaves impari-pinnate, 2–6-

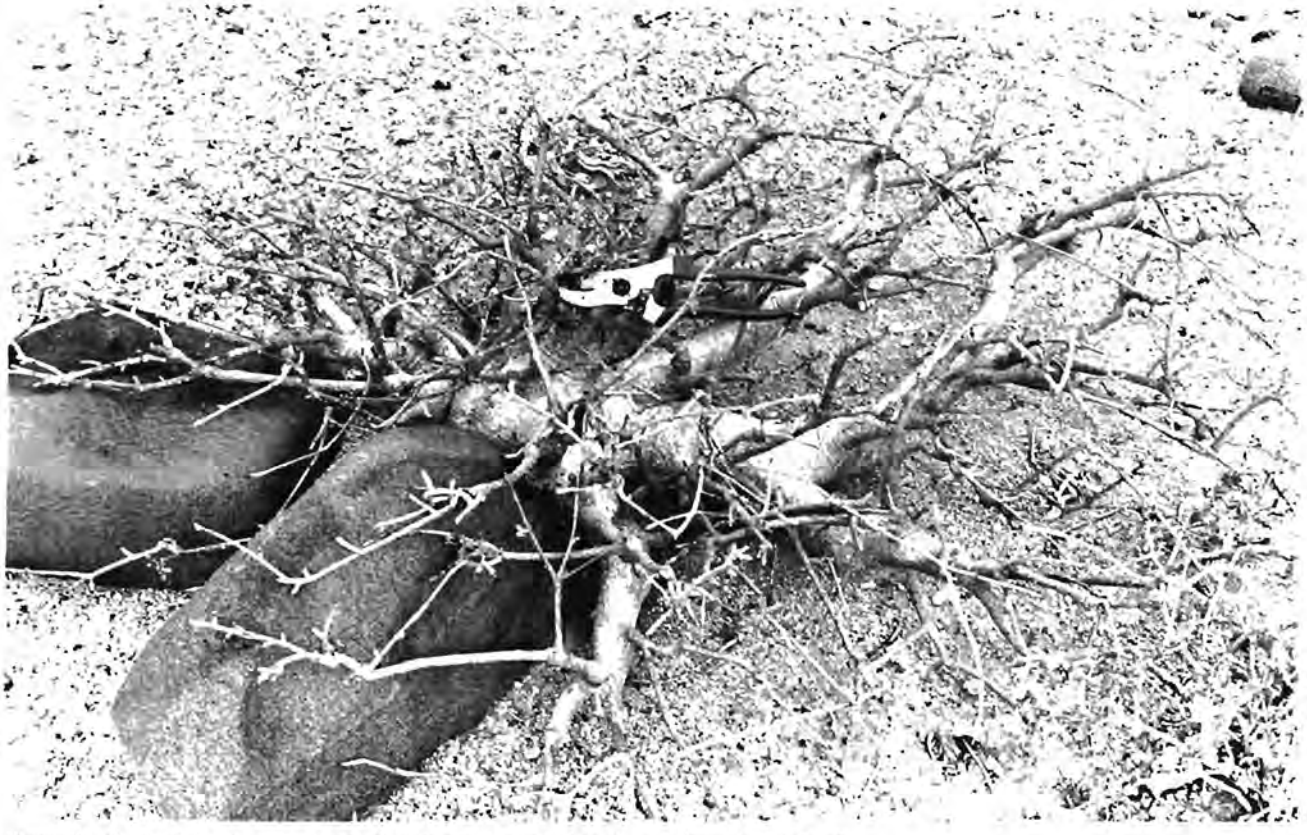

Plate 30 *Commiphora saxicola* north-east of Henties Bay (height less than 0.5 m)

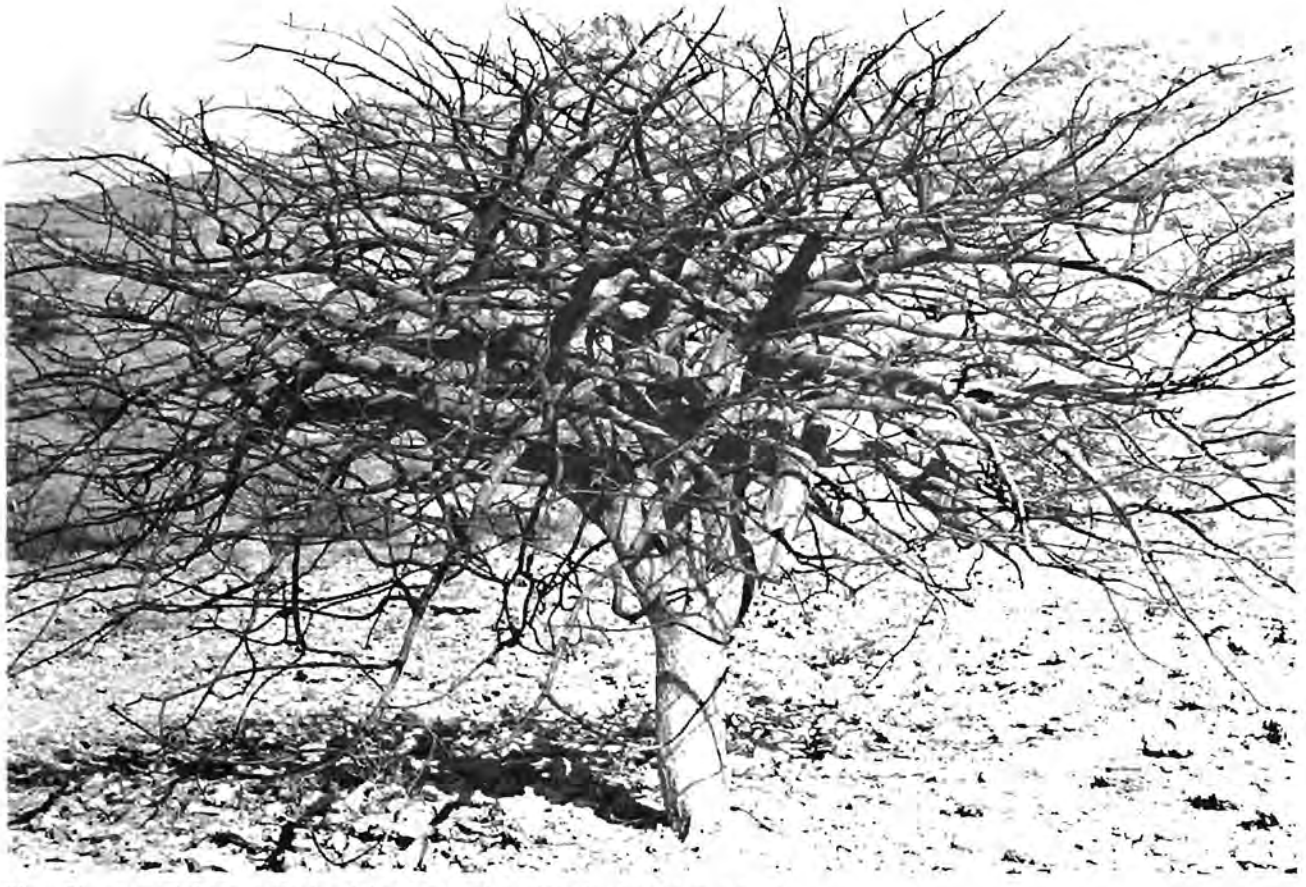

Plate 31. *Commiphora saxicola* 18 km N.W. of Sesfontein (height ± 2,5 m).

Plate 32. Close-up view of the bark of *Commiphora saxicola*.

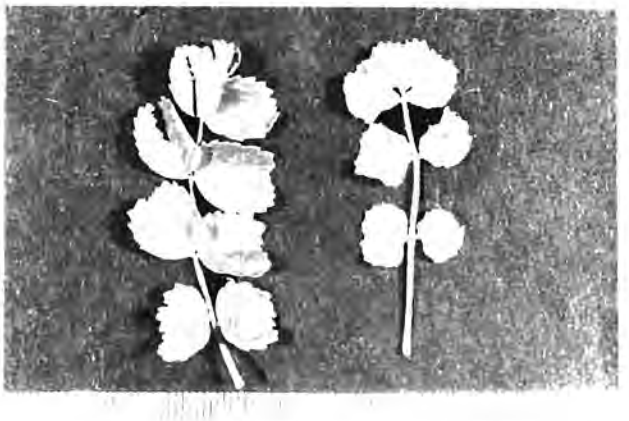

Plate 33. Leaves of *Commiphora saxicola* (scale in mm).

jugate but usually 3–4-jugate, glandular, 1,7–10 cm but usually 5 cm long, petiole 0,3–3,5 cm but usually c. 1.2 cm long, petiolules less than 1 mm long, margins of leaflets crenate-serrate: terminal leaflet 0,3–1,6 × 0,3–1,6 cm but usually c. 1 × 1 cm, suborbicular, apex emarginate or truncate, base cuneate; lateral leaflets 0,4–1,7 × 0,4–1,7 cm but usually c. 1,2 × 1,2 cm, suborbicular to oblate, apex and base truncate. Fruit oblong ellipsoid, c. 1 × 0,6 cm, apiculate, dark red to purpie; pseudaril orange, cupular, covering lower ⅓ of putamen. (Plates 30–33.)

C. saxicola is another endemic species of South West Africa. It occurs in the Namib Desert itself, but is particularly common on the edge of the Namib from Sesfontein in the north to Nauchas in the south. It grows on rocky hills or stony slopes but is often found on sandy flats.

1913(Sesfontein): 23 km NW of Sesfontein (-AB), *Van der Walt* 243 (PRE; WIND; STE). 2013(Unjab Mouth): 57 km E of Torra Bay (-BC), *De Winter & Hardy* 8167 (WIND); Farm Driefontein (-BD), *Giess, Volk & Bleissner* 6137 (WIND). 2014(Welwitschia): 45 km N of Uis (-DD), *Tölken & Hardy* 855 (PRE; WIND). 2015(Otjihorongo): Otjihorongo Reserve (-CC), *Merxmüller & Giess* 1616 (WIND); *Van der Walt* 253 (PRE; WIND; STE); 15 km NE of Ossontati (-CD), *Giess, Volk & Bleissner* 5975 (WIND). 2114(Uis): 15 km S of Brandberg West (-AA), *Van der Walt* 212 (PRE; WIND; STE). 26 km E of Brandberg West (-AB), *Van der Walt* 214 (PRE; WIND; STE); Numas Ravine Brandberg (-AB), *Giess* 3650 (PRE; WIND); Messum Mountains (-AC), *Giess* 9160 (WIND); near Brandberg (-BA), *Liebenberg* 4987 (PRE; WIND); 8 km S of Tsisab Ravine Brandberg (-BA), *Giess* 3650A (WIND); *Van der Walt* 227 (PRE; WIND; STE); *Carr* B3 (PRE); 13 km N. of Uis (-BB), *Giess* 9170 (WIND), near Uis (-BB), *Van der Walt* 221 (PRE; WIND; STE); 2115(Karibib): Ameib (-DC), *Dinter* 6867 (PRE). 2214(Swakopmund): Farm Palmenhorst (-DB), *Van der Walt* 273 (PRE; WIND; STE); 2215(Trekkopje): Trekkopje (-AC), *Seydel* 1208 (PRE); Farm Ubib (-BA), *Wanntorp* 1008 (WIND). 2315(Rostock): Farm Schlesien (-BB), *Merxmüller & Giess* 979 (PRE; WIND). 54 km NW of Solitaire (-DB), *Van der Walt* 270 (PRE; WIND; STE). 2316(Nauchas): Farm Djab (-AB), *Merxmüller & Giess* 911 (PRE; WIND).

The habit of this *Commiphora* species is decidedly variable. It is a small low-growing shrub with thick procumbent stems where it grows close to the West Coast, north-east of Henties Bay. South of Welwitschia, again, which is more inland, the single-boled tree may attain a height of four metres.

Specimens collected in the Kaokoveld (*Merxmüller & Giess* 1430; *Giess* 8921; *De Winter & Leistner* 5670) show leaflets, definitely larger or longer than is typical of *C. saxicola*. This problem will also be investigated.

A report from the National Chemical Research Laboratory of the CSIR mentioned that an extract made from the leaves of this species, contains the most promising antitumor properties of all South African plants analysed so far.

3.1) *Commiphora virgata* Engl. in Bot. Jahrb. 19: 139 (1894); Merxm., Prod. Fl. S.W. Afr. 23: 79 (1968) pro parte

Dioecious, much-branded shrub, 0.5–3 m tall and 0.5–4 m in diameter, short trunk branches near ground level into relatively thick stems; bark peeling

Plate 34. *Commiphora virgata* in the vicinity of Solitaire (height 1 m).

Plate 33. Close-up view of the bark of *Commiphora virgata*

Plate 36. Leaves of *Commiphora virgata*.

around the thicker stems in yellowish-white to silvery, papery strips; stems terminating in virgate, sometimes drooping twigs, branchlets glabrous. Leaves trifoliolate, glabrous, 0.5–4 cm but usually 1–2 cm long; petiole up to 1,5 cm but usually 3–5 cm long; leaflets subsessile, elliptic to broadly elliptic but more often narrowly obovate, apex obtuse, seldom retuse or acute, base cuneate, margins entire, terminal leaflet 0,4–2,5 × 0,2–1 cm but usually c.1.2 × 0.7 cm, lateral leaflets 0.4–1,5 × 0.2–0.7 cm but usually c. 1 × 0,5 cm. Fruit irregularly subglobose or ellipsoid or obovoid, apiculate, c. 8 × 7 mm; pseudaril white, greenish or light red, forming 4 arms of equal length reaching almost to apex of putamen. (Plates 34–36.)

C. virgata occurs on the edge of the Namib Desert and has been collected from Ombepera in the north to Solitaire in the south. It usually grows on rocky hills or stony slopes.

Also recorded from Angola.

1712(Posto Velho): near Ombepera (-DB), *Gibson* 222 (WIND). 1812(Sanitatas): 3 km W of Okonjombo (-BD), *Giess & Leippert* 7417 (PRE; WIND). 1813(Ohopoho): 17 km W of Otjihu (-AC), *De Winter & Leistner* 5663 (PRE; WIND). 1913(Sesfontein): 18 km NW of Sesfontein (-AB), *Van der Walt 240* (PRE; WIND; STE). 1914(Kamanjab): Farm Onguati (-DC), *Schwerdtferger* 178 (WIND). 1915(Okaukuejo): Farm Otjitambe (-CC), *Walter* 1029 (WIND). 2015(Otjihorongo): Sorris-Sorris (-CC), *Van der Walt* 232 (PRE; WIND, STE). 2016(Otjiwarongo), Farm Moselle (-BC), *Walter 1077* (WIND). 2114(Uis): 57 km W of Uis (-AB), *Van der Walt* 213 (PRE; WIND; STE); near Brandberg (-BA), *De Winter* 3147 (PRE; WIND); Tsisab Ravine at Brandberg (-BA), *Van der Walt 227A* (PRE; WIND, STE); near Uis (-BB), *Van der Walt* 220 (PRE; WIND; STE). 2115(Karibib): Spitskoppie (-CC), *De Winter & Hardy* 8094 (WIND); Black Range (-CC), *Van der Walt* 206 (PRE; WIND, STE); near Karibib (-DD), *Wedermann & Oberdieck* 2415 (PRE). 2315(Rostock): Farm Schlesien (-BB), *Merxmüller & Giess* 928 (PRE; WIND); 48 km NW of Solitaire (-DB), *Van der Walt* 269 (PRE; WIND; STE).

The name of this species refers to the long and slender stems. Another characteristic feature is the yellowish-white to silvery bark which peels around the stem in papery strips, a feature of both *C. discolor* and *C. merkeri*.

C. virgata and *C. giessii* were formerly considered as conspesific.

3.12 *Commiphora wildii* Merxm. in Mitt. bot. St-Samml., Münch. 3: 609 (1960); Prod. Fl. S.W. Afr. 23. 79 (1968)

Dioecious, low-growing shrub, less than 1 m up to 2.5 m tall and up to 5 m in diameter, short trunk branches above ground level into relatively thick, often decumbent stems; bark grey-brown, shiny, mostly smooth but occasionally peeling in papery pieces; youngest branchlets frequently very short, pubescent to densely pubescent. Leaves impari-pinnately lobed or pinnately divided, (1–) 2–4-jugate, pubescent to densely pubescent, glaucous, 1–6 cm but usually c. 4 cm long petiole up to 1,5 cm but usually 0,5–1 cm long; leaflets sessile, margins entire, terminal leaflet 0,8–2,5 × 0,6–2 cm but usually c. 2 × 1,2 cm, obovate seldom elliptic, apex usually obtuse or emarginate seldom acute, base cuneate; lateral leaflets 0.7–2.2 × 0,4–1,2 cm but usually c. 2 × 1 cm, asymmetrical, obovate or elliptic, lower margin decurrent. Fruit ovoid to subglobose, c. 1,1 × 1 cm; pseudaril yellow to orange, cupular with 2–4 short lobes. (Plates 37–39.)

This is another species occuring on the edge of the Namib Desert, and is found from the northern border of the Kaokoveld southward to Uis in the south. It has also been collected near the West Coast in the Northern Namib.

Plate 37. *Commiphora wildii* 11 km E. of Brandberg West (height less than 1 m).

Plate 38. Close-up view of the bark of *Commiphora wildii*.

Plate 39. Leaves of *Commiphora wildii*.

Also recorded from Angola.

1712(Posto Velho): 20 km SW of Otjinungua (-AD), *Giess* 8922 (PRE; WIND); 24 km S of Ongutu (-CD), *Giess* 9400 (WIND). 1812(Sanitatas): 78 km W of Otjihu (-BA), *De Winter & Leistner* 5712 (PRE; WIND); near Sanitatas (-BA), *Merxmüller & Giess* 1453 (WIND); Sarusas (-CD), *Giess & Leippert* 7468 (PRE; WIND). 1913(Sesfontein): 23 km NW of Sesfontein (-AB), *Van der Walt* 244 (PRE; WIND; STE). 2013(Unjab Mouth): 44 km E of Torra Bay (-AD), *De*

Winter & Hardy 8170 (WIND); 8 km W of Farm Wêreldend (-BB), *Giess, Volk & Bleissner* 6170 (WIND). 2014(Welwitschia): 90 km W of Welwitschia (-AC), *De Winter & Hardy* 8148 (PRE); Farm Bethanis (-AD), *Giess, Volk & Bleissner* 6148 (WIND). 2114(Uis): 11 km E of Brandberg West (-AA), *Van der Walt* 213 (PRE; WIND; STE). Numas Ravine Brandberg (-AB), *Giess* 3589 (PRE; WIND); Messum Mountains (-AC), *Giess* 9159 (PRE; WIND); 33 km W of Uis (-BA), *Van der Walt* 217 (PRE; WIND; STE); near Uis (-BB), *Van der Walt* 224 (PRE; WIND; STE); Farm Sorrento (-DB), *De Winter* 6030 (WIND).

C. wildii is an attractive shrub with the glaucous leaves and shiny, grey-brown bark contrasting well against the black dolomitic rocks on which it is often found. The leaves are characteristically lobed and resemble those of an oak. This is the reason why the name *C. querquiloba* was proposed for this species. Eventually it was named in honour of Professor H. Wild of the University of Rhodesia who compiled the last revision of the genus *Commiphora* (Wild, 1959).

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