

## Notes on *Acacia* species from north-east Tropical Africa

J. H. ROSS\*

### ABSTRACT

Information relating to a number of miscellaneous *Acacia* species described by E. Chiovenda from north-east tropical Africa is presented.

Although an excellent account of the *Acacia* species of tropical east Africa was published some years ago (Brenan in Fl. Trop. E. Afr. Legum.-Mimos., 1959), doubt still surrounds the identity of a number of species described by Emilio Chiovenda from north-east tropical Africa, particularly from the Somali Republic. Through the kindness of Prof. Dr C. H. Steinberg, Conservator of the Herbarium Universitatis Florentinae, the type specimens of most of these species were received on loan. Those decisions requiring explanation in print form the subject of this paper.

#### ACACIA BRICCHETTIANA Chiov.

*Robecchi Bricchetti* 533 from the Ogaden, Somali Republic, the type specimen of *A. bricchettiana* Chiov., in Ann. Bot., Roma 13: 396 (1915), consists of two flowering twigs. The older twigs of the previous season are reddish- to dark brown, sparingly puberulous and with numerous, somewhat transversely-elongated lenticels, while those of the current season are reddish-brown, with fewer lenticels but more densely puberulous. The epidermis has split longitudinally in places to reveal a yellowish inner layer. The paired stipular spines are slender and up to 4.5 cm long.

The leaves are fairly densely puberulous throughout, with minute, scattered glands along the rhachis, up to 11 pinnae pairs and 10-17 leaflet pairs per pinna. The leaflets are up to  $5 \times 1.3$  mm, the lower surface is paler than the upper, the margins have conspicuous cilia, while scattered hairs sometimes also occur on the lower surface. The midrib (and occasionally a few of the lateral nerves) is conspicuous and slightly raised on the lower surface.

The peduncles are very short, up to 6 mm long, densely pubescent and glandular; the involucrel is basal. The calyces and corollas appear to be reddish or purple, but this impression may be the result of the drying process. The calyces are up to 2 mm long and are glabrous or subglabrous except for the lobes which are pubescent. Likewise, the corollas, which are  $\pm$  3 mm long, are glabrous except for the lobes which are pubescent. The corolla-lobes are up to 1.2 mm long, so the corolla is divided almost down to the calyx.

As the description of *Acacia gloveri* Gilliland in Kew Bull. 6: 139, t.4 (1951) seemed very close to that of *A. bricchettiana*, *Glover & Gilliland* 388, the holotype of *A. gloveri* from the Ogaden, Somali Republic, was compared with *Bricchetti* 533. Vegetatively *Glover & Gilliland* 388 is a good match of *Bricchetti* 533 agreeing in that the older twig is dark  $\pm$  purplish-brown, transversely lenticellate and with the epidermis peeling slightly to reveal a yellowish inner layer, while the younger twig is reddish-brown and densely puberulous. Similarly, the leaves agree in being fairly densely puberulous throughout and glandular, and the leaflets are of a similar size although some in *Glover & Gilliland* 388 are marginally larger than those of *Bricchetti* 533. Leaflet colour, venation and pubescence in *Glover & Gilliland* 388 matches that of *Bricchetti* 533.

Although *Glover & Gilliland* 388 is a fruiting specimen, the remains of an inflorescence is visible on the holotype in the Kew Herbarium and also on the specimen in the carpological collection. The peduncle is puberulous and the remains of a basal involucrel are evident. The remains of dark-coloured spatulate bracts, pubescent at the apex, are visible on the inflorescence and these agree well with those on the flowering specimen of *Bricchetti* 533.

In view of this general agreement it seems certain that *A. gloveri* and *A. bricchettiana* are conspecific. Consequently, I now reduce *A. gloveri* to synonymy under *A. bricchettiana*, the earlier name.

***Acacia bricchettiana* Chiov.** in Ann. Bot., Roma 13: 396 (1915). Type: Somali Republic, Ogaden, *Robecchi Bricchetti* 533 (FI, holo.!).

*A. gloveri* Gilliland in Kew Bull. 6: 139, t.4 (1951), synonym. Type: Somali Republic, Ogaden, between Wardere and Walwal, *Glover and Gilliland* 388 (K, holo.!, BM, iso.!).

#### ACACIA CHEILANTHIFOLIA CHIOV.

Chiovenda, Fl. Somalia 1: 168, t. xvii, fig. 1 (1929), based his description of *A. cheilanthifolia* on five syntypes from the Somali Republic, namely, *Puccioni & Stefanini* 479 (531), 509 (562), 663 (727), 762 (843) and 1010 (1115). Of the five syntypes, only one, namely *Puccioni & Stefanini* 663, carries both flowers and pods. The following description is based on *Puccioni & Stefanini* 663 and any dimensions recorded other than those from this specimen are placed in parenthesis.

The bark on the older twigs is ashen to greyish-brown, often with a somewhat mottled effect, flaking off here and there to reveal a yellowish-brown inner layer, while the young branchlets are reddish-brown and sparingly puberulous. The prickles are in threes near the nodes, typically with the two laterals pointing upwards and the median one pointing downward. However, there is some variation in the degree of curvature of the prickles and often they are  $\pm$  straight and spreading. In *Puccioni & Stefanini* 1010 and, to a lesser extent and only in some instances, in *Puccioni & Stefanini* 479 and 762, the median prickle also points upwards so that all three prickles point upwards. The prickles are up to 6 (12) mm long.

The leaves are small. The petiole is up to 6 mm long, with a large gland up to 2 mm long, elongated along the length of the petiole (sometimes rounded and only 0.5 mm in diameter), glabrous to sparingly puberulous. The rhachis is up to 1.5 (2.4) cm long, glabrous to sparingly puberulous, with recurved prickles on the lower surface and with a fairly large discoid gland at the junction of the top 1-2 pinnae pairs. The pinnae are in (3-) 6 pairs and the rhachillae are up to 4(7) mm long and are without a terminal, recurved prickle. The leaflets are in 3-4 pairs per pinna, 1.5-2(5)  $\times$  1(2,5) mm, oblong to elliptic or rotund-ovate or obovate-oblong, glabrous throughout.

The inflorescence axes are glabrous or subglabrous and up to 4 cm long. The flowers are sessile and the calyx and corolla are glabrous throughout. The pods are yellowish-brown, 3-4(4,5)  $\times$  1 cm, straightish, rounded or mucronate apically, flattened, dehiscent, venose and densely puberulous throughout.

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

*Puccioni & Stefanini* 695 (769), the type specimen of *A. cheilanthifolia* var. *hirtella* Chiov., differs from typical *A. cheilanthifolia* in that the young stems, petioles, rachides, rachillae, leaflets, inflorescence axes and calyces are densely puberulous, and in that it lacks pods.

On account of the prickles in threes at the nodes, *A. cheilanthifolia* is clearly a member of the *A. senegal* (L.) Willd. complex. *A. cheilanthifolia* is a distinct species, differing from *A. senegal* chiefly in having fewer leaflet pairs and smaller pods. *A. cheilanthifolia* bears a superficial resemblance to some specimens of *A. somalensis* Vatke, but the latter differs in having solitary prickles, usually 1 pinna pair per leaf, 2 leaflets per pinna and reddish-brown pods 1,5–1,7 cm wide.

#### ACACIA CUFODONTII CHIOV.

*Cufodontis* 114 from Borana Prov., Ethiopia, the type specimen of *A. cufodontii* Chiov. in *Miss. Biol. Borana Racc. Bot.* 4: 55, fig. 5 (1939), consists of a single flowering twig. The greyish-brown, puberulous twig is armed with recurved prickles which occur singly near each node. The leaves have 2–4 pairs of pinnae and the petioles, rachides and rachillae are  $\pm$  densely pubescent. The leaflets are in 9–13 pairs per pinna, up to  $3 \times 1$  mm, and have conspicuous, spreading, marginal cilia, while some leaflets are also pubescent on the lower surface. The inflorescence axes are  $\pm$  densely pubescent, especially basally.

*A. cufodontii* clearly falls within the *A. senegal* complex and is not specifically distinct from *A. senegal*. Whether the prickles occur singly or in threes near a node in *A. senegal* seems to be of no significance as both arrangements may occur on one and the same shoot, although some gatherings may show all or nearly all the prickles arranged singly. Although *A. cufodontii* is not specifically distinct from *A. senegal*, in the absence of pods and adequate field notes, it is not possible to refer it to an existing variety of *A. senegal* with certainty. As the inflorescence axes are pubescent, *A. cufodontii* is not referable to var. *leiorhachis* Brenan. However, it could possibly be either var. *senegal*, var. *kerensis* Schweinf. or var. *rostrata* Brenan. Lack of material and information make the present knowledge of *A. senegal* in north-east tropical Africa most unsatisfactory.

*Acacia senegal* (L.) Willd., *Sp. Pl.* ed. 4, 4: 1077 (1806) sens. lat.

*A. cufodontii* Chiov. in *Miss. Biol. Borana Racc. Bot.* 4: 55, Fig. 5 (1939), *synon. nov.* Type: Ethiopia, Borana Prov., Malca Guba sul Daua Parma, *Cufodontis* 114 (FI, holo.!).

#### ACACIA GORINII CHIOV.

Chioyenda, Fl. Somalia 2: 194, fig. 118 (1932), based his description of *A. gorinii* on three syntypes from the Somali Republic, namely, *Gorini* 221 and *Senni* 435 and 449.

*Gorini* 221 consists of three twigs, the right-hand one of which is in fruit while the two others are sterile. There are four pods on the specimen, one attached to a twig, two mounted on the sheet and one in the capsule on the top left-hand corner of the sheet. The twigs are yellowish-brown to greyish-white, glabrous or subglabrous and lenticellate. The paired stipular spines are  $\pm$  straight and up to 1,3 cm long. The leaves have up to 9 pinnae pairs, up to 13 leaflet pairs per pinna and the leaflets are up to  $9 \times 2,5$  mm. The pods are chestnut-brown, up to  $11,8 \times 1,4$  cm, dehiscent, longitudinally striate and with flattened,  $\pm$  wing-like margins.

*Senni* 435 from Lac Badana consists of four almost leafless, flowering twigs. The peduncles are short, up to 6 mm long, pubescent, and the involucre is in the lower half of the peduncle. The calyx and corolla are pubescent apically. The capsule mounted above the collector's label contains a single old pod together with several inflorescences and leaf fragments.

*Senni* 449 from Obe, the third syntype, consists of two flowering twigs, while the capsule mounted in the bottom left-hand corner contains the remains of two ancient pods and some seeds. Apart from having fewer pinnae pairs and smaller leaflets, *Senni* 449 is essentially similar to *Gorini* 221.

As it is quite clear that *A. gorinii* is conspecific with *A. nubica* Benth., this opportunity is now taken of reducing *A. gorinii* to synonymy.

*Acacia nubica* Benth. in *Hook., Lond. J. Bot.* 1: 498 (1842). Type: the Sudan, Kordofan, *Kotschy* 407 (K, holo.!), FI!; OXF!; P!; Z!)

*A. gorinii* Chiov., *Fl. Somalia* 2: 194, fig. 118 (1932), *synon. nov.* Syntypes from the Somali Republic.

#### ACACIA HUMIFUSA CHIOV.

Chioyenda, Fl. Somalia 1: 163 (1929), based his description of *A. humifusa* on *Puccioni & Stefanini* 416 (468) from the Obbia province of the Somali Republic. *Puccioni & Stefanini* 416 is a poor, sterile specimen in young leaf. The young branchlets are greyish to greyish-brown, puberulous and lenticellate. The paired, stipular spines are straight or almost so and up to 1 cm long. The leaves are pubescent, with up to 9 pinnae pairs and up to 11 leaflet pairs per pinna. The leaflets have conspicuous marginal cilia and are pubescent or glabrous beneath. The sole contents of the capsule mounted on the right of the specimen, appears to be some entomological curiosity.

Fortunately it is possible to match this sterile type specimen against material of *A. edgeworthii* T. Anders. in the Kew Herbarium. Consequently, this opportunity is now taken of reducing *A. humifusa* to synonymy under *A. edgeworthii*.

*Acacia edgeworthii* T. Anders. in *J. Linn. Soc.* 5, suppl. 1: 18 (1860). Syntypes from Aden, *Edgeworth, Hooker & Thomson* (K!) and *T. Anderson* (K!).

*A. humifusa* Chiov., *Fl. Somalia* 1: 163 (1929), *synon. nov.* Type: Somali Republic, Obbia province, Garbauén e Durgale, *Puccioni & Stefanini* 416 (FI holo.!).

#### ACACIA NERVOSULA CHIOV.

Chioyenda, Fl. Somalia 2: 192, Fig. 117 (1932), based his description of *A. nervosula* on *Senni* 194 from Mogadiscio in the Somali Republic. *Senni* 194 is a rather poor specimen consisting of a sterile twig with two detached pods and the remains of a third in a capsule mounted in the top right hand corner. The twigs are unarmed, grey, elongate, and along them are numerous closely-arranged cushions representing abbreviated lateral shoots from which the usually clustered leaves arise. The leaves are tiny and have but a single pair of pinnae; the petiole is up to 3 mm long and the rachillae are up to 1,4 cm long and fairly densely pubescent. The leaflets are in 5–8 pairs per pinna, up to  $4,8 \times 1,8$  mm, obovate-oblong or obovate-elliptic, sometimes slightly falcate, with or without sparse marginal cilia, while some are appressed-pubescent below. A few of the basal lateral nerves of the leaflets are fairly conspicuous on the lower surface. Only the smaller of the two whole pods has a peduncle and this is  $\pm$  1 cm long and puberulous. The pods are flattened and densely puberulous; the larger is  $11,6 \times 2,2$  cm and the smaller  $6,6 \times 1,65$  cm.

Although there are no flowers, it is quite apparent that *Senni* 194 is not an *Acacia* at all, but an *Albizia*. The specimen agrees well with the description and very limited material of *Albizia obbiadensis* (Chiov.) Brenan and, consequently, *Acacia nervosula* is to be treated as a synonym of that species.

***Albizia obbiadensis* (Chiov.) Brenan** in Kew Bull. 17: 166 (1963). Type: Somali Republic, Obbia, Biomàl, *Puccioni & Stefanini* 553 (FI, holo.).

*Acacia nervosula* Chiov., Fl. Somalia 2: 192, fig. 117 (1932), *synon. nov.* Type: Somali Republic, Mogadiscio, *Senni* 194 (FI, holo.).

#### ACACIA OXYOSPRION CHIOV.

*Senni* 651 from the Somali Republic, the type specimen of *A. oxyosprion* Chiov. var. *oxyosprion*, Fl. Somalia 2: 188, fig. 115 (1932), consists of two twigs. Each twig bears the remains of a few leaves and inflorescence axes, while the one on the left also carries three pods. The capsule mounted on the bottom left-hand corner contains two pods, flowers, leaflets and the fragments of some non-leguminous plants.

The bark on the old twigs is greyish- to purplish-brown, while that on the younger stems is yellowish- to reddish-brown. The prickles are in threes near the nodes, the two laterals pointing slightly upwards or almost at right angles to the twig and the median one pointing downward. The only leaflets attached to the specimen are 1,2 mm wide. The inflorescence axes are sparingly pubescent basally and the pods are yellowish-brown, up to 7 × 2,2 cm, flattened, papery, venose, sparingly pubescent throughout and distinctly rostrate apically.

There is no reason at all why *A. oxyosprion* should not be regarded as conspecific with *A. senegal* (L.) Willd. The basally pubescent inflorescence axes and the pubescent pods with distinctly rostrate apices in *A. oxyosprion* var. *oxyosprion*, match those of *A. senegal* var. *rostrata* Brenan from southern Africa. There is, of course, a large geographical discontinuity between the specimens with rostrate pods in the Somali Republic and those in southern Africa. The Somali material of *A. oxyosprion* var. *oxyosprion* sometimes has slightly larger leaflets than is found in material of *A. senegal* var. *rostrata* in southern Africa but, apart from this, there is little difference between the specimens and the differences do not appear worthy of any formal taxonomic recognition. Typical leaflets and some larger leaflets sometimes appear together on the same twig of *A. oxyosprion* var. *oxyosprion* in the Somali Republic, for example *Senni* 822 (FI). This opportunity is now taken of reducing *A. oxyosprion* var. *oxyosprion* to synonymy under *A. senegal* var. *rostrata*.

***Acacia senegal* (L.) Willd. var. rostrata Brenan** in Kew Bull. 8: 99 (1953). Type: Transvaal, Zoutpansberg district, Dongola Reserve, *Verdoorn* 2264 (K, holo.! PRE!).

*A. oxyosprion* Chiov. var. *oxyosprion* in Fl. Somalia 2: 188, fig. 115 (1932), *synon. nov.* Type: Somali Republic, Pozzi di El Meghet, *Senni* 651 (FI, holo.).

Unfortunately, *Guidotti* 21, the type of *A. oxyosprion* var. *pubescens* Chiov., has not been available for examination. From the description, var. *pubescens* apparently differs from var. *oxyosprion* solely in having a denser indumentum. If this is indeed the case then there is a possibility that var. *pubescens* also belongs to the same taxon as *A. senegal* var. *rostrata*. However, as it would be unwise to pass judgement on var. *pubescens* without first examining the type specimen, no decision on its identity has been taken.

This uncertainty over the identity of *A. oxyosprion* var. *pubescens* is emphasized, because if var. *pubescens* and *A. senegal* var. *rostrata* prove to belong to the same taxon, then the varietal epithet "*pubescens*" has priority over "*rostrata*" and must be adopted for this taxon once the new combination in *A. senegal* has been effectively published (but see comments under *A. senegal* var. *pseudoglaucophylla*). The type specimen of *A. oxyosprion* var. *pubescens* is thought to be housed in the Istituto Botanico dell' Università, Modena, but efforts to borrow the specimen on loan have failed.

#### ACACIA PARADOXA CHIOV.

Chioyenda, Fl. Somalia 1: 165, t.17/2 (1929), based his description of *A. paradoxa* on *Puccioni & Stefanini* 553 (585) from Ilbehlà in the Obbia Province of the Somali Republic. The specimen consists of three twigs, each of which has young fruits. The young branchlets are ashen and the prickles are in threes at the nodes; the two laterals pointing upward and the median one downward. The leaves appear slightly glaucous, have 2-3 pinnae pairs and 5-6 leaflets per pinna. The leaflets are up to 4 × 1,6 mm, linear- to obovate-oblong and glabrous. The petiole and rhachis have few spreading hairs, while on the lower surface of each rhachilla, a short distance from the apex, there is a single recurved prickle. The pods are immature, the largest being 6,5 × 2,6 cm, apparently papery in texture and pale brown.

On account of the prickles occurring in threes at the nodes, *A. paradoxa* Chiov. falls within the *A. senegal* complex. Several species of *Acacia* have prickles on the rhachis, but the presence of a single prickle towards the apex of each rhachilla is characteristic of only one species, namely, *A. hamulosa* Benth. A comparison of *Puccioni & Stefanini* 553 with material of *A. hamulosa*, revealed that *A. paradoxa* Chiov. cannot be distinguished from *A. hamulosa*. Consequently I have no hesitation in reducing *A. paradoxa* Chiov. to synonymy under *A. hamulosa*.

*A. paradoxa* Chiov. is, of course, an illegitimate name, being a later homonym of *A. paradoxa* DC., Cat. Hort. Monsp.: 74 (1813). However, as *A. paradoxa* Chiov. is now regarded as a synonym of *A. hamulosa*, this obviates the necessity of giving the taxon a new name.

***Acacia hamulosa* Benth.** in Hook., Lond. J. Bot. 1: 509 (1842). Type: Arabia, hills near Gedda, *S. Fischer* 72 (K, holo.).

*A. paradoxa* Chiov., Fl. Somalia 1: 165, t.17/2 (1929) *synon. nov.*, non *A. paradoxa* DC., Cat. Hort. Monsp.: 74 (1813). Type from the Somali Republic, *Puccioni & Stefanini* 553 (FI, holo.).

#### ACACIA PUCCIONIANA CHIOV.

*Puccioni & Stefanini* 158 (177), the type specimen of *Acacia puccioniana* Chiov., Fl. Somalia 1: 164, t. 14 Fig. 2 (1929), consists of a single flowering twig. The presence of spines terminating short lateral, spreading shoots which bear leaves and flowers, and of flowers with only 10 stamens, indicates, that the specimen is not an *Acacia* at all, but a species of *Dichrostachys*.

The young stems are pubescent and the leaves are very small, up to 8 mm long in all. The leaves have 1 or 2 pairs of short pinnae, each of which has up to 7 pairs of tiny, pubescent leaflets which are up to 2 mm long and 0,7 mm wide. Unfortunately there are no pods.

The specimen is not referable to *Dichrostachys cinerea* (L.) Wight & Arn. and does not appear to match material of *D. kirkii* Benth. or of any other species represented in the Kew herbarium. Further material from the Somali Republic may reveal the identity of *Puccioni & Stefanini* 158. However, as the identity of *Puccioni & Stefanini* 158 is not clear, I am refraining from making a new combination of the specific epithet in *Dichrostachys* in case the specimen does prove to belong to an existing taxon.

ACACIA SENEGAL (L.) WILLD. VAR. PLATYOSPRION CHIOV.

Chiovenda, Fl. Somalia 2: 187, Fig. 114 (1932), based his description of *A. senegal* var. *platyosprion* on six syntypes from the Somali Republic, namely, *Senni* 87, 116, 191, 201, *Gorini* 421 and *Guidotti* 3. Five of the syntypes have been examined, but unfortunately the sixth, namely *Guidotti* 3, has not been available for examination.

Three of the syntypes, namely *Senni* 87, 116 and 191 are fruiting specimens, while *Senni* 201 consists of two leafless, flowering twigs. The peduncles are sparsely puberulous basally and the pods are sparsely appressed-pubescent, rounded apically and up to 2,4 cm wide. As the syntypes examined are indistinguishable from specimens of *A. senegal* var. *senegal*, this opportunity is now taken of reducing var. *platyosprion* to synonymy.

*Acacia senegal* (L.) Willd. var. *senegal*.

*A. senegal* var. *platyosprion* Chiov., Fl. Somalia 2: 187, Fig. 114 (1932), *synon. nov.* Syntypes from the Somali Republic.

ACACIA SENEGAL (L.) WILLD. VAR. PSEUDOGLAUCOPHYLLA CHIOV.

Chiovenda, in *Stefanini-Paoli* Miss. Somal.: 72 (1916), based his description of *A. senegal* var. *pseudoglaucophylla* on six syntypes from the Somali Republic, namely, *Paoli* 83, 253, 682, 875, 883 and 1052. Examination of these syntypes revealed that they almost certainly do not all belong to the same taxon.

*Paoli* 83 has glabrous or subglabrous leaf-rhachides and rhachillae, and up to 5 pinnae pairs per leaf. The inflorescence axes are glabrous or subglabrous and the pods are up to 8,3 × 2,7 cm, puberulous and rounded to subacute apically. Although it is a little unusual in having glabrous or subglabrous inflorescence axes, this specimen is in all other respects indistinguishable from material of var. *senegal* and, consequently, is referred to var. *senegal*. It should be mentioned that glabrous inflorescence axes do occur in var. *senegal* in other areas of distribution.

*Paoli* 253, which is sterile apart from a fragment of a pod in the capsule mounted on the bottom left corner, appears to be similar to *Paoli* 83 and therefore it too is referred to var. *senegal*.

*Paoli* 883 consists of two leafless, fruiting twigs and a couple of detached pods. The inflorescence axes are ± glabrous and the pods are up to 7,5 × 1,8 cm, puberulous and rounded apically. *Paoli* 883 probably belongs to the same taxon as *Paoli* 83 and 253 and is also referred to var. *senegal*.

*Paoli* 1052 consists of two twigs, the right-hand one of which is in flower and the left-hand one in young fruit. The leaf-rhachides are pubescent and there are up to 4 pinnae pairs per leaf. The inflorescence axes are pubescent throughout or basally only and the young pods are pubescent throughout and distinctly acuminate or rostrate apically. On account of the pods, and in the absence of any field notes, the specimen is hesitantly and provisionally referred to var. *rostrata* Brenan.

*Paoli* 875, which consists of three twigs, is similar to *Paoli* 1052 in having pubescent leaf-rhachides and inflorescence axes. The solitary young pod in the capsule mounted in the lower left corner is pubescent throughout and distinctly acuminate apically. Once again, in the absence of field notes, the specimen is hesitantly and provisionally referred to var. *rostrata*.

The varietal epithet *pseudoglaucophylla* has priority over *rostrata* (and over *A. oxyosprion* var. *pubescens*) but, as the identity of *Paoli* 875 and 1052 is not beyond all doubt, it would seem unwise at this stage to adopt the name *pseudoglaucophylla* for the specimens with rostrate pods hitherto referred to var. *rostrata*. Clearly, better and much more material with adequate field notes is required from north-east tropical Africa to establish the correct varietal epithet for the plants with distinctly rostrate pods.

*Paoli* 682, the sixth syntype, is a miserable, sterile specimen of which the precise identity remains in doubt. The prickles near the nodes are solitary or in threes, and the leaves have one or two pinnae pairs.

To sum up, three of the syntypes of var. *pseudoglaucophylla* are referred to var. *senegal*, two are hesitantly and provisionally referred to var. *rostrata*, and one cannot be identified.

ACACIA STEFANINI CHIOV.

*Paoli* 844 from the Somali Republic, the type specimen of *A. stefanini* Chiov. in *Ann. Bot., Roma* 13: 395 (1915), consists of three leafless, flowering twigs. The young branchlets are greyish- to reddish-brown, subglabrous to very shortly puberulous, and the paired, stipular spines are short and distinctly hooked. The peduncles are short, up to 6 mm long, fairly densely puberulous, and the involucrel is at the base of the peduncle, or a short distance above it. The calyces are cupular and minute, up to 0,5 mm long. The corollas are 2-2,5 mm long, that is, at least four times as long as the calyces. The capsule in the bottom right-hand corner contains a small twig, flowers, and the remains of one rhachilla. This rhachilla reveals that the leaflets are in 7 pairs, ± 2 × 0,5 mm and slightly puberulous.

*Paoli* 844 is a fairly good match of *Hildebrandt* 1394, the isotype of *A. reficiens* Wawra subsp. *misera* (Vatke) Brenan in the Kew herbarium. It agrees with *Hildebrandt* 1394 in the colour and indumentum of the young branchlets, the short, hooked spines, the short, puberulous peduncles, the small, cupular calyces, and the tubular corolla which is ± 4 times as long as the calyx. Consequently, I have no hesitation in reducing *A. stefanini* to synonymy under *A. reficiens* subsp. *misera*.

*Acacia reficiens* Wawra subsp. *misera* (Vatke) Brenan in *Kew Bull.* 12: 90 (1957). Type: Somali Republic, Meid, *Hildebrandt* 1394 (B, holo.†; BM!; K!).

*A. stefanini* Chiov. in *Ann. Bot., Roma* 13: 395 (1915), *synon. nov.* Type from the Somali Republic.

Some years after describing *A. stefanini*, Chiovenda, in *Fl. Somalia* 2: 197 (1932), referred the specimens *Senni* 711 and 813 to this species and provided a description of the pods. A pod of *Senni* 813 is illustrated in Fig. 119. The pods were described as turgid and cylindrical with strongly convex valves. As the description of the pods and the illustration are at variance with the pods of typical *A. reficiens* subsp. *misera*, *Senni* 711 and 813 were borrowed on loan from Florence.

*Senni* 711 and 813, which are both flowering specimens, are referable to *A. reficiens* subsp. *misera*. However, the capsule mounted on the sheet of *Senni* 813 contains eight old pods. All of the pods have been extensively galled, which accounts for their atypical appearance and Chiovenda's description.

ACACIA UNISPINOSA (FIORI) CHIOV.

When Fiori described *A. asak* (Forsk.) Willd. var. *unispinosa* in L'Agric. Coloniale 5: 93, Fig. 67/3 (1911), he omitted to cite any specimens or to nominate a type specimen, citing merely "Nel Samhar alla stazione di Mai Atal e Uakiro (F)". Under the circumstances, all of the specimens in FI collected prior to the date of publication and determined by him as var. *unispinosa*, are regarded as syntypes.

Among the material received on loan from Florence, were three specimens collected by Fiori and determined by him as "*Acacia asak* W. var. *unispinosa* Nob.". On two of the specimens "form. *unispinosa* Nob." appears instead of var. *unispinosa*, but this is of no consequence. The three specimens concerned are *Fiori* 135b, 7 Feb. 1909, from Uakiro, Samhar region (2 sheets) and *Fiori* 135b, 30 Mar. 1909, from stazione di Mai Atal, Samhar region. Of these three syntypes I now select the specimen of *Fiori* 135b, 7 Feb. 1909, from Uakiro with flowers (and five pods plus leaflets and inflorescences in the capsule mounted on the lower right-hand corner) as the lectotype of *A. asak* var. *unispinosa*.

The branchlets are greyish to purplish-grey or greyish-brown, glabrous or sparingly pubescent on the young extremities, and armed with a solitary recurved prickle near each node. All leaves have one pinna pair, sparingly puberulous petioles up to 7 mm long, rhachillae up to 1.5 cm long, and 4–7 pairs of glabrous glaucous leaflets per pinna which are up to  $6 \times 2.5$  mm. Some of the leaflets are galled. The inflorescence axes are sparingly pubescent throughout or basally only and are up to 5 cm long. The calyces are glabrous or very sparsely puberulous. The pods are yellowish-brown, up to  $4.8 \times 1.1$  cm,  $\pm$  straight, glabrous or very sparingly pubescent, especially on the margins and near the suture, venose and longitudinally dehiscent.

Two other specimens, namely, *Baldrati* 4147, 4148, were also determined by Fiori as var. *unispinosa* but, as they were collected subsequent to the publication of var. *unispinosa*, they are of lesser interest. They are both appalling specimens and their chief interest must surely be the numerous galls on the inflorescences and leaflets. The prickles on each of the specimens are either solitary or else in threes near the nodes.

It is clear that var. *unispinosa* is specifically distinct from *A. asak*, as the latter has much larger leaves with 3–6 pinnae pairs, 6–17 pairs of leaflets per pinna and usually larger pods. Var. *unispinosa* is also specifically distinct from *A. senegal*, differing chiefly in having fewer pinnae pairs, fewer pairs of larger leaflets and smaller pods. Chiovenda, Fl. Somala 1: 169 (1929), was therefore correct in giving var. *unispinosa* specific rank.

When Chiovenda elevated var. *unispinosa* to *A. unispinosa* he referred other specimens to this taxon. Although not important as far as typification is concerned, the identity of these specimens is nevertheless of interest. *Puccioni & Stefanini* 236 [264] from Tra Tigieglo e Bur Cal, Somali Republic, which consists of a single flowering branchlet, is most probably *A. unispinosa*.

*Senni* 822, however, clearly belongs to a different taxon. The prickles are in threes near the nodes, or solitary. The leaves have a spreading indumentum, 3–4 pinnae pairs, and each pinna has up to 12 pairs of leaflets which have spreading marginal cilia. The leaflets are of two different sizes and both occur on the same twig. The smaller leaflets attain a size of  $3 \times 0.8$  mm and the larger  $5 \times 2.25$  mm. The inflorescence axes are pubescent throughout and the pods are up to  $4.7 \times 1.4$  cm, densely puberulous, and vary from rounded to acute or rostrate apically. *Senni* 822 is clearly referable to *A. senegal* and, as the specimen was collected from a small tree and some of the pod apices are rostrate, it is hesitantly and provisionally referred to var. *rostrata* Brenan.

Now that it is established that *A. unispinosa* is specifically distinct from *A. asak* and from *A. senegal*, it remains to discuss its relationship to *A. oliveri* Vatke. *A. oliveri* Vatke in Oest. Bot. Zeit. 30: 274 (1880), was based on *Hildebrandt* 729c from the Danakil in Ethiopia. Despite repeated attempts I have not succeeded in tracing a type specimen. However, the description of *A. oliveri* is fairly detailed and agrees well with the material of *A. unispinosa* except for one important discrepancy, namely, the pods of *A. oliveri* were described as "legumen adultum 1,2 dm longum, ad 3 cm latum". The pods of *A. unispinosa* are much smaller and only attain a size of  $\pm 4.8 \times 1.1$  cm.

There is, however, some significant evidence which suggests that the pod described by Vatke did not in fact belong to the specimen of *Hildebrandt* 729c. This evidence is in the form of a sketch in the British Museum of the Berlin specimen of *Hildebrandt* 729c, drawn during E. G. Baker's visit to the Berlin Herbarium in 1926. The life-size drawing, which consists of a vegetative shoot, one inflorescence and three pods, carries the comment "pods 2–3-seeded, flat". The pods are up to 3.5 cm long and 1.1 cm wide and these dimensions are in keeping with the pods of *A. unispinosa*. On the strength of the drawing of the Berlin specimen of *Hildebrandt* 729c in the British Museum, it seems reasonable to assume that the adult pod described by Vatke did not in fact belong to *Hildebrandt* 729c and that it inadvertently came from some other source.

Vatke recorded the colloquial name of *A. oliveri* as "Tikible". On *Bally* 7044 (a fairly good match of *Fiori* 135b, the lectotype of *A. asak* var. *unispinosa*) in the Kew Herbarium, from 15 miles south of Massawa in Ethiopia, the colloquial name is recorded as "Tikkiville". Although spelt somewhat differently, the two names are phonetically similar and the differences in spelling could perhaps be partially explained by the lapse of some seventy years between the time when *Hildebrandt* 729c and *Bally* 7044 were collected.

As the material at present referred to *A. unispinosa* matches the drawing of the Berlin specimen of *Hildebrandt* 729c in the British Museum, agrees with Vatke's description of *A. oliveri* (with the exception of the mature pod), and has a similar colloquial name to the one recorded by Vatke, I am reasonably satisfied that *A. unispinosa* and *A. oliveri* are one and the same taxon. *A. oliveri*, being the earlier name, must be adopted for this taxon and *A. unispinosa* is now reduced to synonymy.

*Acacia oliveri* Vatke in Oest. Bot. Zeit. 30: 274 (1880) excl. descr. leguminis. Type: Ethiopia, the Danakil, *Hildebrandt* 729c (BM, drawing!).

*A. unispinosa* (Fiori) Chiov., Fl. Somala 1: 169 (1929), *syn. nov.* Type: Ethiopia, Samhar, Uakiro, 7 Feb. 1909, *Fiori* 135b (FI, lecto!).