NEW AND INTERESTING TAXA FROM NE TROPICAL AFRICA

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ABSTRACT. Three new species are described from the Somalia region: *Brassica somalensis* Hedge & Miller and *Matthiola puntensis* Hedge & Miller (Cruciferae); *Teucrium spicastrum* Hedge & Miller (Labiatae). The monotypic *Drusa* (Umbelliferae), previously known only from Macaronesia and Morocco, is recorded from Somalia. A general survey is given of the E African genus *Erythrochlamys* (Labiatae) and its four (or five) species, together with a discussion of the status of the allied *Hyperaspis*; the correct identity of the species called *Scutellaria* "*peregrina*" in E Africa is considered.

The new and interesting taxa dealt with in this paper are mostly from Somalia and the adjacent Affars and Issas (formerly French Somaliland; currently also known as T.F.A.I.). Most of the records stem from the recent collecting activities in these two countries of Mr John J. Lavranos. His specimens from the years 1969–1974, of which a fairly complete set is at Edinburgh, clearly show the great interest of the area, the Horn of Africa, and also how relatively poorly known it is floristically. In working up the species discussed here, relevant material at Kew (K), the British Museum (BM), Zürich (Z), Berlin (B) and Florence (FI) was also examined; these specimens are cited along with the Lavranos gatherings.

We are grateful to Mr Lavranos for providing habitat and climatic information for several of the species; and to Gillian Meadows for the illustrations.

CRUCIFERAE

Brassica somalensis Hedge & Miller, **sp. nov.** Fig. 1.

Species suffruticosa, foliis oblongo-linearibus integris insignis nulli affinis.

Herba perennis, suffruticosa, glabra vel tenuiter strigosa, inferne squarroso-ramosa, cortice cinereo. *Caules* erecti, ad 60 cm, simplices, herbacei, teretiusculi, tenuiter striati, glabri vel pilis brevibus retrorsis praediti, inferne ± copiose foliati, demum in racemum strictum abeuntes. *Folia* omnia anguste oblongo-linearia, (10–)20–55(–60) × (2–)5–12(–15) mm, basi cuneata anguste attenuata, glabra vel margine pilis brevibus antrorsis, rigide coriacea (in sicco), raro sinuato-dentata, apice obtusa, nervatura indistincte reticulato-pennata; petiolus subnullus. *Racemi* sub anthesi ± corymbosi, densiusculi, in fructu valde elongati. *Pedicelli* erecto-patentes 5–11 mm longi, in fructu elongati ad 14(–20) mm, validi. *Sepala* linear-elliptica, (4–)5 × (0·8–)1·2–1·6 mm, glabra vel pilis duobus antrorsis praedita, erecto-patentia, apice cucullata; sepala interiora exterioribus parum latiora, basi subsaccata. *Petala* pallide flava (in sicco), c. 8–10 mm; lamina obovata, vel raro anguste elliptica c. 6 × 3·5–4·5 mm, in unguem perangustum 3–4 mm attenuata. *Stamina* subaequalia; filamenta interiora 3·5–4·8 mm; filamenta exteriora 4–6 mm. *Antherae* oblongae c. 1 mm, demum recurvatae.

Glandulae medianae oblongae, lateralibus semi-lunatis, minoribus. *Ovarium* c. 16-ovulatum, non stipitatum. *Stigma* capitatum vix bilobatum. *Siliquae* (10–)18–35 × 1–1·5 mm, erectae, parum torulosae, in rostrum aspermum (1–)2–2·5 mm longum attenuatae; valvae submembranaceae inter semina vix constrictae, nervo mediano prominenti apice retusae. *Semina* ovoidea, 1–1·25 × 0·7–0·8 mm, leviter mucosa, sublaevia brunneo-flavescentia.

SOMALIA (north): Erigavo, on gypsaceous soil, 1700 m, 4 xii 1971, *Lavranos* 10035 (holo. E); Erigavo, open country shrub, c. 50 cm, fls yellow, 1524 m, 6 ix 1956, *Simmons* 1048 (K!); N of Erigavo, slopes of isolated gypseous hillock, thinnish plant to 60 cm, fls yellow, 2178 m, 27 ix 1960, *Hemming* 1944 (K!); 3 miles west of Erigavo, overgrazed gypseous plains, straggly plant to 50 cm, thin, yellow-flowered, 1767 m, 29 ix 1960, *Hemming* 1968, (K!); between Erigavo and Mait, bare patches in grassland, on soil, 1889 m, 31 vii 1957, *Newbould* 781 (K!); Erigavo, 1676 m, 1 x 41, *Peck* 202 (K!); Erigavo and Dayaha, woody shrublet 30 cm, in plains, fls bright yellow, 1828 m, 21 x 1956, *Bally, B.* 11189, (K!); Erigavo-Medishe road, mile 8, in stone-strewn, gypsaceous plains, with *Aloë* etc, shrublet 30 cm, fls bright lemon yellow, 1432 m, 5 xi 1956, *Bally* 10337 (K!); Erigavo at Maledera, shrublet 60 cm, with golden fls, 24 i 1945, *Glover & Gilliland* 646 (BM!); Ragunda, one of the few plants growing on the gravel plains flanking Raguda, fls white, 23 ii 1945, *Glover & Gilliland* 675 (K!).

Somalia (north east): Al Meskat massif, Assah, limestone scree and gravel, windswept ground nr summit of col, fls lemon yellow, 49° 49′ E 11° 20′ N, 6 ix 1957, *Newbould* 1070 (K!).

[The rainfall at Erigavo is c. 432 mm; at the top of the Mait escarpment c. 635 mm with a minimum of 254 mm and a maximum of 1270 mm.]

This new species occupies an isolated position in the genus, of which it certainly is a member, and there appears to be no other African, W Asiatic or Mediterranean species with which it can satisfactorily be compared or contrasted. *B. somalensis* is characterised by the suffruticose habit, the foliage congested at the bases of the racemes, the narrow oblong-linear entire leaves and the ovoid slightly mucilaginous seeds. Amongst the gatherings that are cited above, the indumentum varies from almost completely absent, as in the holotype, to a distinct covering of short retrorse hairs on the stem with antrorse hairs on the leaf margins and petioles (occasionally on the leaf nerves); there seems, however, no reason for giving any formal recognition to the two forms since both completely intergrade. This range of indumentum appears not to be common in *Brassica* but occurs in some species of the related genus *Erucastrum*, such as *E. arabicum* Fisch. & Mey.

Suffruticose or truly shrubby species of *Brassica* are not frequent in the genus and the few that are share few other common characteristics with the new species. For example, *B. balearica* Pers., endemic to Mallorca, and the Algerian *B. spinescens* Pomel (syn. *B. scopulorum* Coss. & Dur.) are of similar habit but have lyrate or pinnatifid leaves and usually the fruit has a seeded beak; geographically, both are far separated from the Somalia plant.

Sinapodendron is a small Macaronesian genus related to *Brassica* which contains species similar in general facies and habit to *B. somalensis*, but its characteristic narrow elliptic petals and almost terete siliquae readily

FIG. 1. *Brassica somalensis*: a, habit × $\frac{2}{3}$; b, sepal × 5; c, petal × 3; d, stamen × 4; e, ovary × 5; f, fruit with valve removed × 3; g, T.S. of fruit; h, seed and i, embryo × 15.

distinguish it from the new species. Although there are some good reasons for maintaining generic independence for *Sinapodendron*, it certainly is closely related to *Brassica* on the available morphological evidence. There also is the possibility that *Sinapodendron* and our new species may have arisen from common ancestors and, in any future revision of the Macaronesian genus, it would be of interest to take consideration of the Somalian plant.

The presence of a distinct new *Brassica* from Somalia is of great interest phytogeographically: of all the c. 40 species in the genus, there are no other truly wild species (i.e. not cultivated or associated with cultivation) in east Africa, tropical Africa or southern Africa. By far the main concentration of species in the genus is in NW Africa and SW Europe where about 30 species are present.

Matthiola puntensis Hedge & Miller, **sp. nov.**

Affinis *M. erlangerandae* Engl. sed foliis simplicibus sinuato-dentatis, petalis distincte unguiculatis et pedicellis brevioribus distinguitur. Differt a *M. chenopodiifolia* Fisch. & Mey. omnibus partibus tenuiter pilosis pilis gracilioribus, foliis angustioribus, petalis minoribus distincte unguiculatis. Differt a *M. longipetala* DC. siliquis non appendiculatis, petalis minoribus malvinis unguiculatis.

Annua, pilis tenuibus eglandulosis, simplicibus vel furcatis et glandulosis tuberculatis sparsim obsita. *Caules* 10–20 cm alti, simplices vel prope basin in ramos erectos divisi. *Folia basalia* et caulina infima breviter petiolata, textura tenui; lamina (10–)15–27 × (2–)3–7 mm, anguste elliptica, margine sinuato-dentata, flavescens in sicco, apice acuta vel obtusa, basi in petiolum sensim attenuata, utrinque parce pilosa. *Folia superiora* decrescentia, brevius petiolata usque subsessilia. *Racemi* ab initio laxi, aphylli, 3–10-flori. *Pedicelli* erecto-patentes, 4–5 mm, fructiferi vix longiores paulo incrassati. *Calyx* 7–8 mm longus, bisaccatus, sepalis erectis, tenuiter membranaceis anguste hyalino-marginatis, pilis brevibus furcatis vel ramosis obsitis. *Petala* in sicco malvina, quam sepala 2-plo longiora; lamina 9·5 × 3·5 mm, oblonga apice rotundata in unguem 9·5 × 0·5 mm abrupte angustata. *Filamenta staminum* longiorum breviter dentata, 6·5 mm; filamenta staminum breviorum 3·5 mm. *Siliquae* submaturae 37–44 × c. 2 mm, lineares, compressae, erecto-patentes, subrectae, leviter torulosae, valvis nervo mediano vix elevato, pilis brevibus ramosis et glandulis tuberculatis. *Stigma* clavatum. *Semina* 1·5 × 1·9 mm, uniseriata, c. 40, late elliptica, applanata, scarioso-marginata. *Fl.* Apr.

AFARS AND ISSAS [T.F.A.I.]: [Goda] above Bankoulé]Bankouwâle), annual, fls mauve, c. 1000 m, 10 iv 1974, *Lavranos* 11468 (holo. E). [On heavily overgrazed slope with *Acacia etbaica* Schweinf., *A. mellifera* (Vahl) Benth., *Ruttya fruticosa* Lindau etc. Rainfall about 300 mm, mainly in Nov.-Mar.]

Matthiola puntensis is most closely related to *M. erlangerana* Engl. which is known only from the type gathering in southern Ethiopia (Boran, Karro Gudda, 400–500 m, *Ellenbeck* 2169, holo. B!). It resembles *M. erlangerana* in overall facies and indumentum but can be distinguished by its leaves which are sinuate-dentate not irregularly pinnatifid, by its clearly clawed petals and its shorter, thicker fruiting pedicels (c. 16 mm in *M. erlangerana*).

On account of its general facies and annual habit, *M. puntensis* is also allied to *M. chenopodiifolia* Fisch. & Mey. and *M. longipetala* DC. It is readily

distinguished from both by the form of the petals which are clearly differentiated into a blade and claw; from the former by the less dense indumentum and from the latter by the entire, not prominently horned, fruit apex. On the basis of the single gathering of the new species its morphological links with these two species do not seem to be close. Likewise their distributions are significantly separate; *M. chenopodiifolia* from S Iran to C Asia and *M. longipetala* from the E Mediterranean and SW Asia south to Egypt.

Five species of *Matthiola* have previously been recorded from NE tropical Africa: *M. elliptica* DC., *M. dimolehensis* Bak. f., *M. erlangerana* Engl., *M. rivae* Engl. and *M. smithii* Bak. f. Type or authenticated material of all species, with the exception of *M. smithii*, has been studied. The following key serves to separate them, from one another and from the new species.

1. Fruit short, < c. 17 mm, few-seeded, apex bicornute [southwest Somalia] . . . . . *M. smithii*
\+ Fruit long, > 17 mm; if shorter and few-seeded then never bicornute 2
2. Plant shrubby with large prominent flowers, petals > c. 25 mm long, the blade broadly obovate narrowing gradually into the long slender claw; siliqua valves with distinct septa separating the seeds 3
\+ Plant herbaceous; petals < 20 mm, blade narrower—at most elliptic; siliqua valves without septa 4
3. Fruit c. 40–50 mm long, stellate-tomentose, hairs c. 0.5 mm long [Sudan, Ethiopia, T.F.A.I. and Somalia] . . . *M. elliptica*
\+ Fruit c. 9 mm long, stiffly hirsute, hairs branched with swollen bases 1·5–2 mm long [northern Somalia] . . *M. dimolehensis*
4. Leaves sinuate-dentate; petals abruptly clawed; fruiting pedicels 4–5 mm [T.F.A.I.] . . . . . *M. puntensis*
\+ Leaves pinnatifid; petals not abruptly clawed; fruiting pedicels 14–16 mm 5
5. Fruit 7 mm, two-seeded; petal blade lanceolate, 2 mm broad [southern Ethiopia] . . . . . *M. rivae*
\+ Fruit from 25 mm (immature); petal blade elliptic, 4 mm broad [southern Ethiopia] . . . . . *M. erlangerana*

M. elliptica and *M. dimolehensis* are closely related sub-shrubs with strikingly large flowers. Their relationship with the rest of the genus is not at all clear. Apart from the points mentioned in the key they are characterized by prominent semi-cylindrical lateral nectary glands paired around the filaments of the shorter stamens. *M. rivae* is undoubtedly close to *M. puntensis* and *M. erlangerana* but is clearly distinguished by its short fruit with 2-seeded loculi. The type of *M. smithii* has not been traced although a single sheet (at BM!) with *M. smithii* pencilled on the bottom is clearly referable to *Diceratella*. From the original description *M. smithii* certainly appears to have the characters of *Diceratella* and not *Matthiola*.

Clearly a revision of all these species would be a rewarding investigation. They lie at the southernmost end of the N hemisphere distribution of the genus (cf. Hedge in Vaughan et al., The Biology and Chemistry of the Cruciferae p. 30, 1976) and clarifying their taxonomy and inter-relationships would

be essential in any proper understanding of the evolution and development of the genus. It is interesting in this respect to remark that the sole southern African member of the genus, *M. torulosa* (Thunb.) DC., appears to be more closely related to Mediterranean species [such as *M. fruticulosa* (L.) Maire] than to any of the species from easternmost Africa discussed above.

A palynological feature of *M. puntensis* is worth mentioning even though its importance cannot be assessed because of the absence of comparative information in the genus as a whole. In the new species the pollen is tetracolpate (c. 25 μm, subsphaeroidal, reticulate) whereas in previously studied species of *Matthiola* pollen is tricolpate or inaperturate.

The ancient Land of Punt is commemorated in the specific epithet of the new species.

UMBELLIFERAE

Drusa glandulosa (Poir.) Bornm. [det. J. M. Lamond]
Somalia: W of Galgallo, on steep cool winter-moist N-facing slopes, in humus in shady places, 40–60 cm, 10 i 1973, *Lavranos & Horwood* 10226; Galgallo, 64 km SSW of Basaso at E end of Al Mado range on limestone plateau, 10 i 1973, *Bally & Melville* 15777 (K!) = *L. & H.* 10226. [With *Anemone somaliensis* Hepper, *Adiantum balfouri* Baker, *Arisaema flavum* Schott etc. in *Buxus hildebrandtii* Baill. scrub. Rainfall probably c. 254 mm; heavy wet fogs frequent.]

The discovery of the monotypic *Drusa* in Somalia is a most interesting, and massive, extension of its known range. Previously, it was known only from the Canary Islands and the coast of Morocco where it may be introduced and not native.

Examples of other genera, though not monotypic, with similar disjunct distributions to that now known for *Drusa* are: *Canarina* (Campanulaceae) with one species in the Canary Islands and two in the mountains of E Africa (cf. Hedberg in Svensk Bot. Tidskr. 55:17–62, 1961); *Aeonium* (Crassulaceae) with c. 30 species in Macaronesia and one in E Africa. *Euphorbia balsamifera* Ait. provides another example, as does *Campylanthus* (Scrophulariaceae)—see Moggi in *Webbia* 17:578–590 (1963).

The habitat of *Drusa* in the Canary Islands is generally mesophytic and, as the Lavranos notes indicate, the Somalia station is rather similar. Although it does seem that *Drusa* is native in Somalia, the possibility that it may accidentally have been introduced cannot entirely be excluded. The area where it was found, however, is very isolated and remote from any cultivation, and it is perhaps significant that it has not been found in equally suitable places more exposed to human influence.

A discussion of the affinities of *Drusa* is given by Mathias & Constance in *Univ. Calif. Publ. Bot.* 38:55–58, 1965.

LABIATAE

Erythrochlamys Gürke in Bot. Jahrb. 19:222 (1894).

Erythrochlamys was described as a monotypic genus based on a gathering, made in present-day Kenya, of *E. spectabile*. Since then, four other species

have been described, all from the Ethiopia/Somalia region. The type-species is now known to be a fairly widespread and not uncommon shrub in parts of Kenya, Ethiopia and Somalia; the other species are more local in distribution and only known from relatively few or, in the case of *E. kelleri* Briq., single collections. All have the remarkable calyces that are the hallmark of the genus: a large single upper calyx lobe, with decurrent margins, which increases in size after anthesis and completely envelops the four small lobes of the lower lip. All have synthecous anthers. There are, however, conspicuous differences between the species in size, facies, indumentum and leaf dimensions.

At first examination, *Erythrochlamys* appears to be a very distinct and isolated genus. But there are good reasons for considering it to be closely related to the widespread large tropical genus *Ocimum*; or rather, to be more precise, some species of *Erythrochlamys* are closely related to some species of *Ocimum*. As currently constituted the two genera share (with some few exceptions) the following features: calyx having upper lobe with decurrent margins; calyx deflexed in fruit; corolla with a short tube, a 4-lobed upper and 1-lobed lower lip; stamens declinate, often exserted, the posterior pair appendiculate, or not, with synthecous anthers. In fact, the only difference between the descriptions of the two genera is that in *Ocimum* the upper lobe of the calyx does not envelop the 4 lobes of the lower lip whereas in *Erythrochlamys* it does. In the great majority of cases, however, one would never mistake a species of *Ocimum* for an *Erythrochlamys*. But there is at least one exception. *Ocimum tomentosum* Oliv., from Somalia, is in all its features—facies, indumentum, leaf form and corolla—very similar to *Erythrochlamys cufodontii* Lanza [and its close relative *E. nummularia* (S. Moore) Hedge] and only differs in the small upper lobe of the calyx, and, apparently, a somewhat different form of the corolla lower lip which is shorter and broader. They are so alike that it is difficult to believe that they are not related; comparison of fig. 2D below and t. 1529 in Hook., *Ic. Plant.* 16, 1886 emphasises this. However, until a general revision of the two genera, considered together, is at hand it is premature to even consider transferring *O. tomentosum* to *Erythrochlamys* or *E. cufodontii* to *Ocimum*. They may in fact be correctly placed in independent genera. Balanced against the similarity of these two species is the fact that there seem to be no obvious connections between the other species of *Erythrochlamys*, viz. *E. spectabilis* and the completely dissimilar *E. leucosphaera*, and other African species of *Ocimum*.

The only other genus that comes into the question of the affinities of *Erythrochlamys* is *Hyperaspis* Briq. This was described as a monotypic genus (Bull. Herb. Boiss. ser 2,3:975, 1903) based on *Keller* 228 and 235 from Abdallah in Ethiopia. Briquet related it to *Ocimum* and *Erythrochlamys* saying that the extraordinary development of the calyx lip which is in the form of a shield recalls *Erythrochlamys* but "ici, le labre, au lieu d'envelopper le calice, se replie au contraire en dehors à la maturité. Il en résulte que, après l'anthèse, les verticillastres sont complètement entourés par les labres scutiformes des calices." From these comments and the original latin description of the genus and species it is difficult to visualise just how *Hyperaspis* is supposed to differ from *Erythrochlamys*. This difficulty is not lessened by study of the original gatherings. The type material consists of two undated and imprecisely located specimens from the Ogaden region; they are almost identical (as if from the same plant) and neither are ideal. The unusually small floral

dimensions that Briquet gave in the original description suggested that the plants might be atypical, either because they were cleistogamous or sex-forms. Examination of the type material (Z!) confirmed this. The corollas are c. 1·5 mm, the anthers sessile c. 1 mm, the styles are c. 0·5–1 mm, and the flowers are apparently closed. Though it is always difficult to be sure from herbarium specimens, the flowers appear to be cleistogamous. Certainly, the anthers bear much apparently fertile pollen but the gynoecial parts are very small and reduced and there are no clear signs that mature nutlets would have developed. Despite Briquet's remarks, quoted above, about the calyx structure, there seems to be no obvious or important calyx difference between *Hyperaspis* and *Erythrochlamys*; what differences there are, are linked with the very small size of the flowers. In fact, all the evidence throws doubt on the validity of the genus. However, although the available *Hyperaspis kelleri* material (it is only known from the type) appears not to be significantly different from *Erythrochlamys*, it is not possible because of the abnormal or atypical corollas to be confident either about reducing it to a synonym of an existing *Erythrochlamys* species or giving it independent specific rank in that genus. It is quite likely that *H. kelleri* is the same as either *E. nummularia* or *E. cufodontii* (the more probable alternative) but better material and field observations are essential before an incontrovertible decision can be made. Nomenclatural change will probably be needed in the future. If *H. kelleri* is transferred to *Erythrochlamys* as an independent species, it will require a new specific epithet because of the existing *E. kelleri* Briq. (regarded below as synonymous with *E. spectabilis*). If, on the other hand, it is conspecific with *E. cufodontii* or *E. nummularia* it will merely go into synonomy as the combination cannot be made.

A second species of *Hyperaspis*, *H. nummularia* S. Moore was described in 1909 from Somalia. It is undoubtedly the same as the later *E. nivea* Chiov., over which it has precedence; the new combination is made below.

For the time being *Hyperaspis* should therefore be considered as a very doubtful genus almost certainly synonymous with *Erythrochlamys*.

Examination of the type specimens and the now not inadequate material of *Erythrochlamys* has enabled a fuller generic description and a key to the species to be given. Five species are recognized here, with *E. kelleri* reduced to synonomy. As the key indicates, and as hinted above, *Erythrochlamys* consists of three quite distinct facets: *E. spectabilis*; *E. leucosphaera*; and the closely related *E. cufodontii* and *E. nummularia*. A fourth facet may be represented by the possible new species discussed below.

Erythrochlamys Gürke

Suffruticose herbs or shrubs with opposite, simple, entire, or serrate leaves. Indumentum of stellate, dendroid or simple hairs and sessile glands, variable in combination and density. Verticils 2–6-fld, distant or approximating. Calyx 5-lobed or -toothed; upper lobe broad undivided, much exceeding the lower lip, margins decurrent, enveloping the rest of the calyx; lower lip 4-toothed, small; calyx expanding and deflexed in fruit. Corolla bilabiate or scarcely so; upper of 4 subequal lobes, lower entire oblong, longer than or subequal to upper; or corolla lobes subequal. Stamens 4,

didynamous, exserted from corolla tube or not; posterior stamens appendiculate or not, villose or pilose at base; anterior stamens entire, glabrous; anthers synthecous. Style bilobed at apex. Nutlets glabrous or pilose, broadly ovate-oblong or narrowly oblong.

1. Indumentum of at least some dendroid or stellate hairs . . 2
\+ Indumentum entirely of simple hairs . . . 5. *E. sp. nov.*
2. Verticils uniformly 2-flowered; leaves obovate, crenate above; pedicels 6–11 mm; calyces surrounded by a dense indumentum of long white hairs forming a distinct sphere; stamens included; corolla scarcely bilabiate . . . . 2. *E. leucosphaera*
\+ Verticils 2–6-flowered; leaves oblong-lanceolate elliptic or suborbicular, entire to serrate; pedicels 2–6 mm; calyx indumentum not as above; stamens exserted; corolla clearly bilabiate . . 3
3. Leaves scabridulous with simple hairs above; upper calyx lobe almost free from lower; stamens not appendiculate . 1. *E. spectabilis*
\+ Leaves above, and below, with a dense indumentum of stellate and dendroid hairs; upper calyx lobe firmly attached to lower; posterior stamens appendiculate 4
4. Calyx indumentum of mostly adpressed stellate hairs; leaves up to 2·5 × 2 cm; nutlets glabrous . . . 3. *E. nummularia*
\+ Calyx indumentum of spreading dendroid hairs with many short lateral branches; leaves up to 5 × 2·6–4 cm; nutlets with branched hairs . . . . . 4. *E. cufodontii*

1. E. spectabilis Gürke in Bot. Jahrb. 19:222 (1894). Fig. 2A.
Syn.: *E. kelleri* Briq. in Bull. Herb. Boiss. ser. 2,3:978 (1903). Syn. nov. Type. Ethiopia, Abdallah, *Keller* 233 (holo. Z!).
Ic.: Engler, Pflanzenwelt Ost-Afrikas Theil C: t. 43 (1895).
Type. [Kenya, SE of Nairobi] Massaisteppe, zwischen Ulu und Ukamba, *Fischer* 500.
Kenya, Ethiopia and Somalia.

A widespread, and in places, common shrub up to 10–15 ft (4·5 m) high. The corollas are whitish to pinkish mauve and the calyx purple with both lips in fruit reflexed; the posterior stamens are pilose at the base but not appendiculate. The solitary and inadequate specimen of *E. kelleri* is from a rather juvenile shoot or plant but seems in no way to differ from *E. spectabilis*.

2. E. leucosphaera Briq. in Bull. Herb. Boiss. ser. 2,3:976 (1903). Fig. 2B.
Type. [Ethiopia] Somal, Warandab (Expedition Ruspoli-Keller), *Keller* 237 (holo. Z!).
Ethiopia, S Somalia.

A remarkable looking member of the genus on account of the thick white globose indumentum on the calyces and the long spreading pedicels. It is a small aromatic bush up to c. 90 cm, often less, with white corollas and pink calyces. The corollas on the type specimen are c. 7 mm but the average length of the Ethiopian specimens is c. 13 mm. On fruiting calyces, which in common with most species of the genus are reddish pink, the indumentum is generally

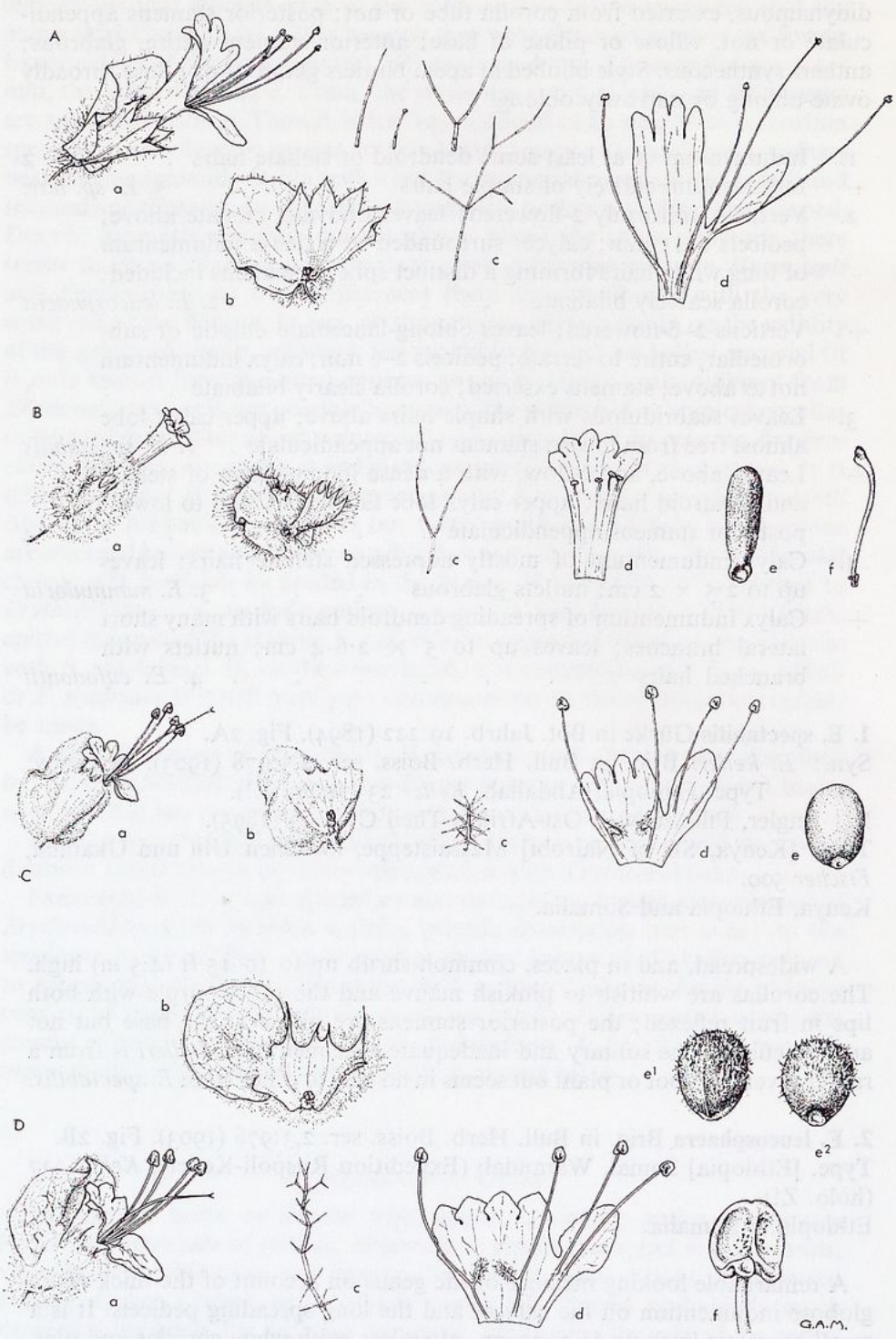

FIG. 2. *Erythrochlamys* species: A, *E. spectabilis*; B, *E. leucosphaera*; C, *E. nummularia*; D, *E. cufodontii*. a, flower; b, calyx opened out; c, hairs on calyx; d, corolla opened out; e, nutlet. Bf, style; De¹, e², outer and inner faces of nutlet; Df, anther; a, b and d × 1½.

much less dense than before anthesis. Hemming (Proc. Linn. Soc. Lond. 177:224, 1966) records it as a common species in low open woodland in southern Somalia (Haud).

3. E. nummularia (S. Moore) Hedge, **comb. nov.** Fig. 2C.
Syn.: *Hyperaspis nummularia* S. Moore in Journ. Bot. 47:288 (1909).
Erythrochlamys niveus Chiov. in Chiovenda, Flora Somalia 275 (1929).
Type. Somalia sett., Costa dei Migiurtini, fra Tudi e Bender Beila, 3 vi 1924, *Puccioni & Stefanini* 684 (750) (holo. FI!).
Type. [Somalia] Somaliland, Ahl mountains, *Hildebrandt* 853 (BM!).
Somalia. Gorgorre, E of Isscushuban [Scusciuban], 4 xii 1969, *Lavranos* 7275.
NE Somalia.

The type specimen is from a small-leaved (c. 5–10 × 5–10 mm) fruiting plant without corollas. The Lavranos gathering is considerably larger in all its parts and probably gives a better impression of the species than does the type—its dimensions are: leaves up to 2·5 × 2 cm; flowering calyx c. 10 mm; corolla c. 9 mm; staminal filaments c. 10 and 7 mm. The most characteristic feature of the species seems to be the finely stellate adpressed indumentum on the calyces. Only a small number of specimens have been seen which can certainly be ascribed to it. As far as its distribution is known, *E. nummularia* appears to be restricted to the NE of Somalia; it may intergrade with the next species but field observations are needed to determine if there are morphological (and geographical) discontinuities.

4. E. cufodontii Lanza in Miss. Biol. Borana. Recc. Bot., Angiosp.-Gym. 100: 183, fig. 52 (1939). Fig. 2D.
Type. [Ethiopia] Borana, Malca Guba sul Daua Parma, risalendo la riva destra, frutice con fiori bianchi, 18 iii 1937, *Cufodontis* 112 (holo. FI!)
Somalia. Bulo-Burti distr., 4 km N of Bulo-Burti, 300 m, 23 xi 1971. *Lavranos* 8977.
Ethiopia, Somalia.

Similar in general appearance to *E. nummularia* but generally with a much thinner stellate indumentum on the mature leaves and a thick lanate indumentum of long spreading dendroid hairs on the calyx, particularly the calyx tube and lower lobes. From the available field-notes it is a small suffruticose whitish-flowered herb c. 50 cm high. As indicated above it can be confused with *Ocimum tomentosum*. See also above for its possible links with *Hyperaspis kelleri* Briq.

5. E. sp. nov.?
[Ethiopia] Ogaden. Between Walwal and Bulleh Sirrauw, caespitose bushy plant, c. 30 cm, very aromatic, in open glade, 26 xi 1944, *Glover & Gilliland* 318 (BM!).

This appears to be a new species on account of the indumentum which consists only of simple hairs and the small fruiting calyces with a sparse indumentum. No flowers are present on the specimen and only a few leaf

fragments. A formal description is therefore not given in the hope that more complete material will become available. The fruiting calyx dimensions are: upper lip c. 8·2 × 7·8 mm; lower lobes c. 1·8 mm. The inside of the calyx tube, particularly the throat, is fairly densely covered with long, white, simple hairs. The leaves appear to be small c. 8 × 8 mm; the verticils are c. 4-flowered, 10–15 in number, distant below approximating above. The nutlets, of which only one of the four appears to reach maturity, are broad obovate, attenuate at the base.

Ocimum tomentosum Oliv.
Type. Somalia: Haki, *James & Thrupp* (holo. K!).
Somalia. Mait road, c. 1000 m, 3 xii 1971, *Lavranos* 9091.

As discussed under *Erythrochlamys* above there are considerable similarities between *E. cufodontii* and this interesting shrub. Apart from the calyx difference already mentioned, the *Ocimum* seems to have violet to greenish flowers with purple staminal filaments whereas the *Erythrochlamys* has whitish flowers; more field observations are needed to confirm if this holds true.

Scutellaria sp. nov. ?
Syn.: "*S. peregrina* L." auctt. afr. non "*S. peregrina* L." auctt. europ.
S. africana Hochst.—*nom. nud.*
Afars and Issas. Goda mountains, head of gorge below Governor's lodge, Airolaf, c. 1400 m, on rock-faces, 9 iv 1974, *Lavranos* 11449. [In relict Juniper forest, growing on shady rock-faces in a deep valley which receives the full effect of the moist NE (winter) monsoon winds; with *Campanula*, *Aeonium* cf. *leucoblepharum* Webb, *Lavandula* sp., *Polygala abyssinica* (R.Br.) Fres.; *Trema guineensis* (Schum.) Ficalho and *Dombeya* sp. grow nearby. Rainfall is probably c. 400 mm, mainly Oct.-Apr.]

This belongs to the species that has generally been called in herbaria and in literature "*S. peregrina* L.". However, the epithet is recognized as a "*nomen ambig.*" and the taxon to which it was most generally referred, now called *S. rubicundum* Hornem., is considered to be restricted to Italy and the Balkans. Clearly, therefore, the name "*S. peregrina*" cannot be applied to our African plant which is known from several gatherings in Ethiopia, Sudan and the Somalia region. It is, without doubt, quite closely allied in facies and indumentum to the Mediterranean species which comprise "sect. *Peregrinae*". Rechinger [Bot. Arch. (Berlin) 43:1–70, 1941] revised the complex, which contains over 20 closely related species in the Mediterranean and SW Asiatic region, but nobody has yet attempted to fit the E African plant into the overall classification. It appears to differ from all the northern species in small, but in this group, significant features: larger floral leaves; longer inflorescence internodes; in the relative proportions and density of the short glandular and long eglandular hairs and glands on the calyx. Surprisingly, there appear to be no validly published names which can be applied to the E African plant. *S. arabica* Jaub. & Spach from the Yemen is geographically

close to the E African species, but, although in the same complex, it appears from the few specimens that have been seen to be morphologically distinct.

The African plant is probably a new species but it would be unwise to describe it formally until all the relevant material in the group has been studied and collated with the taxonomic treatments of Europe, NW Africa and W Asia. Phytogeographically, the presence of this taxon in E Africa is of considerable interest in that there is a large disjunction between it and its near relatives in the Mediterranean region. Many of the latter species grow in mesophytic habitats and although there is little general information about the habitats of the E African plant it too appears to be a mesophyte. As noted above, in T.F.A.I. it grows in Juniper forest.

Teucrium spicastrum Hedge & Miller, **sp. nov.** Fig. 3.

Species insignis nulli affinis.

Herba perennis, basi tenuiter lignescens, laxe caespitosa, molliter cano-tomentosa. *Caules floriferi* erecti, 15–25 cm alti, ramis e basi simplicibus vel ramosis, inferne teretiusculi, in regione inflorescentiae quadrangulares, pilis patentibus eglandulosis, pilis glandulosis et glandulis sessilibus paucis dense obtecti. *Folia caulina* 15–25 × c. 4 mm, anguste oblonga, integra vel crenulata apicem versus, subrevoluta, basi attenuata, vix petiolata, nervis supra impressis subtus prominentibus ut caule pilis albis patentibus eglandulosis, pilis glandulosis et glandulis sessilibus, cano-tomentosa. *Caules steriles* abbreviati; folia lineari-oblonga, parva, congesta. *Verticillastra* multiflora in spicastrum 4–5 × 1·7 cm, oblongum erectum, cylindricum, densum conferta; inflorescentia simplex vel aliquot ramosa, dense cano-tomentosa. *Bracteae* ovato-lanceolatae vel lanceolatae, 7–10 × 1·5 mm, calycem floriferum longiores. *Pedicelli* c. 1 mm longi. *Calyx* c. 6 mm longus, tubulosus, basi irregulariter subsaccatus, non vel vix bilabiatus; dentes calycis aequales 0·7–1·0 mm, ovato-triangulares, apice acuti. *Corolla* albo-cremea vel subrosea (?), c. 11 mm, breviter glanduloso-pilosa; tubus intus parum pilosus; labium 5-lobatum; lobus medianus rotundato-dilatatus ± deflexus, c. 3 × 3 mm, laterales oblongae vel ovatae. *Stamina* 8–10 mm longa; antherae 0·7 mm. *Stylus* 10 mm, bifidus, lobis aequalibus 0·6 mm. *Nuculae* ignotae. *Fl.* Feb.-Apr.

AFARS AND ISSAS [T.F.A.I.]: [Goda] above Bankoulé (Bankouwâle), c. 1000 m, 10 iv 1974, *Lavranos* 11470 (holo. E) [for habitat details see *Matthiola puntensis* above]; above Randa on rocky E-facing slope, c. 1000 m, 2 ii 1973, *Lavranos* 10533 (E); Randa—La Daz road, 900 m, low-growing, stony sandy hillside, *C. N. Curle* 50 (K!).

The new species is recognized by the dense oblong-cylindrical inflorescenses and greyish white tomentose indumentum covering the whole plant. It appears to have no close allies.

Distantly related to *T. spicastrum* are two Arabian species, *T. nummulariifolium* Baker from the Dhofar mts of SE Arabia and *T. yemenense* Deflers from the Yemen. Both have short few-flowered ovate inflorescences and much smaller conspicuously crenate leaves. Several gatherings of a plant from the Sudan and the Red Sea coast have been identified (at K) as *T. nummulariifolium* but these are certainly mis-identifications. The plants are much closer

FIG. 3. *Teucrium spicastrum*: a, habit × ¾; b, calyx opened out and c, flower—both × 3.

to our species than the Arabian plant but apparently differ in their broader leaves and less elongated inflorescences.

There are numerous records of *T. polium* L., a distinct relative of our new species, from Somalia, particularly Goda (Bavazzano in Webbia 26:320, 1972). Although the problem of dealing taxonomically with the polymorphism of *T. polium* appears to be insoluble, there is a distinctive Somalia representative which may be worth formal recognition. An example of it is a Lavranos gathering (Somalia:Ga'an Libah, *L.* 7387); it is a shrub up to 3–4 ft high with terminal condensed short inflorescences, narrow entire linear leaves, and long hairs on the calyx.