

TEUCRIUM (LAMIACEAE) IN NE TROPICAL AFRICA

O. RYDING*

Teucrium (Lamiaceae) from NE tropical Africa is revised. Of the six species recognized, three new species are described and illustrated: *T. clementiae* Ryding from E Ethiopia and N Somalia, *T. somalense* Ryding from NW Somalia, and *T. poltioides* Ryding from NE and C Somalia. Maps and a key to the species are also provided.

Keywords. Djibouti, Ethiopia, *Labiatae*, new species, Somalia.

INTRODUCTION

The genus *Teucrium* is widespread in warm and temperate parts of the world and has its highest concentration of species in the Mediterranean area. An infrageneric classification of the genus was presented by Kästner (1989).

Vatke (1881) mentioned that *T. polium* L. had been collected in northern Somalia. Baker (1900) and Cufodontis (1962) mentioned two species of *Teucrium* from NE tropical Africa, *T. polium* [in sect. *Chamaedrys* Kästner subsect. *Polium* (Mill.) Kästner] and *T. scordium* L. [in sect. *Scorodonia* (Hill) Schreb. subsect. *Scordium* Kästner]. Hedge & Miller (1977) described *T. spicastrum* Hedge & A.G. Mill. (in subsect. *Polium*) as a new species from Djibouti. They also mentioned several gatherings of a close relative of this species from Sudan and the Red Sea coast incorrectly identified as *T. nummularifolium* Baker. In addition they mentioned *T. polium* and a distinctive relative of this species from Gaan Libah in north-western Somalia. Thulin (1991) suggested that there may be more than one species involved in the *T. polium* complex in Somalia. He also described a new species belonging to sect. *Teucrium*, *T. eburneum* Thulin from north-eastern Somalia. King (1988) revised the *Teucrium* from the Arabian Peninsula and Socotra. In connection with work for the Floras of Ethiopia and Somalia, a revision of the *Teucrium* from NE tropical Africa is provided.

Key to Teucrium species in NE tropical Africa

- 1a. Corolla tube less than 1mm long; calyx lobes as long as or longer than the tube _____ 2
- 1b. Corolla tube over 2.5mm long; calyx lobes much shorter than the tube _____ 3

* The Botanical Museum, Gothersgade 130, DK-1123 Copenhagen K, Denmark.

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- 2a. Flowers with pedicels over 2mm long; corolla 10–15mm long _____
 _____ 1. **T. clementiae**
- 2b. Flowers with pedicels less than 2mm long; corolla 15–16mm long _____
 _____ 2. **T. eburneum**
- 3a. Inflorescence lax; flowers in 1–4-flowered decussate cymes; pedicels over 3mm
 long _____ 3. **T. scordium**
- 3b. Inflorescence dense; flowers scattered or spirally arranged; pedicels 0–2mm
 long _____ 4
- 4a. Calyx slightly inflated; inflorescences becoming ± elongate _____ 6. **T. yemense**
- 4b. Calyx not inflated; inflorescences subspherical or becoming up to twice as long
 as wide _____ 5
- 5a. Leaves with 5–12 teeth at each side _____ 4. **T. polioides**
- 5b. Leaves entire or with up to 3 indistinct teeth at each side near the apex _____
 _____ 5. **T. somalense**

1. T. clementiae Ryding, *sp. nov.* Fig. 1A–F.

Species nova, differt ab aliis speciebus cognatis sectionis *Teucrui* combinatione constanti lobis lateralibus foliorum brevibus, racemis plus minusve laxis, cymis sine bracteolis, lobis calycis anguste triangularibus, corollis 10–15mm longis albidis vel luteolis viridibus, pilis nucum eglandulatis brevibus.

Type: Ethiopia, Hararge Region, 48km S of Jijiga on road to Deghabur, 9 vi 1971, *Gilbert* 2025 (holo. C, iso. ETH, K, photo of holo. E).

Fragrant shrublet, up to about 30–40cm tall. *Stems* erect or ascending from a woody base, sharply 4-angled in herbaceous parts, shortly and densely canescent with unbranched, spreading to recurved hairs. *Leaves* subsessile, mostly lobed with a narrowly lanceolate median lobe and with 2(–4) shorter lateral lobes, sometimes unlobed and narrowly lanceolate to linear, shortly and rather densely canescent on both sides; margin revolute, (apart from the lobes) entire. *Inflorescence* lax or rather lax, branched; bracts 1–4 times as long as the pedicels, lower ones similar to the leaves, upper ones usually entire and narrowly elliptic to linear; cymes 1-flowered, without bracteoles; pedicels 2–6mm long at anthesis, 3–7mm long in the fruit. *Calyx* campanulate at anthesis, becoming cupulate, scarcely enlarging in fruit, c.5–9mm long, 6–9mm wide; lobes longer than the tube, subequal, c.2.5–6mm long, narrowly triangular, slightly apiculate. *Corolla* 10–15mm long; tube less than 1mm long; limb (lower lip) 9–14 × 5.5–8mm, white to pale greenish yellow with purple or magenta veins, hairy outside, strongly hairy inside near the insertion points of the stamens, upper lobes c.2.5–4.5 × 1.5–3mm, lateral lobes 2.5–4.5 × 1.5–2.5mm, lower (median)

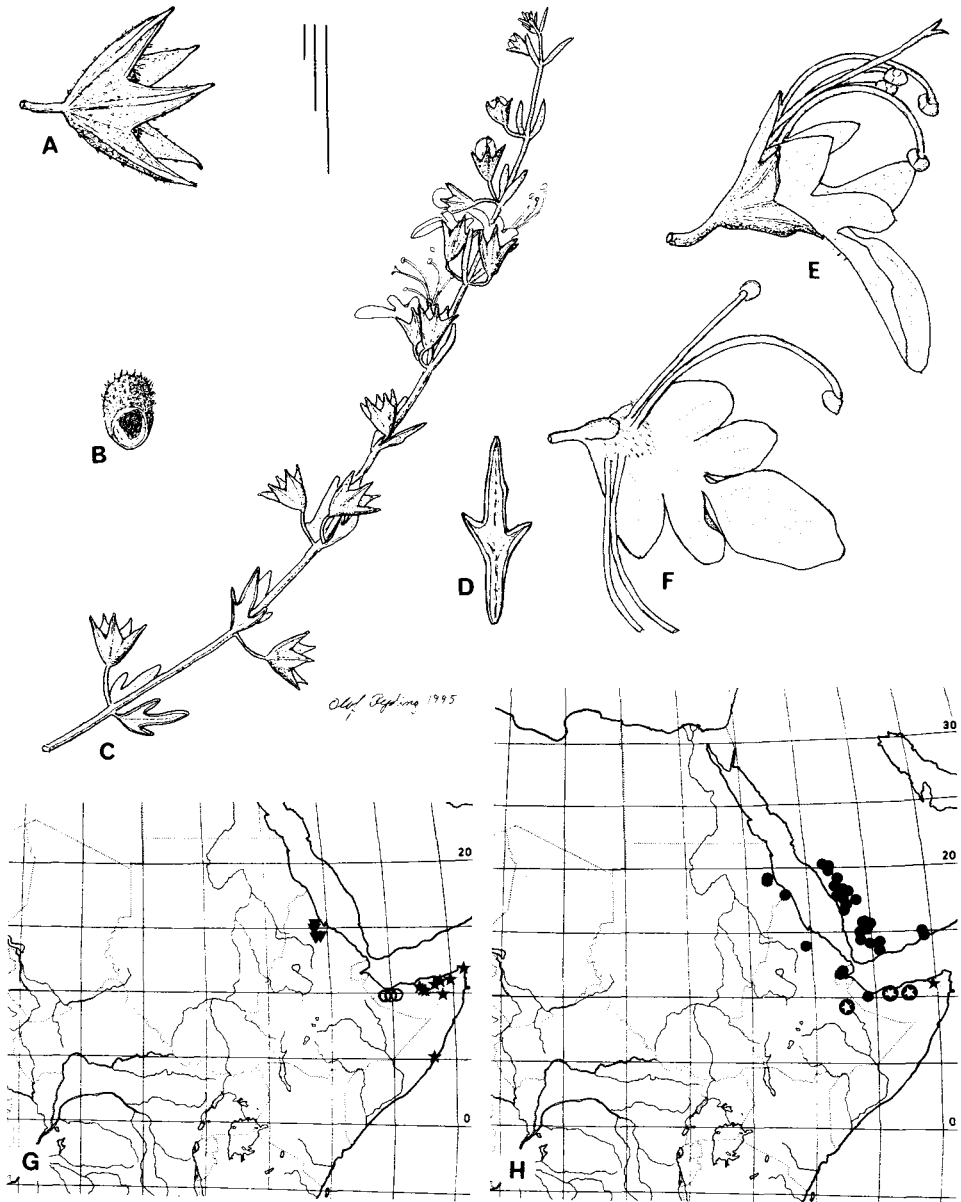


FIG. 1. A-F, *Teucrium clementiae*: A, calyx; B, nutlet; C, upper part of the main branch in an inflorescence; D, leaf; E, corolla; F, corolla dissected along the dorsal side. G, map showing the known distributions of *T. scordium* (filled triangle), *T. somalense* (open dot) and *T. polioides* (star). H, map showing the known distributions of *T. yemense* (filled dot; the easternmost group of dots are localities of the collections that King (1988) discerned as *T. sp. B*), *T. clementiae* (star in dot) and *T. eburneum* (star). Short scale bar for habit and leaf = 5mm; medium length scale bar for flower, fruiting calyx and corolla = 5mm; long scale bar for nutlet = 5mm. A-F from Gilbert 2025 (C).

lobe c.5–8 × 2.5–4.5mm, cuneate at the base. *Stamens* slightly hairy near the base; posterior pair 10–12mm long; anterior pair 12–15mm long; anthers 0.8–1mm long. *Style* glabrous, 12–15mm long; branches less than 1mm long, lower slightly longer than the upper one. *Nutlets* ellipsoid, 2.5–3 × 1.5–1.8mm, brownish, shallowly reticulate, densely pubescent with short eglandular hairs.

Distribution and habitat. *T. clementiae* is known only from the Hararge Region in Ethiopia and Woqooyi Galbeed and Sanaag Regions in Somalia (Fig. 1H). It grows on shallow soil overlying limestone or in rock crevices, in *Acacia* bush vegetation or open ground at c.1500–1800m altitude.

T. clementiae belongs to sect. *Teucrium* sensu Kästner (1989). It is probably most closely related to the Somalian *T. eburneum*, but it differs from that species in having narrower and often much longer lobes of the leaves and bracts, a laxer inflorescence with longer pedicels, smaller flowers, and slightly narrower and distinctly apiculate calyx lobes.

T. oliverianum Ging. ex Benth. and *T. orientale* L. are known from the Arabian Peninsula, and differ from *T. clementiae* in having violet or bluish corollas. In addition to this difference, *T. oliverianum* differs from *T. clementiae* in having much longer hairs on the nutlets, and smaller bracts and calyces. *T. orientale* also differs from *T. clementiae* in having bipinnatifid leaves and glandular nutlets.

The three South African *Teucrium* species, *T. africanum* Thunb., *T. trifidum* Retz. and *T. kraussii* Codd, differ from *T. clementiae* in having bracteoles in the cymes and smaller flowers.

T. multicaule Montbret & Aucher from Syria and Turkey differs from *T. clementiae* in having narrower, acuminate-subulate calyx lobes, longer side lobes on the leaves and usually pink corollas.

The Mediterranean *T. creticum* L., *T. breviflorum* Schreb. and *T. fruticans* L. constitute other possible relatives of *T. clementiae*, but differ in having entire leaves.

The Somalian material of *T. clementiae* differs from the Ethiopian material of this species in having smaller flowers and slightly longer and narrower calyx lobes. In these respects, the Somalian material of the species is more different from *T. eburneum* than the geographically more remote Ethiopian material. However, the collection Hemming & Watson 3311 from the Woqooyi Galbeed/Sanaag border, that grew in a very dry site, in rock crevices, slightly resembles *T. eburneum* in having mostly entire leaves and comparatively dense spikes.

Additional specimens examined. ETHIOPIA. Hararge: about 54km SE of Jijiga along road to Degahabur, 7 vi 1969, *J. de Wilde* 5131 (BR, K). SOMALIA. Woqooyi Galbeed/Sanaag Region: 140km WSW of Erigavo, 27 xi 1980, Hemming & Watson 3311 (K). Sanaag Region: Erigavo Distr., Erigavo, 7 x 1941, Peek 223 (K); Medishe, 16 v 1945, Glover & Gilliland 940 (BM, K).

2. *T. eburneum* Thulin in Edinb. J. Bot. 48: 337 (1991).

Type: Somalia, Bari Region, Al Miskat, Bahaya, 26 xi 1986, *Thulin & Warfa* 6086 (holo. UPS, iso. E).

Shrublet, 10–30cm tall, shortly and densely canescent with unbranched hairs. *Leaves* sessile or almost so, narrowly elliptic to narrowly ovate, 10–22 × 4–8mm, narrowly cuneate at the base, subacute at the apex, drying yellowish green; margins flat or slightly revolute, entire or, in the upper leaves, 3-lobed with short and broad lobes, with 3 veins prominent on the lower surface. *Inflorescence* rather dense, with c.0.5–1.5mm long pedicels; bracts sessile or subsessile, leaf-like, ± obovate, 7–11mm long, shallowly 3-lobed with subequal lobes; cymes 1-flowered, without bracteoles. *Calyx* campanulate at anthesis, becoming cupulate, c.7–8mm long, 7–8mm wide; lobes narrowly triangular, hardly apiculate, as long as, or slightly longer than, the tube, 4.8–5.6mm long. *Corolla* cream, 15–16mm long, strongly hairy near the insertion points of the stamens; tube less than 1mm long; limb (lower lip) c.15 × 10mm, upper and lateral lobes 4.5–5 × 2.8–3.2mm, lower (median) lobe c.8 × 5.5mm, cuneate at the base. *Stamens* slightly hairy near the base; posterior pair c.10mm long; anterior pair c.11mm long; anthers c.1.2mm long. *Style* c.11mm long, with subequal lobes, c.1mm long. *Nutlets* ellipsoid, c.2.4 × 1.6mm, shallowly reticulate, densely pubescent with short hairs.

Distribution and habitat. *T. eburneum* is known only from the type locality (Fig. 1H), where it grows on stony limestone slope at 1500–1600m altitude.

T. eburneum belongs to sect. *Teucrium* sensu Kästner (1989). It may be closely related to *T. clementiae*, which it resembles in flower and nutlet characters. However, it can easily be distinguished from this species and most other members of the section in having mostly entire leaves and a dense inflorescence with subsessile flowers.

3. *T. scordium* L., Sp. Pl. 565 (1753) subsp. **scordium**; A. Rich., Tent. Fl. Abyss. 2: 202 (1850); Baker in Fl. Trop. Afr. 5: 500 (1900); Cufod. in Bull. Jard. Bot. État. 32, suppl.: 805 (1962).

Syn.: *T. abyssinicum* Hochst. nom. nud.; Benth. in A. DC., Prodr. 12: 586 (1848), pro syn.

T. scordium var. *microphyllum* A. Rich., Tent. Fl. Abyss. 2: 202 (1850). Type: Ethiopia, 'Abyssinia', Tchélécote, *Quartin-Dillon & Petit* (lecto. P, selected here).

Stoloniferous herb, softly hairy to subglabrous, smelling of garlic when crushed. *Leaves* sessile or subsessile, oblong or ovate-oblong; apex rounded; base cuneate; margin crenate or crenate-dentate in the apical $\frac{2}{3}$. *Inflorescence* lax; bracts large and similar to the ordinary leaves; cymes epedunculate, 1–4-flowered; flowers with 3–6mm long pedicels. *Calyx* obconical-campanulate, 3–4mm long; lobes c.0.4 times as long as the tube, subequal, 1mm long, triangular, acute or usually shortly apiculate. *Corolla* purplish pink or mauve, 6–10mm long; tube 2.5–4mm long; limb (lower lip) 4–6.5 × 2–3mm, upper lobes and lateral lobes 0.5–1mm long, lower (median)

lobe 2–3 × 1–1.5mm, cuneate at the base. *Stamens* slightly hairy or glabrous, c.4mm long, with c.0.5mm long anthers. *Style* c.5mm long with subequal branches. *Nutlets* reticulate, brown, glandular, c.1.2 × 0.9mm.

Distribution and habitat. *T. scordium* subsp. *scordium* has a disjunct distribution, occurring from northern Europe and northern Spain to the Himalayas, and in Eritrea and the Tigray Region in Ethiopia (Fig. 1G). It is found in damp places, moist meadows and river banks. In Ethiopia, the species is found at 1900–2400m altitude, but in the northern distribution area it grows at lower altitudes.

Despite the wide gap in the geographical distribution, there seem to be no consistent differences between the Ethiopian material of *T. scordium* subsp. *scordium* and the material from the northern distribution area.

Richard (1850) discerned a variety among the Ethiopian material, var. *microphyllum* A. Rich., differing from var. *scordium* only in having smaller leaves. However, there are no distinct differences in leaf size either within the African material of *T. scordium* subsp. *scordium*, or within the species as a whole. Hence, the author agrees with Cufodontis (1962) who reduced this variety to a synonym under *T. scordium* subsp. *scordium*.

Kästner (1989) placed *T. scordium* in his sect. *Scorodonia* subsect. *Scordium* together with *T. melissoides* Boiss. & Hausskn. ex Boiss.

Additional specimens examined. ERITREA. Fiuma Ammarsa, 22 i 1916, *Baldrati* 2092 (FT); Torrente Baratani, 18 iv 1893, *Pappi* 4332 (FT). Hamasien: Belesa, 4 v 1892, *Terraciano & Pappi* 2515 (FT); Barantiano near Asmara, 6 iii 1909, *Fiori* 1591 (FT); Adi Sogro (Asmara), 23 iv 1903, *Chiovenda* 73 (FT). Serai: Adi Ganam, 13 x 1902, *Pappi* 245 (FT); Adi Ugri (= Mendefera), 22 xii 1909, *Bellini* 19 (FT). ETHIOPIA. Abyssinia, *Quartin-Dillon* (P, on same sheet as last collection); *Quartin-Dillon*, dernier envoi 1844 (P); Abyssinia, environ? Igger, *Quartin-Dillon & Petit* (K). Tigray: Province of Urahit (in Agame Prov.), i 1839, *Schimper* 3/1766 (BM, K, P); Adoua et environs, 1–23 vi 1841, *Petit* 52 (P).

4. *T. polioides* Ryding, sp. nov. Fig. 2L–P.

Species nova, differt ab *T. polii* pilis non-ramosis; ab *T. polii* subspeciebus *capitato*, *pii-fontii* et *vincentino* capitulis solitariis; ab aliis speciebus cognatis sectionis *Chamaedrys* subsectionis *Polio* combinatione constanti foliis subsessilibus duplo ad triplo (rare quadruplo) longioribus quam latis, dentibus foliorum 10–24, capitulis sphaericis vel leviter elongatis, floribus sessilibus 7–10mm longis, calyce non-inflato, corolla albida.

Type: Somalia, Bari Region, Galgallo, 64km SSW of Bosaso, 10 i 1973, *Bally & Melville* 15782 (holo. C, iso. K, photo of holo. E).

Syn: *T. polium* var. sensu Vatke, *Linnaea* 43: 99 (1881); sensu Baker in *Fl. Trop. Afr.* 5: 501 (1900), pro parte quoad specim. *Hildebrandt* 1450, non L.

Tufted subshrub, up to 25cm tall. Young *stems* densely covered with unbranched crisped, greyish to whitish hairs and some sessile glands. *Leaves* subsessile or very shortly petiolate, coriaceous; blade elliptic or sometimes obovate, up to 4.5–10 ×

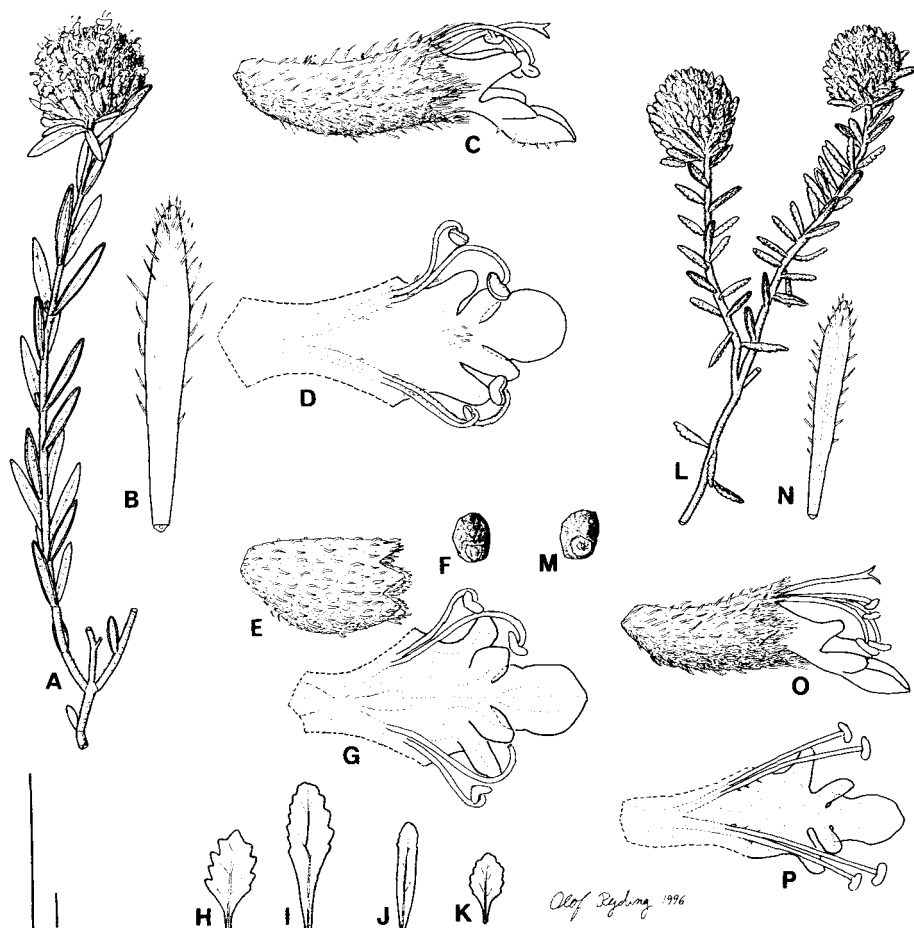


FIG. 2. A-D, *Teucrium somalense*: A, part of a plant; B, upper bract (upper side); C, flower; D, corolla dissected along the dorsal side showing the inside. E-K, *T. yemense*: E, fruiting calyx; F, nutlet; G, corolla dissected along the dorsal side; H, leaf of form from Sudan; I, leaf of form from Ethiopia; J, leaf of form from Djibouti; K, leaf of form from Somalia. L-P, *T. poliooides*: L, part of a plant; M, nutlet; N, upper bract (upper side); O, flower; P, corolla dissected along the dorsal side showing the inside. Long scale bar for fruiting calyx, corollas and nutlets = 5mm; short scale bar for habit and leaves = 5mm. A-D from Hansen *et al.* 6440 (C); E-G, K from Gillett & Watson 23674 (K); H from Aylmer 653 (K); I from Tewolde-Berhan 1107 (ETH); J from Curle 50 (K); L, N-P from Bally & Melville 15782 (C); M from Newbould 919 (K).

1.5–4mm, 2–3(–4) times as long as broad (but due to revolute margin often appearing to be more narrow), slightly to moderately tomentose; below densely tomentose; margin crenate with (4–)5–12 teeth at each side, revolute. *Inflorescences* solitary on long or short branches, dense, spherical or becoming up to twice as long as wide after anthesis, 10–15mm in diam.; lower bracts similar to the leaves, upper bracts

narrowly oblanceolate, slightly longer than, or as long as, the calyces; flowers sessile (pedicels 0–0.3mm long), scattered or spirally arranged or perhaps subopposite at the base of the spike. *Calyx* tubular, 4–6mm long, densely pubescent with the hairs at the mouth longer, with subsessile glands; lobes c.1mm long, 0.2–0.3 times as long as the tube, upper broadly triangular, lateral triangular, lower narrowly acuminate-triangular. *Corolla* (7–)8–10mm long, white with yellowish markings on the lower lip, hairy on the ventral side; tube 3.5–4.5mm long; limb (lower lip) 4–6 × 3–5mm, upper and lateral lobes c.1.0–1.6 × 0.4–0.8mm, lower (median) lobe concave, 1.8–2.5 × 1.5–2.1mm, truncate-hastate at the base. *Stamens* with hairy filaments; posterior pair c.3–4mm long, with 0.5–0.7mm long anthers; anterior pair 4–5mm long, with 0.6–0.8mm long anthers. *Style* 7–10mm long, glabrous; branches less than 1mm long, lower slightly longer than the upper one. *Nutlets* reticulate, glabrous, dark brown, c.1.6 × 1.1mm.

Distribution and habitat. *T. polioides* is known only from the Sanaag, Bari and Mudug Regions in Somalia (Fig. 1G). It grows in *Commiphora*–*Boswellia* bushland, limestone or gypsum plateaux or slopes at an altitude of 50–1900m.

The single collection from the Mudug Region (*Thulin & Abdi Dahir* 6657), that is geographically isolated, differs from the other material of this species in having obovate and more densely whitish pubescent leaves and smaller, c.7mm long flowers.

T. polioides belongs to sect. *Chamaedrys* subsect. *Polium*. In her revision of the *Teucrium* from the Arabian Peninsula, King (1988) recognized 14 species of this subsection. Many of these species are very similar to each other and differ in only a few characters. *T. polioides* is perhaps most closely related to the widespread *T. polium*, but also resembles several of the other species from the Arabian Peninsula. However, whereas *T. polium* has branched hairs, or in the Arabian Peninsula branched and simple hairs intermixed (King, 1988), *T. polioides* has simple hairs only. Unlike *T. polioides*, most forms of *T. polium*, including the widespread subsp. *capitatum* (L.) Arcang., have two to several flower-heads clustered in the inflorescences rather than a solitary inflorescence. As suggested by King's (1988: fig. 3Aa) illustration, at least some of the Arabian material of *T. polium* differs from *T. polioides* in having a rounded, not truncate-hastate (Fig. 2P) lower lobe of the corolla.

King (1988) suggested that *T. leucocladum* Boiss. and *T. popovii* R.A. King may be closely related to *T. polium*, but these two species and *T. hijazium* Hedge & R.A. King differ from *T. polioides* in having broader leaves with fewer teeth. In addition to these differences, *T. leucocladum* deviates by having distinctly smaller flowers.

T. rhodocalyx Schwartz from south-eastern Yemen may be another relative of *T. polioides*, but differs in having c.1mm long pedicels, pink to deep carmine corollas and usually more elongate spikes.

T. socotranum Vierh. from Socotra differs from *T. polioides* in having broader and petiolate leaves.

T. mascatense Boiss. from Oman and *P. balfouri* Vierh. from Socotra differ from *T. poliooides* in having slightly narrower leaves with up to two teeth at each side.

Additional specimens examined. SOMALIA. Gebirgs-Region Serrut, iv 1875, *Hildebrandt* 1450 (K); between Mashalaid and Kerim at Habashawalay, 26 vii 1978, *Elmi & ?Rodol* 903 (K). Sanaag: Surud Range, Shimba Beris, 20 xii 1929, *Collenette* 385 (K). Erigavo Distr., 9 vii 1945, *Glover & Gilliland* 1125 (K, BM); 3 mi E of Erigavo, 26 ix 1938, *Kinnon* S/100 (K); Mogor D'Ali, 13 viii 1957, *Newbould* 919 (K). Bari: above Galgalo, 10 i 1973, *Lavranos & Harwood* 10204 (E); 96km NNE of Gardo, 27 vi 1979, *Hansen & Heemstra* 6291 (C, K); Al Miskat Mts, between Bahaya and Moqor-ranxo, 27 xi 1986, *Thulin & Warfa* 6107 (K, UPS); Karkar Mts, between Gardo and Iscusciuban, God Adde, 23 xi 1985, *Thulin & Warfa* 5454 (K, UPS); Tohen, 3 xii 1971, *Bavazzano & Lavranos* s.n. (FT). Regione di Abal, 28 ix 1957, *Scortecci* s.n. (FT); 1957, *Scortecci* s.n. (FT). Mudug: 20km N of Hobyo (Obbia) on road to Jiriiban, 28 v 1989, *Thulin & Abdi Dahir* 6657 (K, UPS).

5. *T. somalense* Ryding, sp. nov. Fig. 1A–C.

Species nova, differt ab aliis speciebus cognatis sectionis *Chamaedrys* subsectionis *Polio* combinatione constanti pilis non-ramosis, foliis subsessilibus triplo ad sexies longioribus quam latis, dentibus foliorum 0–6 indistinctis, capitulis spaericis vel leviter elongatis, floribus sessilibus 10–12mm longis, calyce non-inflato, corolla albida.

Type: Somalia, Togdheer Region, Gaan Libah, 19 xi 1979, *O.J. Hansen, H. Heemstra & Abukar Sheekh* 6440 (holo. C, iso. K, photos of holo. E, UPS).

Syn: *T. polium* sensu Baker in Fl. Trop. Afr. 5: 501 (1900), pro parte quoad specim. *James & Thrupp* s.n., non L.

Subshrub, up to 10–30cm tall. Young stems densely tomentose with crisped, unbranched, whitish hairs. Leaves sessile, coriaceous, narrowly oblong, narrowly elliptic or oblanceolate, 3–6 times as long as wide or sometimes broader than so near the base of the stems, but due to revolute margins usually appearing narrower, up to 14–22 × 2.5–5mm, above slightly tomentose, below densely whitish tomentose; margin revolute, entire or with up to 3 obscure teeth at each side near the apex. Inflorescences very dense, spherical or becoming up to twice as long as wide after anthesis, 12–18mm in diam.; lower bracts similar to the leaves; upper bracts narrowly oblanceolate, 6–8 × 0.7–1.5mm, usually slightly longer than the calyces; flowers sessile (pedicels 0–0.3mm long), scattered or spirally arranged or perhaps subopposite at the base of the spike. Calyx tubular, 6–7mm long, villous with the hairs at the mouth longer, and glandular with sessile glands; lobes 0.2–0.25 times as long as the tube, c.1.2mm long, upper broadly triangular, lateral and lower triangular. Corolla 10–12mm long, white; tube 4.5–6mm long; limb (lower lip) 5–6 × 3.5–4.5mm, upper lobes c.1.8 × 1mm, lateral lobes c.1.5 × 0.8mm, lower (median) lobe concave, suborbicular, 2.3–2.8 × c.2.2–2.7mm, cuneate at the base. Stamens with hairy filaments; posterior pairs c.3–4mm long, with 0.6–0.8mm long anthers; anterior pairs 4–5 long, with 0.9–1.0mm long anthers. Style 8–10mm long, glabrous; branches less than 1mm long, lower slightly longer than the upper one. Nutlets reticulate, glabrous, dark brown, c.2.0 × 1.1mm.

Distribution and habitat. The species is known only from a small area in the Togdheer Region in Somalia (Fig. 1G). It grows in open bushland, often on limestone, at 700–1750m altitude.

T. somalense belongs to Kästner's (1989) subsect. *Polium*. The species is perhaps most closely related to *T. polium* and *T. polioides*, but can be distinguished from these two species as well as most other members of subsect. *Polium* in having narrower leaves with entire margins or with few obscure teeth at the apex. *T. mascatense* Boiss. from Oman has similar but usually smaller leaves, but differs from *T. somalense* in having larger corolla lobes in relation to the corolla tube, 0.5–1mm long pedicels, and more densely glandular calyces.

Additional specimens examined. SOMALIA. Adda Galla, year not known, *James & Thrupp* (K). Togdheer Region: Wagga Mt., 1897, *Lort Phillips* s.n. (BM, K); Goradambas, 29 xii 1944, *Glover & Gilliland* 468 (K); Fodjor Escarpment, 13 ii 1954, *Bally* 9676 (K); 8km N of Adadle, 17 i 1962, *Hemming* 2369 (K, FT); Gaan Libah, 21 xii 1969, *Lavranos* 7387 (E); *Bavazzano & Lavranos* s.n. (FT); 10 x 1978, *Allen & Elmi* 484 (E); 30 v 1949, *Bally* 7325 (K); 30 x 1954, *Bally* 10224 (K); 4 x 1957, *Bally* 11792 (K); 7 vii 1945, *Glover & Gilliland* 1143 (K); Gerbakele, 15km E of Gaan Libah Forest Station, 10 ii 1981, *Carter* 861 (K); between Sheikh and Alla Ullly, xii 1971, *J.I. Wood* (K); 9°56'N 45°40'E, 23 vi 1981, *Gillett & Watson* 614 (K).

6. *T. yemense* Deflers, Voyage au Yeman 190 (1889). **Fig. 2E–K.**

King in Notes Roy. Bot. Gard. Edinburgh 45: 38 (1988). Type: Yemen, in Wadi Schidja, prope Menakha, *Deflers* 443 (lecto. P, selected by King 1988).

Syn.: *T. spicastrum* Hedge & A.G. Mill. in Notes Roy. Bot. Gard. Edinburgh 35: 179 (1977). Type: Djibouti, Goda above Bankoulé (Bankouwâle), 10 iv 1974, *Lavranos* 11470 (holo. E).

T. polium sensu *Bavazzano* in *Webbia* 26: 320 (1971), non L.

T. sp. B sensu King in Notes Roy. Bot. Gard. Edinburgh 45: 40 (1988).

Subshrub or perennial herb, laxly branched, up to 15–25cm tall, densely or moderately pubescent with simple, greyish, spreading or antrorse eglandular hairs and smaller glandular hairs, at least sometimes with a smell of absinthe. *Leaves* sessile, subsessile or shortly petiolate; blade oblong or oblanceolate, up to 12–25 × 2.5–8mm; base narrowly cuneate-attenuate; margin slightly revolute or flat, shallowly to deeply crenate in the apical part, with (2–)3–6(–8) teeth at each side. *Inflorescences* dense, becoming ± elongate; bracts narrowly oblanceolate, petiolate, much smaller than the leaves; flowers sessile or pedicel up to 2mm long, subopposite at the base, scattered or spirally arranged or subopposite at the base of the spike. *Calyx* slightly inflated on ventral side, 5–7mm long; lobes 0.2–0.3 times as long as the tube, upper 3 slightly broader, c.0.7–1.2 × 0.7–1.2mm, ovate-triangular, acute to acuminate. *Corolla* c.7.5–12mm long, pale purple with darker markings or cream white; tube 4–6mm long; limp (lower lip) 4–6 × 3.5–5mm, upper lobes 1.5–2 × c.1mm, lateral lobes c.1–1.5 × 1–1.5mm, lower (median) lobe 3–4 × 3–4mm, cuneate to subtruncate at the base. *Stamens* filaments hairy; posterior pair c.4.5mm long; anterior pair

c.6.5mm long; anthers 0.6–0.9mm long. *Style* c.10mm long, with subequal branches. *Nutlets* obovate, c.1.6 × 1mm, reticulately rugose, dark brown.

Distribution and habitat. The species occurs in SE Sudan (Red Sea Hills), N Ethiopia (Tigray), Djibouti, NW Somalia (Woqooyi Galbeed Region), Yemen and SW Saudi Arabia (Fig. 1H). It grows on rocky slopes at 800–3300m altitude.

Kästner (1989) placed *T. yemense* in subsect. *Polium* (Mill.) Kästner. The species differs from other members of the subsection in having the calyx inflated on the ventral side and slightly narrowed at the mouth.

According to King (1988), the Arabian material of *T. yemense* has 3–4 lobes (teeth) at each side of the leaves and at least 1.5mm long calyx lobes. Her *T. sp. B* was considered as a close relative of *T. yemense*, deviating by having 6–8 lobes at each side of the leaves and a broader calyx with up to 1mm long lobes. However, some recent gatherings of *T. yemense* (Thulin *et al.* 7894, 7959, 8471), from South Yemen just outside the earlier known distribution area, approach *T. sp. B*. Their calyx is as broad or slightly broader than in typical *T. yemense* and has 1–1.5mm long lobes. One of these collections (Thulin *et al.* 8471) has 4–6 teeth (lobes) on each side of the leaves. When the African material is taken into consideration, there seem to be no discontinuities in the variation between *T. yemense* and *T. sp. B*.

In Africa, the species seems to be divided into some isolated, morphologically slightly divergent populations (Fig. 1H).

The *Teucrium* material from Sudan, sometimes incorrectly identified as *T. nummularifolium*, apparently belongs to *T. yemense*. It tends to have comparatively lax inflorescences with comparatively long pedicels, and has broad leaves with 4–6 teeth at each side (Fig. 2H).

The single collection from Ethiopia has rather long leaves with 5–6 teeth at each side (Fig. 2I).

Some of the material from Djibouti (including the type of *T. spicastrum*) has narrow leaves with 2–5 short teeth at each side near the apex (Fig. 2J). However, other collections from the same country have broader leaves with more prominent teeth.

The collections from Somalia have rather broad leaves with 4–6 teeth on each side (Fig. 2K). One of these collections, *Ruspoli & Riva* 258, has been annotated as a type of *T. ruspolianum* Gürke at FT. However, this name has apparently never been published.

Additional NE African specimens examined. SUDAN. Red Sea Hill Distr.: Erkowit, 14 v 1907, *Brown* 1154 (K); Erkowit, 20 iii 1949, *Mohamed aff Ismail* 3481 (K); in vicinity of Erkowit, 2–7 iii 1936, *Aylmer* 653 (BM, K); Red Sea Hills, Shalata Pass, 19 iv 1959, *Jackson* 3948 (K); slopes of Jebel Okum, 2–4 iii 1913, *Lynes* s.n. (BM); Kasala Prov., Tokai Distr., Karora Hills, Kadow Pass, *Robbie* 46 (FT, K, P). ETHIOPIA. Tigray: about 30km NE of Mekele on the Asmara road, 17 ix 1972, *Tewolde-Berhan* 1107 (ETH). DJIBOUTI. Piste d'Ali-Sabieh a Assamo, 16 vi 1993, *Mallet* s.n. (C); Randa–La Daz road, 2 iv 1957, *Curle* 50 (K); above Randa, 2 ii 1973, *Lavranos* 10533 (E); N edge of Arta Plateau, iv 1974, *Lavranos* 20123 (E). Additional collections from Djibouti by *Chedeville* (P and/or FT) are enumerated under '*T.*

polium' by Bavazzano (1972: 320). SOMALIA. Woqooyi Galbeed: E of Duwi, 30 vi 1981, Gillett & Watson 23674 (K); Lafarug, 8 xii 1892, Ruspoli & Riva 258 (FT).

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