WEBBIA Journal of Plant Taxonomy and Geography

Firenze University Press
www.fupress.com/webbia

OPEN ACCESS

**Citation:** Lidetu, H., Hoban, G., Lockyear, O., Belcher, A., Svanhström, V.J., & Darbyshire, I. (2024). Additions to and revisions of the endemic and near-endemic Acanthaceae of Ethiopia. *Webbia. Journal of Plant Taxonomy and Geography* 79(2): 201-225. doi: 10.36253/jopt-16074

**Received:** Apr 25, 2024

**Accepted:** May 13, 2024

**Published:** September 3, 2024



**Data Availability Statement:** All relevant data are within the paper and its Supporting Information files.

**Competing Interests:** The Author(s) declare(s) no conflict of interest.

**Editor:** Ib Friis

**ORCID**
HL: 0009-0004-2885-2480
VJS: 0000-0001-8519-8295
ID: 0000-0002-5514-9561

# Additions to and revisions of the endemic and near-endemic Acanthaceae of Ethiopia

Hanny Lidetu[1], Gabriella Hoban[2], Olivia Lockyear[3], Aaron Belcher[4], Vida J. Svahnström[2], Iain Darbyshire[2,5,*]

[1] *Department of Plant Biology & Biodiversity Management, College of Natural and Computational Sciences, Addis Ababa University, P.O. Box 3434, Addis Ababa, Ethiopia*
[2] *Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3AE, United Kingdom*
[3] *Strawberry Hill, Fishers Lane, Cold Ash, Berkshire, RG18 9NG, United Kingdom*
[4] *The Estate Office, Tregothnan, Tresillian, Truro, TR2 4AN, United Kingdom*
[5] *Honorary Senior Researcher, School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Johannesburg, Private Bag 3, WITS 2050, South Africa*
* Corresponding author. E-mail: i.darbyshire@kew.org

**Abstract.** Taxonomic studies in the Acanthaceae of Ethiopia and neighbouring countries reveal the presence of several previously overlooked endemic and near-endemic taxa. The *Isoglossa somalensis* Lindau complex is revised, resulting in the description of a new species, *Isoglossa recurva* Hanny & I.Darbysh. from the forests of southwest Ethiopia, and a new variety of *I. somalensis*, var. *glandulosa* Hanny, G.Hoban & I.Darbysh. from montane southeast Ethiopia. *Barleria induta* C.B.Clarke from Ethiopia and Eritrea, treated as *B. prionitis* L. subsp. *induta* (C.B.Clarke) Brummitt & J.R.I.Wood in the *Flora of Ethiopia and Eritrea* (FEE), is reevaluated and found to represent two species, with *B. praetermissa* I.Darbysh. described from the Tigray region of northwest Ethiopia. Finally, *Hypoestes microphylla* Nees is resurrected as a good species, separate from the widespread *H. triflora* (Forssk.) Roem. & Schult. under which it was treated as a synonym in FEE. Descriptions, tables of comparison and notes on the habitat, ecology and extinction risk for these taxa are provided. The first record of *I. gregorii* (S.Moore) Lindau for Ethiopia is also noted and a revised key to *Isoglossa* in Ethiopia is presented. The endemic Acanthaceae of Ethiopia now stands at 21 species (23 taxa), whilst an additional 23 species (24 taxa) are considered to be range-restricted near-endemics.

**Keywords:** diversity, endemism, IUCN Red List assessment, new species, taxonomy.

## INTRODUCTION

The Acanthaceae are among the most species-rich and morphologically and ecologically variable lineages of flowering plants (Manzitto-Tripp et al. 2022). The family is particularly noteworthy for its high rates of local endemism, with many species having highly restricted ranges. Species of Acanthaceae can also be locally abundant and comprise an important component of the local ground flora, hence they are often of high ecological significance.

Given this combination of high diversity, restricted ranges and ecological importance, the Acanthaceae can be considered a high priority for plant conservation focus in many parts of the world (Manzitto-Tripp et al. 2022).

Ethiopia is very rich in endemic plant species (Ensermu and Sebsebe 2014; Sebsebe et al. 2021) and, indeed, Sosef et al. (2017) estimated Ethiopia to be the tropical African country with the second highest rate of plant endemism, with a rate of 19.9% of the total flora, bettered only by neighbouring Somalia (32%). In the account of the Acanthaceae for the *Flora of Ethiopia and Eritrea* (FEE), Ensermu (2006) documented 215 taxa in 41 genera, this being the sixth most species rich family within the Flora region (Ensermu and Sebsebe 2014). Of these, 17 species and three subspecies were recorded as endemic to Ethiopia, with a further 11 undescribed potential endemics also documented (Ensermu 2006). Many other taxa of Acanthaceae were recorded from Ethiopia and only one other country. Since the FEE account, one new species in each of the genera *Acanthopale* C.B.Clarke (*A. aethiogermanica* Ensermu), *Blepharis* Juss. (*B. gypsophila* Vollesen & Thulin), *Lepidagathis* Willd. (*L. pseudoaristata* Ensermu) and *Rhinacanthus* Nees (*R. mucronatus* Ensermu), and four new species in *Barleria* L. (*B. baluganii* Ensermu, *B. ferox* Ensermu & I.Darbysh., *B. gidoleensis* Ensermu & I.Darbysh. and *B. negelleensis* Ensermu & I.Darbysh.) have been described (Ensermu 2009; Vollesen and Thulin 2015; Ensermu and Darbyshire 2018), although all but *B. gypsophila* were based on species included as unnamed taxa in FEE. All these new taxa were thought to be endemic to Ethiopia at the time of publication, but *L. pseudoaristata* has since been recorded from northern Kenya (Darbyshire et al. 2010) and so can be considered near-endemic.

This publication is part of an ongoing study by Addis Ababa University, the Royal Botanic Gardens, Kew and the Ethiopian Biodiversity Institute on the diversity and extinction risk of the endemic flora of Ethiopia. In this current work we investigate several taxa of Ethiopian Acanthaceae for which further taxonomic work was required to fully delimit the taxa. The first concerns the *Isoglossa somalensis* Lindau complex in the forests of central and southern Ethiopia; the second concerns the *Barleria induta* C.B.Clarke (or *B. prionitis* L.) complex and the third concerns the status of *Hypoestes microphylla* Hochst. ex Nees, these latter two from the drylands of northern Ethiopia and western Eritrea.

With the findings of the current work, the endemic Acanthaceae of Ethiopia currently stand at 21 species and two further infraspecific taxa, whilst an additional 23 species and one infraspecific taxon are considered to be range-restricted near-endemics for which Ethiopia holds a majority or globally important portion of the population (Appendix 1).

## MATERIALS & METHODS

Herbarium specimens of the relevant species were analysed at the herbaria of BM, K, ETH, FT and P (herbarium abbreviations follow Thiers, updated continuously) using standard herbarium practices. Other relevant type material was viewed online via JSTOR Global Plants (https://plants.jstor.org/). Prior to dissection, flowers were soaked in Aerosol OT 5% solution; all other characters were measured on dry material. All duplicates seen are indicated with an exclamation mark "!"; those only seen electronically are marked with an asterisk "*".

The extinction risk (conservation) assessments for each taxon follow the Categories and Criteria of the IUCN Red List (IUCN 2012) and the guidelines for their use (IUCN Standards and Petitions Subcommittee 2022). Extent of Occurrence (EOO) and Area of Occupancy (AOO) were calculated using the GeoCAT tool (https://geocat.iucnredlist.org/; Bachman et al. (2011).

The distribution maps were produced in QGIS version 3.2. Country boundaries were obtained from GADM (https://gadm.org/). Within Ethiopia and Eritrea, we have applied (in grey lines) a shapefile of the floristic region boundaries of *Flora of Ethiopia and Eritrea*. However, in the "Distribution" section for each taxon, we also list the current administrative regions in which they are found. Note that the boundaries of the regional states in Ethiopia have been updated recently, with the Southern Nations Nationalities and People's Regional State being subdivided into the South West Ethiopia Peoples' Regional State, South Ethiopia Regional State, Central Ethiopia, and Sidama. However, this change has not yet been reflected in the GADM layers for Ethiopia and we have not been able to locate any suitably up-to-date GIS shapefiles for these new administrative boundaries, hence why these are not shown on the maps.

## TAXONOMIC ACCOUNTS

### *1.* ***Isoglossa***

*Isoglossa* Oerst. (Acanthoideae: Justicieae: Isoglossinae; Kiel et al. 2006; Manzitto-Tripp et al. 2022) is a genus of ca. 70 species. It has a palaeotropical and subtropical distribution, with a centre of diversity in east Africa, where it is noted for its high number of highly range-restricted montane species (Darbyshire 2009; Darbyshire and Hemp 2023). In the *Flora of Ethiopia*

*and Eritrea*, five species were documented (Ensermu 2006): *I. congesta* Hedrén, *I. ovata* E.A.Bruce (= *I. bruceae* I.Darbysh.; Darbyshire 2009), *I. parvifolia* Rendle, *I. punctata* (Vahl) Brummitt & J.R.I.Wood and *I. somalensis* Lindau. The lattermost of these species was treated in a broad sense and is morphologically variable across the Ethiopian highlands. Following a taxonomic revision of the *I. somalensis* complex based on detailed morphological analyses, one new species, *Isoglossa recurva* Hanny & I.Darbysh., and a new variety of *I. somalensis*, var. *glandulosa* Hanny, G.Hoban & I.Darbysh., are here described. In addition, the first record of *I. gregorii* (S.Moore) Lindau for Ethiopia is noted. In view of these taxonomic changes and additions, we provide a revised key to the genus in Ethiopia.

***Isoglossa recurva*** Hanny & I.Darbysh., **sp. nov.**

Type: Ethiopia, Illubabor Region, 66 km north of Tepi along the road to Mocha and Gore, 25 Jan. 2000 (fl., fr.), *I. Friis*, *S. Bidgood*, *Ermias Getachew & Mulugeta Gichile 9814* (holotype ETH!; isotypes C, K! [K005326606]). (Figure 1).

(=) *Isoglossa somalensis sensu* Ensermu (2006: 494), pro parte, non Lindau.

*Diagnosis*

This species is most likely to be confused with *Isoglossa somalensis*, and in particular var. *glandulosa* Hanny, G.Hoban & I.Darbysh. (described below) which both share a glandular inflorescence indumentum. However, *I. recurva* differs most markedly in (1) the upper lip of the corolla being strongly recurved, with clearly protruding lower lip (versus upper lip not or barely recurved, lower lip not clearly protruding); (2) the inflorescence being narrowly and laxly paniculate and the glandular hairs having minute, inconspicuous gland tips (versus spiciform or more rarely narrowly paniculate, not so lax, glandular hairs when present [var. *glandulosa*] with conspicuous, thick gland tips); (3) the staminal filaments being much shorter, ± 2.8 mm long, and the anthers thecae being smaller, 1.1–1.5 mm (versus filaments 5–8 mm long, thecae 1.4–2.8 mm long, ≥ 2.3 mm in var. *glandulosa*); and (4) having a shorter style, ± 3.9 mm long (versus 7.7–11.5 mm long). It is easily separated from the sympatric *Isoglossa somalensis* var. *somalensis* by having a dense glandular indumentum on the inflorescence (versus glandular hairs absent or at most very sparse), and for this reason it is only compared to var. *glandulosa* in Table 1.

*Isoglossa recurva* is also similar to *I. ventricosa* I.Darbysh. from southern Tanzania but can be separated from that species by (1) the anther thecae overlapping by more than half their length and oblique (versus anther thecae fully superposed and separated, subparallel); (2) the seeds having short blunt tubercles lacking minute hooks (versus tubercles elongate towards the seed rim and minutely hooked); (3) having longer calyx lobes, 4.7–6.8 mm long in flower, 7.5–9.5 mm in fruit (versus 3–5 mm long in flower, 5–6 mm in fruit); and (4) having a more deeply lobed upper lip, lobes 2.3–3 mm long (versus 1.5–2 mm long).

*Description*

Perennial herb with basal stems prostrate and leafy stems ascending, 40–50 cm tall; stems with internodes 2.5–11.5 cm long; young stems grey to greyish-green, with two opposite lines of spreading or curled hairs when young but soon glabrous except at and immediately below the nodes where few hairs persist. Leaves elliptic or ovate-elliptic, becoming more ovate distally, largest leaves 3.9–11.6 × 1.8–5 cm, base attenuate, margin shallowly repand, apex attenuate, upper surface sparsely pubescent, lower surface with hairs largely restricted along main veins and margin; cystoliths dense, linear; lateral veins 7–9 pairs; petiole 3.4–25 mm long, spreading- to antrorse-pubescent on upper side. Inflorescence a narrowly paniculate thyrse, 10.5–21.5 × 3–5.5 cm, ± densely glandular-pilose, hairs ± 1 mm long with a minute gland-tip, and eglandular-puberulous with hairs 0.2–0.3 mm long, or sometimes (*Friis et al.* 7167) more densely eglandular-pubescent with hairs to 0.6 mm long; main axis bracts green, linear-lanceolate, 2.2–5.8 mm long or sometimes proximal-most pairs more leaf-like, up to 10.3 mm long, with eglandular hairs on upper surface and along margin; bracteoles similar to bracts but 2–4.2 mm long; pedicels 0.8–2.7 mm long. Calyx lobes linear-lanceolate, 4.7–6.8 mm long in flower, extending to 7.5–9.5 mm in fruit, glandular-pilose with minute brown gland-tip, and also with shorter finer eglandular hairs especially towards calyx base and margins of lobes. Corolla 15–18 mm long, white with pink to translucent spotting on lower lip, with short eglandular hairs dorsally on tube and extending onto upper lip, with or without longer hairs on tube ventrally, tube pubescent internally below attachment point of stamens; tube 6.7–9.2 mm long, including cylindrical basal portion 2–3 × 1.4–2 mm, throat markedly expanded ventrally, mouth 2.8–4.5 mm in diameter; upper lip hooded, recurved, 5–9 mm long, with 2 rounded lobes 2.3–3 mm long; lower lip protruding, 8–10.6 mm long with 3 rounded lobes 2.8–5 mm long, palate raised upward with central furrow and

**Table 1.** A comparison of the diagnostic characters separating *Isoglossa recurva* from *Isoglossa somalensis* var. *glandulosa*.

| Character | *Isoglossa recurva* | *Isoglossa somalensis* var. *glandulosa* |
|---|---|---|
| Inflorescence form | Narrowly paniculate thyrse | Spiciform or narrowly paniculate thyrse |
| Inflorescence indumentum: glandular hairs | ± densely glandular-pilose, hairs with inconspicuous, minute gland tips | Densely glandular-pilose, hairs with conspicuous, thick gland tips |
| Calyx length: flower / fruit | 4.7–6.8 mm / 7.5–9.5 mm | 6–12 mm / 9–13.2 mm |
| Corolla length | 15–18 mm | (13–) 15.5–27 mm |
| Corolla tube shape and length | Throat markedly expanded ventrally, not expanded dorsally<br>6.7–9.2 mm | Throat expanded both dorsally and ventrally and somewhat saccate<br>8–10.5 mm |
| Cylindrical portion of tube, width | 1.4–2 mm | 2.4–4.2 mm |
| Corolla lips | Upper lip strongly recurved, lower lip clearly protruding | Upper lip not recurved, lower lip not clearly protruding |
| Upper lip length | 5–9 mm | 9.8–11.8 mm |
| Upper lip lobe length | 2.3–3 mm | 0.6–1.6 mm |
| Staminal filament length | ± 2.8 mm | 5–7 mm |
| Anther theca length | 1.1–1.5 mm | 2.3–2.8 mm |
| Ovary length | ± 1.5 mm | 2.6–3 mm |
| Style length | ± 3.9 mm | 10–10.7 mm |

with raised "herring-bone" venation, glabrous. Stamens inserted ± 5 mm from base of corolla tube; filaments ± 2.8 mm long, glabrous; anther thecae overlapping by more than half their length and oblique; upper theca 1.3–1.4 mm long, lower theca 1.1–1.5 mm long, glabrous. Pistil glabrous; ovary ± 1.5 mm long; style ± 3.9 mm long; stigma ± 0.3 mm long, minutely bilobed. Capsule 11.8–16.6 mm long, glabrous; seeds ca. 2.1 × 1.5 mm, tuberculate with short blunt tubercles.

*Distribution*

Recorded from Gambela and South West Ethiopia Peoples' regional states in Illubabor and Keffa floristic regions of Southwest Ethiopia (Fig. 2).

*Habitat & Ecology*

Recorded from dense montane forest with "*Schefflera*" (probably = *Astropanax abyssinicus* (Hochst. ex A.Rich.) Seem.), *Ficus* L., *Aningeria adolfi-friederici* (Engl.) Robyns & Gilbert and *Cyathea* Sm., and in *Oldeania alpina* (K.Schum.) Stapleton bamboo thicket; 2100–2550 m asl.

*Conservation status*

This species is restricted to five locations in the Kefa and Illubabor floristic regions of Ethiopia, with an estimated AOO of 20 km$^2$ and EOO of 4,588 km$^2$. While this AOO value is likely underestimated due to incomplete botanical coverage in this part of Ethiopia, it is considered likely that the true value falls within thresholds for a threatened category under criterion B2. Two of the five locations lie within protected areas, namely the Sele Anderacha National Forest Priority Area and the Mizan-Teferi Controlled Hunting Area, the latter also falling partly within the Kefa UNESCO-MAB Biosphere Reserve. However, protection of the forest for biodiversity within these reserves is considered to be highly limited and the expansion of agriculture, grazing and human settlement into the forest, and tree felling for charcoal production, are inferred to threaten this species through most of its range, particularly in the vicinity of the main transport routes and towns such as Mizan Teferi and Gecha. In addition, several of these forests are managed for coffee production which may impact this species negatively by clearance of the ground flora.

It is therefore inferred to be undergoing a continuing decline in the area, extent, and quality of habitat and is preliminarily assessed as **Endangered B1ab(iii)+2ab(iii)**.

This species is currently known from one Important Plant Area (IPA) in Ethiopia: the Mount Karkarha IPA, which qualifies under criterion A(i) due to the presence of two other globally threatened Ethiopian endemic species, *Dorstenia soerensenii* Friis (EN B1ab(iii)+2ab(iii)) and *Scadoxus nutans* (Friis & I.Bjørnstad) Friis & Nordal (VU B1ab(iii,v)) for which this IPA is considered to be an important site (House *et al.* 2023). The presence of *Isoglossa recurva* at this site provides further evidence of its importance for plant diversity. This species is also likely to occur within the Shako-Bench Forest IPA and the Bonga Forests IPA but has not yet been recorded from


**Figure 1.** *Isoglossa recurva.* A. Habit. B. Mature leaf, adaxial surface. C. Node of stem showing indumentum. D. Detail of stem hairs. E. Flower, side view. F. Stamen, showing attachment to corolla tube and associated indumentum. G. Mature capsule within calyx. H. Outer face of capsule valve. J. Indumentum of calyx lobe in fruit. K. Seed. A, C–E and J from *Gilbert et al. 4203*; B, F–H and K from *Friis et al. 9814*. Drawn by Andrew Brown.

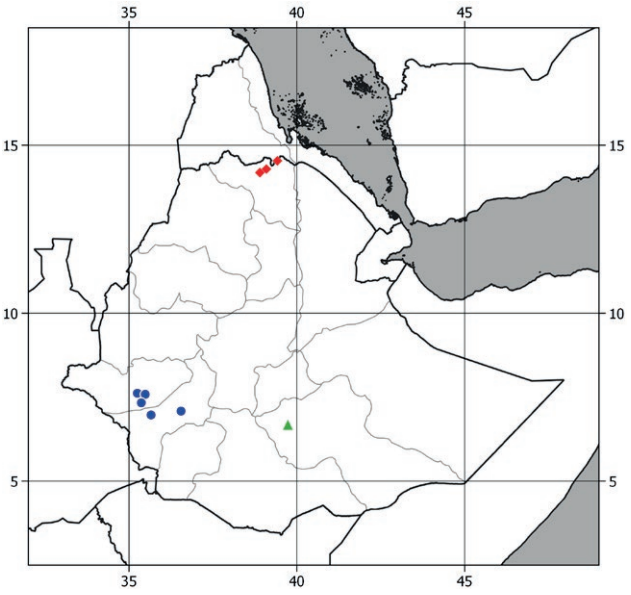


**Figure 2.** Distribution of *Isoglossa recurva* (blue circles), *I. gregorii* (green triangle) and *Hypoestes microphylla* (red diamonds) in Ethiopia and Eritrea.

there. The remnant forested areas north of Tepi in which this species occurs may also qualify as an IPA but this area has not yet been assessed for its IPA status.

*Taxonomic notes*

The cited specimens display some differences in leaf size and inflorescence length. Two populations with small leaves and small, slender inflorescences (*Friis et al. 7167*, *Puff & Ensermu 861109-1/4*) look superficially rather different to the other specimens but they share with them the distinctive corolla form and inflorescence indumentum, and the flowers are also closely comparable in size. We have no doubt that they are conspecific. It is likely that these slender variants are a result of suboptimal environmental conditions. However, it should be noted that several species of *Isoglossa* are long-lived but monocarpic and often mass-flowering on a cycle of several years (plietesial; see Darbyshire 2009). In such cases, occasional individuals can flower more early in the growth cycle than most of the population and in those cases, the plants can appear smaller in stature than fully mature individuals. However, we do not yet have evidence as to whether or not *I. recurva* is a plietesial species.

Given their geographic proximity, *Isoglossa recurva* is most likely to be confused with *I. somalensis*, and in particular with var. *glandulosa* which shares the long-glandular indumentum of the new species (see below). The two are readily separated by the characters listed in the Recognition and Table 1; the corolla morphology is particularly diagnostic. See also the key to Ethiopian species below. However, it should be noted that only the eglandular var. *somalensis* is sympatric with *I. recurva*; indeed, the two have been recorded together at the same site near Felege Salem village in Keffa floristic region by C. Puff & Ensermu K. (their numbers *861111-1/4* and *861111-1/6*).

The corolla morphology – the markedly expanded ventral side of the tube, reflexed upper lip and protruding lower lip – and the inflorescence form and indumentum of *Isoglossa recurva* are most similar to that of *I. ventricosa* I.Darbysh. from the Mufindi Highlands of southern Tanzania (Darbyshire 2009), hence these species are compared in the Diagnosis.

*Additional specimens examined (paratypes)*

**ETHIOPIA: Illubabor Region:** Mocha Awraja, 21 km from Tepi (on the track to Gecha), 9 Nov. 1986 (fl.), *Puff & Ensermu 861109-1/4* (ETH!); 65 km north of Tepi, along the new road to Gore, between Gecha and Macha, 16 Nov. 1995 (fl., fr.), *Friis et al. 7167* (C, ETH!, K!); **Keffa Region:** Kaka [Karkarha] Mountain, near Mizan Teferi, 13 Jan. 1976 (fl.), *Gilbert & Rankin 4203a* (K!); Kefa Awraja, 52 km from (S of) Bonga towards the border of Kefa Kulo Konta Awraja (= c. 5 km beyond Felege Salem Village), 11 Nov. 1986 (fl., fr.), *Puff & Ensermu 861111-1/4* (ETH!).

***Isoglossa somalensis*** Lindau, Annuario del Reale Ist. Bot. di Roma. 6: 82. 1895.

See Friis & Vollesen (2005: 445); Ensermu (2006: 494), pro parte; Darbyshire et al. (2015a: 349).

Type: Ethiopia, "inter Alghe et Oi", 16 Sept. 1893 (fr.), *D. Riva 1293* (holotype FT! [FT003267]; isotype B, photo at K!) – see note.

(=) *Isoglossa ovata sensu* Andrews (1956: 177), non E.A.Bruce.

*Description*

Perennial herb or slender subshrub with basal stems prostrate, leafy stems ascending to erect or sometimes straggling in bushes or undergrowth, 30–490 cm tall; stems with internodes 2–16 (– 19) cm long; young stems greyish-green or light/dark green to violet-tinged, with two opposite lines of spreading or curled hairs, sometimes restricted to immediately below the

nodes when mature, sometimes scattered hairs persist or glabrous. Leaves elliptic, ovate-elliptic or lanceolate, becoming more ovate distally, largest leaves 3–12.7 × 1.4–6.6 cm, apex attenuate to acute, or attenuate-acuminate, base attenuate, cuneate or oblique or distalmost leaves obtuse to rounded, margin entire to shallowly repand or crenate; with ± dense inconspicuous antrorse hairs along the main vein, lateral veins and margins on both surfaces; cystoliths dense, linear; lateral veins 4–12 pairs; petiole 0.4–8.2 cm long, spreading- to antrorse-pubescent mainly on upper surface and margin. Inflorescence terminal, a spiciform or narrowly to broadly paniculate thyrse, 5–35 × 2–21 cm, axes with numerous short eglandular hairs only or sometimes also densely glandular-pilose, these with conspicuous dark-brown gland tips; branching along main axis opposite, main axis bracts green, those in proximal portion of inflorescence ovate or elliptic, 12–47 × 3.5–26 mm, those in distal portion gradually reducing in size or more rarely quickly becoming linear-lanceolate, 2.2–15 × 1.7–9.4 mm long, with eglandular hairs on upper surface and along margin; bracteoles similar to bracts but linear-lanceolate, 2–4.3 mm long; pedicels 1–2 mm long. Calyx lobes linear-lanceolate, 4–12 mm long in flower, extending to 5–30 mm in fruit, with short eglandular hairs and sometimes also densely glandular-pilose with thickened dark-brown gland-tips. Corolla (13–) 16–27 mm long, white to pale lilac-pink, with red-pink, purplish or purple-brown spots and stripes on lower lip and into throat, densely pubescent on dorsal part of the corolla externally, sometimes tube pubescent internally below attachment point of stamens; tube (6.7–) 8–14 mm long, including short cylindrical basal portion 0.8–3.1 × 2.3–4.8 mm, throat expanded both dorsally and ventrally and somewhat saccate, mouth 4.5–14 mm in diameter; upper lip hooded, (6.5–) 8–11.8 mm long, with 2 rounded lobes 0.6–3 mm long; lower lip 7.3–15.5 mm long, with 3 rounded lobes 1.5–6 mm long, palate raised upwards with a central furrow and with somewhat prominent "herringbone" venation, glabrous. Stamens inserted 5–9.5 mm from base of corolla tube; filaments 5–8 mm long, glabrous; anther thecae overlapping by half their length or slightly more than half their length and oblique or sometimes patent to each other; upper theca 1.5–2.8 mm long, lower theca 1.4–2.7 mm long, glabrous. Pistil with ovary 1.7–3 mm long, glabrous or shortly pubescent at apex; style 7.7–11.5 mm long; stigma 0.2–0.3 mm long, minutely bilobed. Capsule (11–) 15–23 mm long, glabrous or sometimes with glandular hairs with dark- brown gland tips towards apex; seeds ca. 1.8–2.7 × 1.8–2.7 mm, tuberculate with short blunt tubercles.

*Conservation status*

*Isoglossa somalensis* is widespread in Ethiopia and extends to South Sudan. Its large EOO of 362,810 km$^2$ greatly exceeds thresholds for a threatened category under criterion B1. It occurs at many more than 10 locations and is not thought to be severely fragmented or subject to extreme fluctuations. Some of the subpopulations are likely to be under significant threat from expansion of agriculture, human settlement and grazing, even in cases where they occur within protected areas, hence the global population is likely to be in decline and some subpopulations will probably have been lost. However, it is not thought that past or future rates of population reduction are high enough for this species to qualify as threatened under criterion A. Therefore, this species is preliminarily assessed as **Least Concern**.

***Isoglossa somalensis*** Lindau var. ***somalensis***

*Description*

Mature leaves 4.5–12.7 × 1.7–6.6 cm. Inflorescence a ± broadly paniculate thyrse with short eglandular hairs only, rarely with few scattered glandular hairs.

*Distribution*

*Isoglossa somalensis* var. *somalensis* is recorded from Imatong State in South Sudan and from Gambela, Oromia, South Ethiopia and South West Ethiopia Peoples' regional states and Addis Ababa city, in Arsi, Bale, Gamo Gofa, Harer, Illubabor, Keffa, Shewa and Sidamo floristic regions of Ethiopia (Fig. 3). It may also occur in northern Uganda but has not yet been collected from there. Despite its name, this species does not occur in Somalia.

*Habitat & Ecology*

Understorey of moist montane forest, occurring in a range of forest types with dominant tree species including *Afrocarpus gracilior* Pilg. and/or *Juniperus procera* Hochst. ex Endl., to more mixed assemblages with e.g., *Acacia abyssinica* Hochst. ex Benth. (*Vachellia abyssinica* (Hochst. ex Benth.) Kyal. & Boatwr.), *Albizia gummifera* (J.F.Gmel.) C.A.Sm., *Aningeria adolfi-friederici* (Engl.) Robyns & Gilbert, *Astropanax abyssinica*, *Bersama abyssinica* Fresen., *Brucea antidysenterica* J.F.Mill, *Croton macrostachyus* Hochst. ex Delile, *Galiniera saxifraga* (Hochst.) Bridson, *Hagenia abyssinica* (Bruce) J.F.Gmel, *Erythrina brucei* Schweinf., *Macaranga kilimandscharica* Pax, *Maytenus* Molina, *Myrsine melanophloeos* (L.) R.Br. ex Sweet, *Ocotea kenyensis* (Chiov.) Robyns & R.Wilczek,

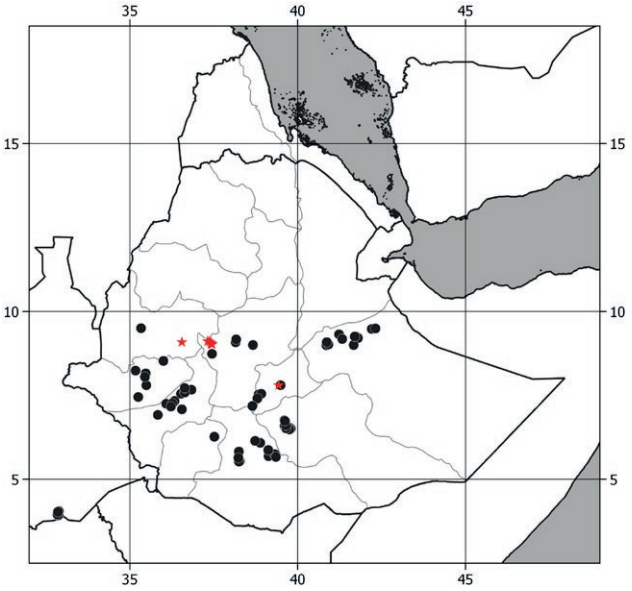


**Figure 3.** Distribution of *Isoglossa somalensis* var. *somalensis* (black circles) and specimens intermediate between var. *somalensis* and var. *glandulosa* (red stars) in Ethiopia and South Sudan.

*Olea welwitschii* (Knobl.) Gilg & G.Schellenb. and/or *Syzygium afromontanum* (F.White) Byng. It also occurs along paths, margins and clearings in forest and sometimes in secondary scrub. Recorded over a wide elevation range, from 1600–3050 m asl.

*Conservation status*

This variety occupies the full EOO (362,810 km$^2$) of *Isoglossa somalensis* s.l. and the other information provided in the preliminary assessment of the species as a whole (see above) is equally applicable here; this variety is therefore preliminarily assessed as **Least Concern**.

*Taxonomic notes*

Leaf shape and leaf base are variable in this variety. Most of the specimens have elliptic leaves with a cuneate/attenuate base. However, *Gillett 5198* (Harar region) and *de Wilde 8705* (Shoa region) have ovate leaves with rounded bases whereas *Friis et al. 3577* (Bale region), *de Wilde 9205* (Arsi region) and *Chaffey 1112* (Arsi region) have more lanceolate leaves with attenuate bases. This variety nearly always lacks glandular hairs throughout, but there are rare specimens with very few scattered glandular hairs on the inflorescence.

The type specimen at FT is attribute to Dr. Riva but the printed label states "Legit Coll. Ruspoli. Dr. Riva".

*Additional specimens examined*

**ETHIOPIA: Arsi Region:** Chellemo forest, 45 miles W of Addis Ababa, 8 Dec. 1953 (fl., fr.), *Mooney 5094* (ETH!, FT!, K!); E slope of Mt. Boruluccu along road to Ticcio, about 25 km SE of Asella, 6 Dec. 1965 (fl.), *de Wilde & de Wilde-Duyfjes 9205* (ETH!, K!); Munessa forest, Nov. 1976 (fl.), *Chaffey 1112* (K!); Chilalo Awraja, ± 9 km W of Kersa, 5 Dec. 1982 (fl.), *Ensermu et al. 561* (ETH!); **Bale Region:** ca. 20 km N of Delo Menna (Masslo), on road to Goba, 28 Oct. 1984 (fl., fr.), *Friis et al. 3577* (K!); Dello Awraja, Harenna forest, Shawe swamp, 15 Dec. 1986 (fl., fr.), *Mesfin 5712* (ETH!); Dello Awraja, Harenna forest, 21 km from turnoff near Shisha River, 16 Dec. 1986 (fl., fr.), *Mesfin 5767* (ETH!); Dello Awraja, c. 23–25.5 km on Dello Menna-Goba road, 28 Dec. 1990 (fl., fr.), *Mesfin et al. 8245* (ETH!); Dollo Awraja, c. 20.5 km on Dello Menna-Goba road, 28 Dec. 1990 (fr.), *Mesfin et al. 8253* (ETH!); Dalo Awraja, Tate, 16 km from Dalo Menna on the road Goba, (Tate), Harenna forest, 9 Oct. 1993 (fl.), *Ensermu & Melaku 2577* (ETH!); Dello Mena Werede, 25 km from Delo Menna towards Goba, 31 Jan. 1995 (fr.), *Sebsebe et al. 4369* (ETH!); 42–43 km from Delo Menna towards Goba to the western side of the main road, 5 Feb. 1995 (fl., fr.), *Sebsebe et al. 4387* (ETH!); 42 km from Delo Menna towards Goba 11 Feb. 1995 (fl.), *Sebsebe et al. 4407* (ETH!); **Gamo Gofa Region:** Gughe highlands, 9 km from Chencha on road to Dorse, 10 Oct. 1989 (fl., fr.), *Gilbert* & *Phillips 9249* (ETH!, K!); **Harar Region:** between Harer and Addis Ababa, Oct. 1898 (fl.), *Wellby s.n.* (K!); Garra pass, 24 Feb. 1933 (fl.), *Gillett 5198* (K!); Gara muleta, 20 Oct. 1960 (fl.), *IECAMA J-4* (K!); S face of Gara Muleta Mountain, c. 50 km due W of Harar, 24 Sept. 1961 (fl.), *Burger 1044* (ETH!, K!); near Firta, Jan. 1961 (fl., fr.), *IECAMA RS-240* (K!); Gara Ades, 21 Oct. 1962 (fl., fr.), *Burger 2255* (K!); S face of Gara Mullata Mountain, c. 50 km due W of Harar, 2 Aug. 1962 (fl.), *Burger 2007* (ETH!, FT!, K!); 1 km from Harawacha along road to Deder, track to the left leading to the top of the mountain, 28 July 1967 (fl.), *Westphal & Westphal-Stevels 914* (K!); 80 km from Asebe Teferi, road to Kobbo, 18 Aug. 1967 (fl.), *Westphal & Westphal-Stevels 1347* (K!); road Bedeno-Longhe, 16 km from Bedeno, 26 Oct. 1967 (fl.), *Westphal & Westphal-Stevels 2434* (K!); NW face of Gara Mullata, about 36 km on the road from Kulubi via Whater to Mennonite Mission at Badenno, 9 Jan. 1969 (fl.), *de Wilde 4395* (K!); ± 29 km from Harar on road to Jarso (Ejersa Goro), 25 Sept. 1980 (fl.), *Ensermu & Tamrat 374* (ETH!); Chercher and Adal and Gara Gracha Awraja, Asebe Teferi-Gelemso road, 21 Sept. 1982 (fl., fr.), *Puff et al. 820921-3/2* (ETH!, K!); Gara Mulleta Awraja, 75 km SW Dire Dawa closer

to Girawa town, 20 Apr. 1983 (fl.), *Sebsebe & Ensermu 1393* (ETH!); Harer Zuriya Awraja, 48 km from Harer (13 km from Jarso) on the road to Gursum, 22 Jan. 1987 (fl., fr.), *Ensermu & Petros 1935* (ETH!, K!); 7 km on Gelemso road from Asebe Teferi road, 18 Oct. 2006 (fl., fr.), *Friis et al. 12511* (K!); **Illubabor Region:** about 20 km S of Gore, along the Gore-Mocha-track, 16 Dec. 1972 (fl., fr.), *Friis et al. 1801* (ETH!, K!); around Gumaro tea plantation, 9 Jan. 1978 (fl., fr.), *Mesfin & Sebsebe 186* (ETH!); Gore Awraja, 40 km from Gore on the way to Gambella, 9 Oct. 1980 (fl.), *Mesfin & Sebsebe 1366* (ETH!); Gore Awraja, 37–41 km from Gore on the road to Masha, 1 Feb. 1984 (fl., fr.), *Ensermu et al. 836* (ETH!); Gore Awraja, c. 15 km S of Gore (on new Mocha and Tepi road), 4 Nov. 1986 (fl., fr.), *Puff & Ensermu 861104-3/2* (ETH!); 55 km N of Tepi, along the new road to Gore, between Gecha and Macha, 16 Nov. 1995 (fl.), *Friis et al. 7165* (ETH!, K!); **Keffa Region:** Santama, 18 m NW of Jimma, 11 Oct. 1954 (fl., fr.), *Mooney 5987* (ETH!, K!); Jimma, 12 Aug. 1961 (fl., fr.), *Brehme s.n.* (ETH!); Bonga, about 5 km S of R.C. Mission, 21 Dec. 1965 (fl., fr.), *de Wilde* and *de Wilde-Duyfjes 9365* (ETH!, K!); Belleta forest, some 40 km SW of Jimma on Bonga road, 10 Nov. 1970 (fl., fr.), *Friis et al. 252* (ETH!, FT!, K!); Belleta forest, 10 km N of Bonga, or 88 km SW of Jimma, 1 Jan. 1972 (fl., fr.), *Ash 1459* (ETH!, K!); Bonga beyond the Catholic Mission, near the water fall (450 km W of Addis Ababa), 7 Oct. 1980 (fl.), *Mesfin & Sebsebe 1297* (ETH!); Woshi, 28 May 1985 (fl.), *Admasu & Reinhard 625* (ETH!); Kea Awraja, c. 37–32 km S of turnoff from Mizan Teferi-Bonga road (= new road S to Bachuma and Maji, c. 10-5 km from Shewa Gimira), 10 Nov. 1985 (fl., fr.), *Puff & Ensermu 861110-2/4* (ETH!); Kefa Awraja, 52 km from (S of ) Bonga towards the border of Kefa and Kulo Konta Awraja), c. 5 km beyond Felege Salem village, 11 Nov. 1986 (fl.), *Puff & Ensermu 861111-1/6* (ETH!); Jimma Awraja, Belete forest, 35–44 km from Jimma on the road to Bonga, 28 Dec. 1998 (fl., fr.), *Ensermu & Aschalew Getahun 4147* (ETH!); Belete [Belleta] forest, SW of Jimma on road to Bonga, 16 Sept. 2003 (fl.), *Brummitt 20926* (K!); **Shewa Region:** Foresta di Bagieo (Gaggi), 22 April 1937 (fl.), *Giordano 500* (FT!); Bosco di Gaggi, 13 May 1937 (fl., fr.), *Senni 752* (FT!); Woliso, 7 Nov. 1958 (fl.), *Mooney 7612* (ETH!, FT!, K!); Hayikoch & Butajira Awraja Lepiz Gambo state forest 22 km E of (Arsi) Negele (=E escarpment of Rift Valley), 24 Sept. 1982 (fl.), *Puff et al. 820924-1/7* (K!); Hayikoch and Butajira Awraja, c. 10 km E of Shashamene on Goba road, 25 Sept. 1982 (fl., fr.), *Puff et al. 820925-1/2* (ETH!); Hossaina, 15 Mar. 1985 (fr.), *Fichtl 542* (ETH!); Jibat and Mecha Awraja, Chilimo forest, 7–12 km from Ginchi on the road to Jeldu, 30 Dec. 1986 (fl.), *Ensermu & Zemede 1803* (ETH!); Jibat and Mecha Awraja, 2–3 km W of Shenen, 8 Dec. 1987 (fl.), *Ensermu & Petros 1989* (ETH!); **Sidamo Region:** Socorà, 5 Nov. 1937 (fl.), *Vàtova 426* (FT!); idem, 10 Nov. 1937 (fl., fr.), *Vàtova 498* (FT!); idem, 10 Nov. 1937 (fr.), *Vàtova 863* (FT!); idem, 10 Nov. 1937 (fl.), *Vàtova 885* (FT!); Afrera–Irba Moda, 17 Nov. 1937 (fl., fr.), *Vàtova 761* (FT!); Agere Mariam (Alghe), 1 Dec. 1952 (fl., fr.), *Gillett 14560* (FT!, K!); Mogade forest, 6 Jan. 1954 (fr.), *Mooney 5468* (ETH!, FT!, K!); Wadere, 26 Jan. 1954 (fr.), *Mooney 5635* (ETH!, FT!, K!); Zembaba, ± 25 km SE of Adola, near wood factory on road side, 19 Oct. 1980 (fl., fr.), *Ensermu 442* (ETH!); Jemjem Awraja, 84–88 km from Negele on road to Kibre Mengist (=SE of Kontema), 29 Dec. 1982 (fl., fr.), *Puff & Ensermu 821229-5/3* (ETH!); Jemjem Awraja, 31 km N of Kibre Mengist on road to Wendo, 30 Dec. 1982 (fl., fr.), *Puff & Ensermu 821230-1/2* (ETH!); Arero Awraja, Gedebada, ca. 20 km N of Agere Mariam (c. 444 km S of Addis Ababa on Addis-Moyale road), 8 Oct. 1985 (fl., fr.), *Mesfin et al. 3136* (ETH!); Arero Awraja, c. 2–17 km N of Agere Mariam, 14 Oct. 1985 (fl.), *Mesfin et al 3604* (K!, ETH!); Mogade forest, S of Agere Mariam, 6 Nov. 1990 (fl., fr.), *Friis et al. 6231* (K!); Jemjem Awraja, Harru, 17 km from Wadere on the road to Adola, 14 Oct. 1993 (fl.), *Ensermu & Melaku 2624* (ETH!); 86 km N of Yabello on the road to Agere Mariam and Addis Ababa, Mogade forest, 20 Oct. 1993 (fl.), *Ensermu & Melaku 2657* (ETH!); Arero Awraja, Mogade forest about 2 km S of Agre Mariam on the road to Yabello, 24 Dec. 1998 (fl.), *Ensermu & Aschalew 4082* (ETH!).

**SOUTH SUDAN: Imatong State:** Itibol to Ibahin, 18 Dec. 1935 (fl., fr.), *Thomas 1658* (K!); Imatong Mountains, 12 Feb. 1936 (fr.), *Johnston 1480* (K!); Gilo, Imatongs, 10 May 1954 (fl.), *Jackson 3132* (K!); Imatong Mountains, 13 Feb. 1976 (fl., fr.), *Howard IM 44* (K!); near Gilo village, 8 Nov. 1980 (fl., fr.), *Friis & Vollesen 5* (K!); between Gilo and Mt Konoro, 23 Nov. 1980 (fl.), *Friis & Vollesen 406* (C, K!).

***Isoglossa somalensis*** Lindau var. ***glandulosa*** Hanny, G.Hoban & I.Darbysh., **var. nov.**

Type: Ethiopia, Sidamo Region, 23 km from Bore towards Kibre Mengist, 13 Dec. 1990 (fl., fr.), *Sebsebe & Ensermu 2603* (holotype ETH!; isotypes C, K! [K005326598]).

*Diagnosis*

Var. *glandulosa* differs from var. *somalensis* in having a dense glandular indumentum on the inflorescence (versus eglandular only or rarely with very few scattered

**Table 2.** The main morphological differences between *Isoglossa somalensis* var. *somalensis* and *Isoglossa somalensis* var. *glandulosa*.

| Character | *Isoglossa somalensis* var. *somalensis* | *Isoglossa somalensis* var. *glandulosa* |
|---|---|---|
| Leaf size | 4.5–12.7 × 1.7–6.6 cm | 2–8.6 × 1.4–5 cm |
| Inflorescence form | Broadly paniculate thyrse | Spiciform or narrowly paniculate thyrse |
| Inflorescence indumentum | Dense short eglandular hairs, rarely also with few scattered glandular hairs | Densely glandular-pilose and also with dense eglandular hairs |

glandular hairs), and in the inflorescence typically being spiciform or narrowly paniculate (versus ± broadly paniculate); Table 2.

*Description*

Mature leaves 2–8.6 × 1.4–5 cm. Inflorescence spiciform or a narrowly paniculate thyrse, densely glandular-pilose with conspicuous, thick dark-brown gland tips in addition to the shorter eglandular hairs.

*Distribution*

*Isoglossa somalensis* var. *glandulosa* is recorded from Oromia, Sidama and South Ethiopia regional states in the Bale and Sidamo floristic regions of Ethiopia (Fig. 4).

*Habitat & Ecology*

Recorded from montane forest with, e.g., *Hagenia abyssinica*, "*Schefflera*" (probably *Astropanax abyssinicus*), *Ilex mitis* (L.) Radlk., *Allophylus abyssinicus* (Hochst.) Radlk. and *Croton macrostachyus* including in clearings; also occurs in bamboo (*Oldeania alpina*) thicket and *Erica-Hypericum-*"*Schefflera*" forest near the treeline; 2300–3400 m asl.

*Conservation status*

This variety is restricted to high montane areas in the Bale and Sidamo floristic regions of Ethiopia. The estimated AOO and EOO are 80 km$^2$ and 12,558 km$^2$ respectively. This AOO value may be underestimated due to incomplete botanical coverage in this part of Ethiopia, but it is considered likely that the true value falls within thresholds for a threatened category under criterion B2. This variety is known from 11 locations some of which are under threat from expansion of agriculture and human settlement. These threats are inferred to be contributing to a continuing decline in the area, extent, and quality of suitable habitat for this taxon. While most of this taxon's known distribution is within protected areas, they are not strictly managed and are still impacted by agricultural encroachment and grazing. As it meets the Vulnerable threshold under criteria B1 and B2 and is undergoing a continuing decline, but narrowly exceeds the threshold for number of locations, this variety is preliminarily assessed as **Near Threatened B1ab(iii)+2ab(iii)**.

*Taxonomic notes*

Some specimens from Bale region have a narrowly paniculate thyrse, with well-developed, though short, secondary peduncles and the bracts typically reducing from ovate to linear-lanceolate moving up the inflorescence rachis. Plants from the Sidamo region usually have a spiciform inflorescence with secondary peduncles very short or absent and there is little or no reduction in bract size up the rachis, the bracts being ovate throughout. However, there is variation in this trend, for example *Gilbert & Ermias 8478* from Bale has a spiciform inflorescence, whilst *Mooney 8200* and *de Wilde & de Wilde-Duyfjes 8381* from Sidamo have narrowly paniculate thyrses. In all cases, the inflorescences are markedly narrower than in var. *somalensis*.

The large majority of specimens of *Isoglossa somalensis* are easily separated into the two taxa defined here,

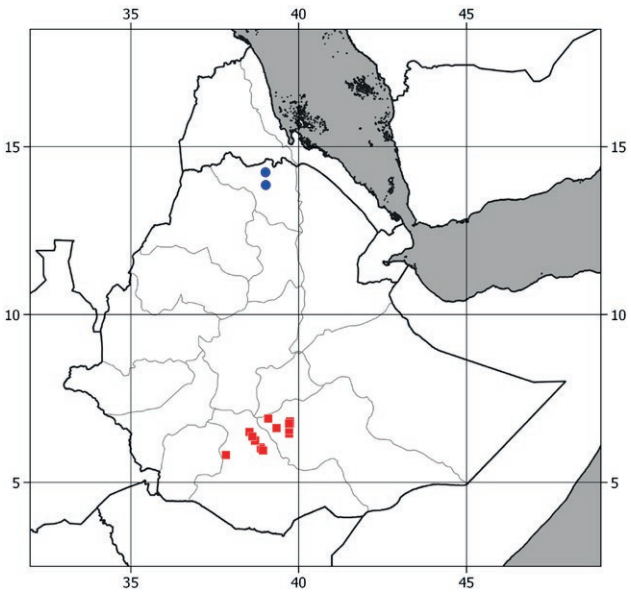


**Figure 4.** Distribution of *Isoglossa somalensis* var. *glandulosa* (red squares) and *Barleria praetermissa* (blue circles) in Ethiopia.

which look very distinct from one another and are worthy of recognition. However, there are a few intermediate specimens and the two are not wholly allopatric. Unusually, most of the intermediate specimens are from Shewa Region, thus not within the current known range of var. *glandulosa*. These intermediate specimens of *I. somalensis* (see citations below) have a glandular inflorescence indumentum similar to var. *glandulosa*, though typically less dense, however they have a more lax inflorescence an often larger leaves, tending towards var. *somalensis*. Furthermore, on *Friis et al. 3722* (and *3722A*) from Bale Region, the collectors note that "glandular and glabrous forms intermix"; however, the two specimens seen both have glandular hairs, one more dense than the other, indicating that true var. *somalensis* is not present at that site. Whether these intermediate forms are the product of ancient hybridisation when the range of var. *glandulosa* was wider than today, or whether they should be treated as a third infraspecific taxon is uncertain. However, they are not given formal taxonomic status at present and, given their presence, variety appears to be the most appropriate rank at which to separate the two formally recognised taxa here. Future molecular studies may help to elucidate the status of these few intermediate populations.

*Additional specimens examined (paratypes)*

**ETHIOPIA: Bale Region:** 46 km from Goba along the road to Delo Menna (Masslo), 2 Nov. 1984 (fl.), *Friis, Gilbert* & *Vollesen 3722* (K) - see note; 45 km N of Dolo Menna on the road to Goba, 12 Nov. 1986 (fl.), *Gilbert & Ermias 8478* (ETH!, K!); Dello Awraja in Harenna forest, c. 16 km on Dello Menna-Goba road, 14 Dec. 1986 (fl., fr.), *Mesfin 5674* (ETH!); Dello Awraja in Harenna forest, c. 8 km S of Kocha, 15 Dec. 1986 (fl.), *Mesfin 5698* (ETH!); Harenna forest, 24 Dec. 1989 (fl.), *Mesfin 7602* (ETH!); near road to Dolo Menna, Harenna forest below Rira, 23 Dec. 1989 (fl.), *Miehe 103* (K!); above Rira, 9 Feb. 1990 (fl.), *Miehe 2148* (K!); Mendeyu Awraja, Rira Town, along Rira stream, 28 Dec. 1990 (fl., fr.), *Mesfin et al. 8144* (ETH!); Bale forest, 27 Nov. 1993 (fl., fr.), *Fichtl 921* (ETH!); 6 km [from] Rira village on the road to Delo Menna, 8 Dec. 1993 (fl.), *Ensermu & Melaku 2570* (ETH!); 47 km from Delo Menna towards Goba, 6 Feb. 1995 (fl., fr.), *Sebsebe et al. 4398* (ETH!); 48 km from Delo Mena towards Goba, 8 Feb. 1995 (fl.), *Sebsebe et al. 4402* (ETH!); Region 4, Bale zone, Adaba woreda, Tarura area, 10 km S of Dodola Peasant Association, edge of Witte forest, 11 Oct. 1995 (fl., fr.), *Sebsebe & Ensermu 4781* (ETH!); **Sidamo Region:** E slopes [of] Mt. Delo, 28 Jan. 1953 (fl., fr.), *Gillett 14979* (FT!, K!); Gajaso, 16 Mar. 1958 (fl.), *Smeds 1301* (K!); Shosho, 16 Mar. 1958 (fl.), *Smeds 1310* (K!); near Irba Meda, 10 Oct. 1959 (fl.), *Mooney 8200* (ETH!, K!); Aghere Selam, 13 Dec. 1962 (fl.), *Mooney 9697* (ETH!); between Wondo & Hagere Selam, 21 Oct. 1965 (fl., fr.), *de Wilde & de Wilde-Duyfjes 8381* (ETH!, K!); road Hagere Selam to Kebre Mengist, 39 km from Agere Selam, 15 km from Bore, 18 Nov. 1967 (fl., fr.), *Westphal* & *Westphal-Stevels 2696* (K!); 43 km S of Agere Selam on the road to Kebre Mengist, 1 Nov. 1972 (fl.), *Friis et al. 765* (ETH!, K!); ca. 23 km from Adola on the road to Bore and Awassa, 5 Apr. 1993 (fl., fr.), *Ensermu et al. 2516* (ETH!); Jemjem Awraja, 17 km from NW of Adola on the road to Bore and Addis Abeba, 15 Oct. 1993 (fl.), *Ensermu & Melaku 2640* (ETH!); 63 km from Bore towards Kebre Mengist forest, 24 Oct. 1996 (fl., fr.), *Melaku & Kaleab* 172 (ETH!).

*Specimens examined that are intermediate between var.* somalensis *and var.* glandulosa (Fig. 3).

**ETHIOPIA: Arsi Region:** on track to Ticcio, 28 Nov. 1966 (fl., fr.), *Gilbert 139* (ETH!, K!); **Bale Region:** 46 km from Goba along the road to Delo Menna (Masslo), 2 Nov. 1984 (fl.), *Friis et al. 3722A* (K!); **Shewa Region:** Scioa, Kachiny, 21 Oct. 1935 (fl., fr.), *Taschdjian 143* (FT!); 40 km W of Ambo, along road to Lekemti, 9 Nov. 1965 (fl.), *de Wilde & de Wilde-Duyfjes 8705* (ETH!, K!); 8 km W of Ghedo, 20 Sept. 1975 (fl.), *Gilbert & Thulin 920* (K); c. 5 miles W of Ghedo, on Addis Ababa to Lekemti road, May 1978 (fl., fr.), *Ash 3301* (K!); Finchoa Magoria (Gedo), 5 Feb. 1979 (fl.), *A. B. & G. Tadesse 156* (ETH!); 26 km N of Gedo on the road to Fincha, 27 Oct. 1982 (fl.), *Hedrén 521* (ETH!); Jibat and Mecha Awraja, Gbedo Wereda, 183 km from Addis Ababa on the way to Nekemt, 25 Oct. 1985 (fl.), *Sebsebe & Ensermu 1516* (ETH!); Jibat and Mecha Awraja, c. 18 km from Gedo on the road to Fincha, 30 Nov. 1986 (fl., fr.), *Ensermu & Zemede 1799* (ETH!).

***Isoglossa gregorii*** (S.Moore) Lindau in H.G.A.Engler (ed.), Pflanzenw. Ost-Afrikas, C: 372. 1895.

See Darbyshire et al. (2010: 621; 2015b: 147).

(≡) *Homilacanthus gregorii* S.Moore, J. Bot. 32: 129. 1894.

Type: Kenya, Mt Kenya, 24 June 1893 (fl., fr.), *J. W. Gregory s.n.* (holotype BM! [BM000931245]).

*Distribution*

Widespread in the mountains of East Africa, recorded from southern Ethiopia (newly recorded here), Uganda, Kenya, Tanzania, eastern D. R. Congo, Malawi and

eastern Zimbabwe. In Ethiopia it is known only from Oromia regional state, in the Bale floristic region (Fig. 2).

*Habitat & Ecology*

A species of moist montane and submontane forest and forest margins, in Ethiopia recorded from Mixed Afromontane *Aningeria-Olea-Croton-Prunus* forest at ca. 2,000 m asl.

*Conservation status*

This is a widespread and locally common species and has been assessed as **Least Concern** (Darbyshire et al. 2010, 2015b).

*Taxonomic notes*

The Ethiopian specimen cited below was uncovered by the last author (I.D.) during a visit to the ETH herbarium in 2010, but this new country record has not been published until now; this species is incorporated into the revised key to Ethiopian *Isoglossa* below.

*Additional specimens examined*

**ETHIOPIA: Bale Region:** Dello Awraja, Harenna Forest, ca. 4 km S of Kecha, 15 Dec. 1986 (fl., fr.), *Mesfin 5702* (ETH!).

*Revised key to species of Isoglossa in Ethiopia*

1. Inflorescences axillary with bracts leaf-like, peduncles widely divergent from stems, patent or deflexed; leaf blades (1.7 –) 2–3 × 1–1.5 (– 1.8) cm ..... **2**

   Inflorescences predominately terminal, bracts usually rapidly modified from leaves in size and shape up the inflorescence axis, cyme peduncles not so widely divergent from axis; leaf blades (2 –) 4–18 (– 20) × (1 –) 3.5–8.5 cm ..... **3**

2. Inflorescences congested; peduncles deflexed; calyx lobes 6–10 mm long, pilose with long-stalked glandular hairs with small gland tips and with short non-glandular hairs; style pubescent at base ..... *I. congesta*

   Inflorescences lax; peduncle ± patent or at most slightly deflexed; calyx lobes 3–4 mm long, with short stalked glandular hairs with large gland tips and short non-glandular hairs; style glabrous ..... *I. parvifolia*

3. Inflorescence spiciform or if branched then branches spiciform; corolla 7–17 mm long; seeds with elongate hooked tubercles ..... **4**

   Inflorescence paniculate, or if spiciform then with corolla (13–) 15–25 (–27) mm long; seeds with tubercles broader, not elongate and lacking hooks, but sometimes with fine hair-like processes ..... **5**

4. Cymule bracts 1.5–4.5 (–6) mm long, triangular-ovate; inflorescences with opposite cymules, sometimes branched, axes straight with well-spaced cymules, bracts not imbricate; calyx lacking pilose hairs and only rarely with glandular hairs; corolla white or rarely pale pink. ..... *I. punctata*

   Cymule bracts 4.5–14 mm long, ovate, elliptic or somewhat obovate; inflorescence wholly or partially unilateral (i.e. 1 cyme per node), spiciform or few-branched, axes often curved, cymules usually shortly spaced and with imbricate bracts distally; calyx often with long pilose hairs and/or glandular hairs; corolla pink, mauve or rarely (not in Ethiopia) white ..... *I. gregorii*

5. Inflorescence with short eglandular hairs only, glandular hairs absent or rarely very sparsely present ..... *I. somalensis* var. *somalensis*

   Inflorescence with indumentum including numerous long glandular hairs ..... **6**

6. Young stems long white-retrorse to patent-pubescent in two opposite lines, hairs fine and without conspicuous cell walls; anther thecae offset and separated by 0.7–1.3 mm, upper or both thecae held almost patent to filament; seeds rugose-tuberculate, tubercles with minute hair-like processes ..... *I. bruceae*

   Young stems shortly pubescent in two opposite lines or below the nodes, hairs appearing deflated in dry state and with conspicuous cell walls; anther thecae offset but overlapping, oblique but neither theca patent to filament; seeds tuberculate with short blunt tubercles lacking hair-like processes ..... 7

7. Inflorescence spiciform or narrowly paniculate, densely glandular-pilose with conspicuous, thick gland tips; calyx lobes 6–12 mm long in flower, 9–13.2 mm in fruit; corolla throat expanded both dorsally and ventrally and somewhat saccate, upper lip not recurved, 9.8–11.8 mm long with lobes 0.6–1.6 mm long, lower lip not clearly protruding; staminal filaments 5–7 mm long; anther theca 2.3–2.8 mm long; style 10–10.7 mm long ... *I. somalensis* var. *glandulosa*

   Inflorescence narrowly paniculate, ± densely glandular-pilose with inconspicuous, minute gland tips; calyx lobes 4.7–6.8 mm long in flower, 7.5–9.5 mm in fruit; corolla throat abruptly expanded ventrally but not expanded dorsally, upper lip strongly recurved, 5–9 mm long with lobes 2.3–3 mm long, lower lip clearly protruding; staminal filaments ± 2.8 mm long; anther theca 1.1–1.5 mm long; style ± 3.9 mm long ..... *I. recurva*

## 2. ***Barleria***

*Barleria* L. (Acanthoideae: Barlerieae; Manzitto-Tripp et al. 2022) is the fourth largest genus in the Acanthaceae family with ± 300 species, the majority of which

are from tropical and southern Africa (Darbyshire et al. 2019; Comito et al. 2022). Many of the species are highly range-restricted. In the *Flora of Ethiopia and Eritrea* account of Acanthaceae, Ensermu (2006) recorded 39 species of *Barleria*, including 11 that were considered to be potentially new species to science but were not formally named and published. Four of those 11 taxa have since been described as new species, endemic to Ethiopia (Ensermu and Darbyshire 2018).

*Barleria induta* C.B.Clarke, a striking species with large yellow flowers and harsh spines, was described from northern Ethiopia and Eritrea (Clarke 1899), where it is now known to occupy a small range in the dry rocky terrain of Gonder and Tigray floristic regions and neighbouring western Eritrea. Ensermu (2006) tentatively followed Wood et al. (1983) in treating *B. induta* as a subspecies of the Asian species *B. prionitis* L. However, Ensermu noted that subsp. *induta* (C.B.Clarke) Brummitt & J.R.I.Wood could potentially be re-elevated to species rank or combined with Arabian subsp. *appressa* (Forssk.) Brummitt & J.R.I.Wood and Indian subsp. *pubiflora* (Benth. ex Hohen.) Brummitt & J.R.I.Wood. under a resurrected *B. appressa* Forssk. It has since been argued that the various taxa from across Africa, Arabia and the Indian Subcontinent treated as subspecies of *B. prionitis* by Wood et al. (1983) are so distinct morphologically that they should be (re-)elevated to separate species (see, e.g., Darbyshire et al. 2010). A RADseq phylogeny of *Barleria* (Comito et al. 2022) has subsequently demonstrated that *B. induta* is not closely related to *B. prionitis* (including subsp. *pubiflora*) and instead is resolved in a clade together with *B. appressa* and another species from northeast Africa and Arabia, *B. trispinosa* (Forssk.) Vahl. This makes much more sense both morphologically and phytogeographically. As part of an ongoing revision of sect. *Prionitis* (I. Darbyshire, unpubl. data), the *B. induta-appressa-trispinosa* clade has been re-evaluated, and there are clear morphological characters to treat these taxa as distinct species. Furthermore, specimens previously treated as *B. induta* or *B. prionitis* subsp. *induta* have been found to represent two distinct taxa. *Schimper 682* from Tigray region of Ethiopia was included within subsp. *induta* by Brummitt & Wood (in Wood et al. 1983), but they remarked on one of the two sheets at K "but sepals almost glabrous"; they did not comment on the much smaller corollas and anthers. *Friis et al. 12246* from the same region is a close match for the early Schimper specimen and confirms this taxon to be distinct from *B. induta*, with a number of notable morphological differences. Here, we present a revised description of *B. induta* excluding the aforementioned two specimens which we describe as a new species, *B. praetermissa* I.Darbysh. For completeness, the two species are compared with *B. appressa* in Table 3.

With the addition of this new species, *Barleria* is the genus of Acanthaceae with the highest number of endemics in Ethiopia; six species are strict endemics (*B. baluganii*, *B. ferox*, *B. gidoleensis*, *B. longissima* Lindau, *B. negelleensis* and *B. praetermissa*) whilst a further four are range-restricted near-endemics (*B. boranensis* Fiori, *B. grandis* Nees, *B. induta* and *B. punctata* Milne-Redh.). Furthermore, several other potential Ethiopian endemic *Barleria* taxa noted by Ensermu (2006) only remain undescribed due to insufficient material and are clearly distinct, endemic species.

***Barleria praetermissa*** I.Darbysh., **sp. nov.**

Type: Ethiopia, Tigray Region, 45 km S of Adwa (Adi Abun) on the new road to Abi Adi (fl.)13 Oct. 2005, *I. Friis, S. Bidgood, Wege Abebe & Ermias Getachew 12246* (holotype K! [K001295149]; isotypes C, ETH). (Figure 5).

(=) *Barleria diacantha* sensu Clarke (1899: 145), pro parte quoad *Schimper* 682, non Nees.

(=) *Barleria prionitis* L. subsp. *induta* (C. B. Clarke) Brummitt & J.R.I. Wood in Wood et al., Kew Bull. 38: 438. 1983, pro parte quoad *Schimper* 682 & *sensu* Ensermu (2006: 414), pro parte.

*Diagnosis*

Differs from *Barleria induta* in the anterior and posterior calyx lobes being glabrous to very sparsely glandular-pubescent externally (versus ± densely glandular-pubescent and with interspersed finer eglandular hairs); having smaller corollas, less than 40 cm long (versus ≥ 50 cm long), with a short tube 7.5–10 mm long (versus 14.5 –22.5 mm) and with the abaxial lobe 16–17.5 mm long, ± equal in length to the other four lobes (versus 26.5–34 mm long, markedly larger than the other lobes); having smaller anthers, 4.2–4.7 mm long (versus 5–6.3 mm long); and in the antherodes of the reduced lateral stamens being shortly exserted from the corolla tube (versus included within the tube); see Table 3.

*Description*

Spiny shrub, ± 100 cm tall, much branched; leafy stems brown, somewhat angular, largely glabrous or some internodes sparsely puberulous on two opposite sides. Axillary spines few to numerous, pale sandy-coloured or whitish, 2- or 4-rayed, stalk 0.5–2 mm long, longest ray 8–20 mm long, straight. Leaves held

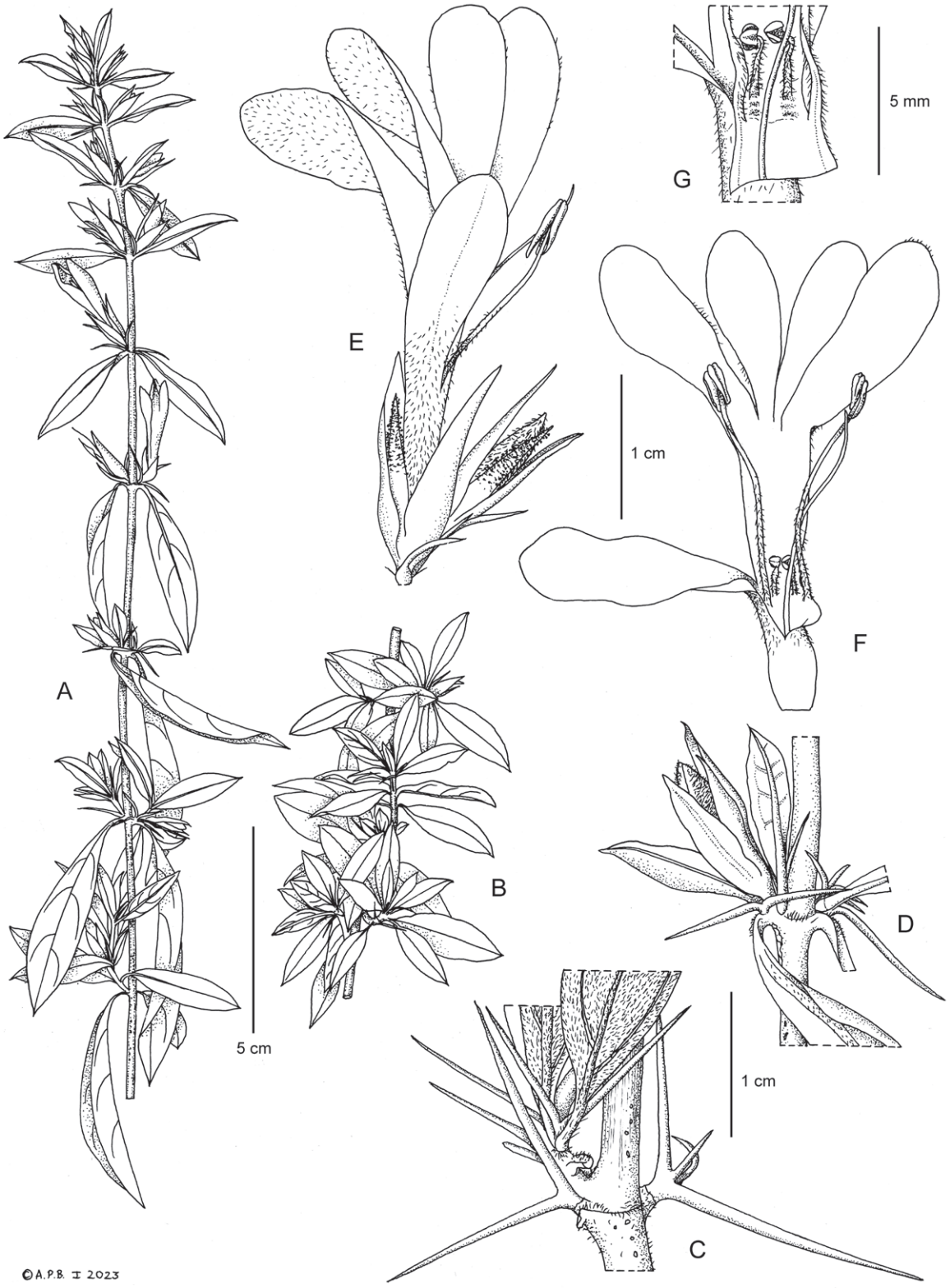


**Figure 5.** *Barleria praetermissa*. A. Habit, fertile distal portion of stem. B. Habit, proximal stems with shorter nodes and short lateral branches. C. Proximal node with axillary rayed spines. D. Node with flower bud, showing calyx and bracteoles. E. Paired flowers. F. Dissected corolla with androecium. G. Detail of short lateral stamens (note the exserted antherodes) and base of long, abaxial stamens. A, B and D–G from *Friis et al. 12246*, C from *Schimper 682*.

**Table 3.** The main morphological differences between and distribution of *Barleria appressa*, *B. praetermissa* and *B. induta*.

| Character | *Barleria appressa* | *Barleria praetermissa* | *Barleria induta* |
|---|---|---|---|
| Leaf apex | Acute or attenuate, apiculate or mucronulate for up to 1 mm | Acute or somewhat attenuate, shortly mucronate for up to 1.7 mm | Acute or attenuate, conspicuously and stiffly mucronate for up to 2.2 mm |
| Calyx indumentum: external surface of anterior and posterior lobes | Eglandular-puberulous and with few to numerous short glandular hairs, these often mainly towards margin and apex, with interspersed pale strigulose hairs; rarely whole calyx glabrous (*Wood* 2508; BM, K) | Glabrous or with very few glandular hairs towards margin | ± densely glandular-pubescent and with interspersed finer eglandular hairs, these sometimes more numerous towards base |
| Calyx shape: anterior and posterior lobes | Lanceolate, attenuate to acuminate into apical spine(s) | Lanceolate, acute or only slightly attenuate into apical spine(s) | Ovate-lanceolate to lanceolate, attenuate or acuminate into apical spine(s) |
| Corolla length | 43 - 60 mm | 37 - 39.5 mm | (50 –) 56 - 75 mm |
| Corolla tube length (fully fused portion below split of abaxial lobe) | 15–19.5 mm | 7.5–10 mm | 14.5–26 mm |
| Abaxial corolla lobe dimensions and relation to other lobes | (13.5 –) 17.5–27 × (4.5 –) 10–12.5 mm; subequal to longer than the other lobes | 16–17.5 × 5.8–7.5 mm; subequal in length to other lobes | 26.5–38 × 10.5–15.5 mm; markedly longer than other lobes |
| Filament length on fully developed (abaxial) stamens | 23 - 31 mm | ± 18 mm | 28 - 37 mm |
| Anther length on fully developed (abaxial) stamens | 2.8–4 mm | 4.2–4.7 mm | 5–6.3 mm |
| Position of reduced lateral stamens (sometimes referred to as staminodes) | Included within corolla tube | Antherodes exserted slightly beyond abaxial corolla lobe (corolla mouth) | Included within corolla tube |
| Distribution | Yemen | Northwest Ethiopia | Northwest Ethiopia and West Eritrea |

on main and short lateral branches, the latter can appear clustered, petiole 2–8 mm long, puberulent above when young; blade elliptic or narrowly elliptic-lanceolate, 3.6–9.8 × 0.9–3 cm (l/w ratio 3.3–3.9: 1), base cuneate or attenuate, margin entire, apex acute or somewhat attenuate, with a short mucro to 1.7 mm long, young leaves pale-strigulose along margin and main veins beneath, sometimes also with short fine spreading white hairs on both surfaces but these soon-caducous, mature leaves often glabrescent; lateral veins 3–4 pairs, somewhat prominent beneath. Inflorescences opposite-axillary, together forming loosely defined contracted to lax terminal spikes; flowers solitary at each axil, subsessile; bracts foliaceous but reducing in size upwards, those towards stem apex typically oblanceolate, 2.3–2.4 × 0.3–0.6 cm, indumentum as young leaves, broad sessile glands few or largely absent; bracteoles pale sandy-coloured, pale green or white, linear-spinose or narrowly oblanceolate-spinose, 6.5–11 × 0.7–1.2 mm, largely glabrous. Calyx drying green-brown (or dark brown when young), anterior lobe lanceolate, 10–12.5 × 4.3–4.5 mm, apex acute or only slightly attenuate, with a short simple or minutely notched spine, base somewhat rounded, margins revolute, external surface glabrous or with very few glandular hairs towards margin, venation parallel, obscure or faintly visible, not prominent; posterior lobe as anterior lobe but 12.5–15.7 mm long, apex with a longer spine; lateral lobes narrowly lanceolate, 8.5–10.7 mm long, glandular-puberulous. Corolla yellow, 37 - 39.5 mm long, shortly eglandular-pubescent externally; tube 7.5–10 mm long; limb in strong "4+1" configuration; abaxial lobe offset by 8.7–12.2 mm, oblanceolate or narrowly oblong-elliptic, 16–17.5 × 5.8–7.5 mm, apex rounded; lateral lobes as abaxial lobe but 6.3–8.3 mm wide; adaxial lobes narrower, 4.5–6.5 mm wide. Stamens inserted ± 7.5 mm from base of corolla tube; filaments of long abaxial stamens ± 18 mm long, shortly pubescent in proximal half; anthers 4.2–4.7 mm long; short lateral stamens inserted higher than abaxial stamens, ± 1.7 mm long, pilose, antherodes exserted slightly beyond corolla mouth, ± 0.7 mm long. Pistil glabrous; stigma linear, 1.3–1.5 mm long. Capsule not seen.

*Distribution*

Occurs in Tigray regional state and floristic region of northern Ethiopia (Fig. 4).

*Habitat & Ecology*

Recorded from degraded *Terminalia* woodland [presumably dominated by *Terminalia brownii* Fresen.] on brown and grey schist (*Friis et al. 12246*); 1400–1525 m asl.

*Conservation status*

This species is known only from the two cited localities (representing two locations), ca. 40 km apart in Tigray floristic region of northwest Ethiopia. It is highly likely to be under-recorded as botanical survey in this region has been limited, in part due to the challenging mountainous terrain making access away from major transport routes difficult. However, we are confident that this species is highly range-restricted and is probably naturally rare given the paucity of collections despite its large and showy flowers. There has been widespread and significant loss and degradation of natural habitat throughout the range of this species, through a long history of human occupation and associated arable and pastoral agriculture and settlement. Satellite imagery available via Google Earth Pro reveals intensive agriculture including terraced hillslopes in the vicinity of the two known locations for the species. The only available habitat information suggests that it may be able to persist in degraded habitats and its spiny nature may also protect it to some extent from high grazing pressure. However, given its apparent scarcity, an estimated AOO well below the 500 km$^2$ threshold for Endangered under criterion B2, and the high levels of habitat transformation within its range, this species is preliminarily assessed here as **Endangered B2ab(iii)**.

*Taxonomic notes*

*Barleria praetermissa* and *B. induta* are sympatric and are morphologically similar, for example in having leaves clustered on short lateral branches, but *B. praetermissa* is a less robust plant and they are otherwise separated by the characters listed in the Recognition section and in Table 3. The flowers and inflorescences of *B. praetermissa* resemble more *B. appressa* from Yemen and it could be confused with a rare variant of that species that has glabrous anterior and posterior calyx lobes (*Wood 2508* [BM!, K!] from Shahārah, the northernmost collection of that species seen). However, *B. appressa* also has larger corollas but with smaller anthers, the calyx lobes are more attenuate or acuminate in that species, particularly the posterior lobe, and its leaves are only apiculate or at most shortly mucronulate, whereas those of *B. praetermissa* are more conspicuously mucronate. *Barleria praetermissa* is also notable for having shortly exserted antherodes on the short lateral stamens - in all other species of sect. *Prionitis* including *B. appressa* and *B. induta*, these are included within the corolla tube. The three species are compared in Table 3.

*Additional specimen examined (paratype)*

**ETHIOPIA. Tigray Region:** Addi Ana, 4 Nov. 1862 (fl.), *Schimper 682* (B* [photo at K], BM!, K!).

***Barleria induta*** C.B.Clarke, Fl. Trop. Afr. 5: 146. 1899, pro parte excl. *Salt s.n.* ex Ethiopia.

(≡) *Barleria prionitis* L. subsp. *induta* (C.B.Clarke) Brummitt & J.R.I.Wood in Wood et al., Kew Bull. 38: 1983, pro parte excl. *Schimper 682*; Ensermu (2006: 414), pro parte.

Type: Ethiopia, prope Adoam [near Adwa], 7 Mar. 1837 (fl., fr.), *Schimper 208* (lectotype K! [K000394475], designated by Brummitt and Wood, l.c.; isolectotypes B* [2 sheets, photos at K], BM!, BR* [BR0000006268718, BR0000008356307], K! [K000394474; K000394476], L* [L.2840328, L.2840329], LISU!, M* [M0109634, M0109635], MO*, MPU* [MPU007105], P! [P02895021, P02895023, P02895024, P02895025], S* [S09-3627, S09-3629], TUB* [TUB004329, TUB004330], WAG* [WAG0000007]).

*Additional syntypes, not selected as lectotype*

**ERITREA**: Bogos, Aug. 1872 (fl.), *J. M. Hildebrandt 450* (B!, photo at K!); Ethiopia, Sabra [locality and date on P sheets only], 7 Oct. 1852 (fl.), *Schimper 782* (B, photo at K!; MPU* [MPU015407], P! [P0295017, P02895018, P02895019]); Ethiopia, without precise locality, *Herb. Linnaeus* (n.v.).

(=) *Barleria horrida* Buscal. & Muschl., Bot Jahrb. Syst. 49: 495. 1913.

Type: cited in the protologue as Mozambique, "am ufer des Mbusi", 14 Dec. 1909 (fl.), *E. d'Aosta 121* (holotype B, photo at K!), but actually pertaining to Eritrea, *G. Schweinfurth 652*, *fide* Lindau (1915: 373).

(=) *Barleria hystrix* L. var. b *oblongifolia* Nees in A.P.D.C., Prodr. 11: 483. 1847, pro parte quoad *Schimper 208*.

(=) *Barleria bispinosa* sensu Anderson (1863: 27) quoad *Schimper 208*, non (Forssk.) Vahl.

*Description*

Harshly spiny shrub or shrublet, 100–250 cm tall, sometimes forming rounded bushes; leafy stems dark reddish- or greenish-brown, somewhat angular, puberulous, sometimes most densely so on two opposite sides, mature stems glabrescent, becoming stout and woody towards the base with brown bark, up to 1 cm (or probably more) in diameter. Axillary spines pale sandy-coloured or whitish, 2 or 4-rayed, if the latter then two longer and two shorter, stalk 2–5 mm long, longest ray 16–31 mm long, straight. *Leaves* clustered on short lateral branches as well as along the main branches, petiole 2.5–10 mm long, puberulent; blade elliptic or ovate-elliptic to narrowly oblong-elliptic, 2.2–13 × 0.9–5.3 cm (l/w ratio 1.8–3.3 (–4): 1), base cuneate or attenuate, margin entire, apex acute or attenuate, with a stiff mucro 0.8–2.5 mm long, young leaves with short fine spreading white hairs on both surfaces and whitish-strigulose along margin and main veins beneath, the spreading hairs soon-caducous and the mature leaves can be largely glabrescent, broad sessile glands sparsely scattered on the lower surface and often more numerous towards base; lateral veins 3–6 pairs, prominent and usually pale beneath. Inflorescences axillary but sometimes clustered towards stem apices on both main stems and short lateral branches; flowers solitary at each axil, subsessile; bracts foliaceous but reducing in size upwards, those towards stem apex typically 1.5–3.7 × 0.3–1.2 cm, can be obovate-elliptic, indumentum as young leaves; bracteoles pale sandy-coloured or whitish, spinose, (6.5 –) 11.5–24 × 0.8–1.3 mm, sparsely puberulous and/or strigulose, sometimes with few short glandular hairs towards base, often with scattered broad sessile glands; rarely some bracteoles at proximal fertile nodes with a more developed blade, then oblanceolate-spinose, up to 3.5 mm wide. Calyx green, anterior lobe ovate-lanceolate to lanceolate, 10.5–20.5 × 4.5–7 (– 9) mm, apex attenuate or acuminate into a simple or rarely shortly notched spine, base somewhat rounded, margins revolute, external surface ± densely glandular-pubescent and with interspersed finer eglandular hairs, these sometimes more numerous towards base, venation obscure or only midrib prominent; posterior lobe as anterior lobe but 12.5–25 mm long, apex long-attenuate or -acuminate into spine; lateral lobes lanceolate-attenuate, 10–13.7 mm long. Corolla yellow to yellow-orange, (50–)55–75 mm long, densely eglandular-pubescent externally; tube 14.5–26 mm long; limb in strong "4+1" configuration; abaxial lobe offset by 16.5–21 mm, oblong-elliptic or slightly oblanceolate, 26.5–38 × 10.5–15.5 mm, apex rounded; lateral lobes oblong-elliptic, 20.5–32 × 10–14.5 mm, apices rounded or with very short attenuate tips; adaxial lobes as lateral lobes but 9–13.5 mm wide. Stamens inserted 9.5–15.5 mm from base of corolla tube; filaments 28–37 mm long, shortly pubescent in proximal half or two-thirds; anthers 5–6.3 mm long; lateral staminodes (0.8–)2–5 mm long, pilose towards base, antherodes 1–1.2 mm long or rarely undeveloped. Pistil glabrous; stigma linear, 1.4–1.7 mm long. Capsule 18.5–23 mm long, glabrous; seeds 10–10.5 × 6.7–7 mm.

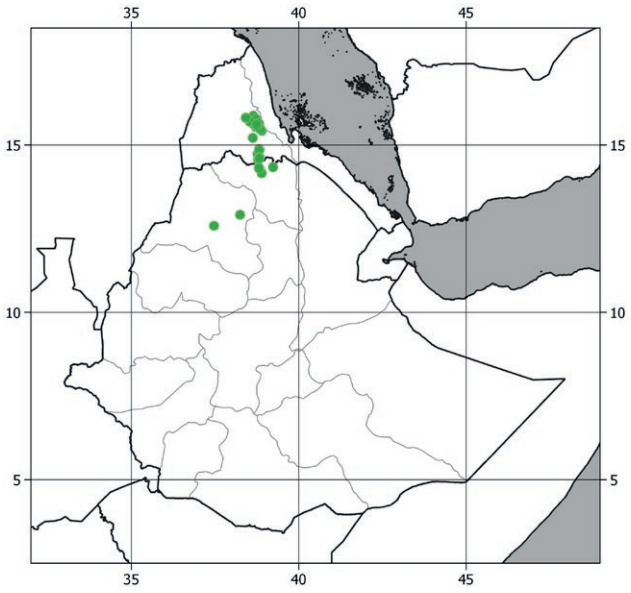


**Figure 6.** Distribution of *Barleria induta* (green circles) in Ethiopia and Eritrea. Note that the southern two localities may not be accurately placed.

*Distribution*

Restricted to Anseba and Debub regions in the Eritrea-West floristic region of Eritrea, and Amhara and Tigray regional states in the Tigray and Gondar floristic regions of northern Ethiopia (Fig. 6).

*Habitat & Ecology*

Occurs on arid rocky hillslopes with thin soils, growing in open *Acacia* Mill. woodland, in low bushland with frequent succulents, or in areas of evergreen bushland dominated by *Euclea* L.; it can be locally dominant in these habitats; 1400–2400 m asl.

*Conservation status*

This species has a restricted range, with an EOO of 29,859 km$^2$ and an AOO of 60 km$^2$ based on known

occurrence data. However, the two historical outlier records from Amhara state may not be accurately located; if excluded, the EOO is only 5,823 km$^2$. It can be locally abundant in suitable habitat, but expanding human settlements and increased agricultural activity in the majority of areas where this species has been collected are inferred to have resulted in a decline in area of occupancy and quality and extent of suitable habitat. The fact that this species tends to grow on stony hillsides, which tend to be less impacted than flatter areas, may reduce the level of threat to this species. The impact of overgrazing on this species is unclear, although its harsh spines should provide some protection. It is currently assessed as **Near Threatened B2ab(ii,iii)** (Darbyshire et al. 2023).

*Taxonomic notes*

This is a very striking species due to its large, highly zygomorphic flowers with a large and strongly offset abaxial lobe, and with densely glandular-pubescent calyces. It is quite unlike the Indian *Barleria prionitis* in a whole range of facies such that it is difficult to understand why they were united by Wood et al. (1983).

On the specimen *Tekle Hagos 112*, this species is described as a tree 3–5 m tall, but this is at odds with other descriptions of this species and it is likely to be the result of a mix-up in the collection notes.

The specimen "*Rousseau s.n.*" cited below from the herbarium of the Naturalis Biodiversity Center (L) is of uncertain origin; no such collector is mentioned by Friis (2009) in the review of botanical collectors in Ethiopia and Eritrea, and he/she has not been traced.

*Additional specimens examined*

**ERITREA: Eritrea-West Region**: Habab, Bogos, Aug. 1872 (fl.), *Hildebrandt 449* (B!, photo at K!); Az-taclesan–Abrascico, 6 May 1892 (fr.), *Terracciano & Pappi 334* (FT!); Mensa, Aba Maitan–Dada, 8 Jan. 1893 (fl.), *Terracciano & Pappi 2154* (FT!); (Mensa) Mt Agaro, 18 Jan. 1893 (fl.), *Terracciano & Pappi 493* (FT!); Bogos, Lalamba, 3 Feb. 1893 (fl., fr.), *Terracciano & Pappi 2590* (FT!); (Mensa) Belta, 4 Feb. 1893 (fl.), *Terracciano & Pappi 975* (FT!); (Mensa), Sella Mogasaz - Mt Ira, 5 Feb. 1893 (fl.), *Terracciano & Pappi 819* (FT!); Bogos, Abi Mandel–Alibaret, 5 Feb. 1893 (fl., fr.), *Terracciano & Pappi 2509* (FT!); Mensa, Adinalai–Maldi, 10 Feb. 1893 (fl.), *Terracciano & Pappi 1487* (FT!); (Amasen), Sciumma-Negus, 11 Feb. 1893 (fl.), *Terracciano & Pappi 383* (FT!); tra Halibaret [Elabered] ed Asmara, 8–15 May 1902 (fl., fr.), *Tellini 701* (FT!); Az-taclesan–Keren, 11–13 Oct. 1902 (fl.), *Tellini 1167* (FT!); Saraé, Adi Quala, 23 Oct. 1902 (fl.), *Pappi 542* (FT!, MO, P!); da Halibaret ad Amba Derho, 8–11 Dec. 1902 (fl., fr.), *Tellini 899* (FT!); Grat Gabru, 1 Nov. 1905 (fl.), *Beccari 219* (FT!); without precise locality, 1908 (fl., fr.), *Mangano 15* (FT!); Hamasen Region, Anseba ad Abrascico, 16 Feb. 1909 (fl., fr.), *A. Fiori 424* (FT!); Hamasen Region, tra Elaberet ed Azteclesan [Adi Tekelezan], 1 Mar. 1909 (fr.), *Fiori 726* (FT!); Serae, Adi Ugri, [Mendefira], 20 Mar. 1909 (fl.), *Fiori 424 bis* (FT!); Serae, a SE di Adi Ugri, 30 Oct. 1910 (fl.), *Bellini 342* (FT!); Addi Ugri [Mendefira], 17 Feb. 1913 (fl., fr.), *Baldrati 1003* (FT!); Serae Region, Addi Ugri [Mendefira], 21 May 1914 (fl.), *Baldrati 1000* (FT!); Addi Uogiri [Mendefira], 21 May 1914 (in bud), *Baldrati 1091* (FT!); Addi Ugri, Feb. 1915 (fl., fr.), *Baldrati 10* (FT!); Serae, Addi Ugri, 17 Feb. 1915 (fl., fr.), *Baldrati 1085* (FT!); Maragus, 26 Jan. 1917 (fl., fr.), *Baldrati 1077* (FT!); Asmara–Keren road, 19 Nov. 1956 (fl., fr.), *Hemming 1118* (BM!, EA!, ETH!, K!); a few miles from Teclezan village on the way to the village Elaberet, 12 Jan. 1963 (fl., fr.), *Tekle Hagos 112* (ETH!, K!); Mareb R. Valley, 8 km S of Adi Quallo or 102 km from Asmara on the Axum road, 29 Dec. 1972 (fl.), *Ash 1827* (EA!, ETH!, K!, MO!); Seraje Awraja, c. 61 km S of Asmara, 6 Mar. 1986 (fl.), *Mesfin & Sebsebe 3703* (ETH!); Gundet, ca. 5 km S of Adi Kwala along the road to the Tigray border, 17 Nov. 1988 (fl.), *Ryding et al. 1551* (ETH!, K!); on the pass between Elabored and Adi Teklezan, 13 Dec. 1997 (fl., fr.), *Wood 12949* (K!).

**ETHIOPIA: Tigray Region:** Massoua a Adowa, without date (fl.), *Quartin-Dillon s.n.* (P!); without locality 1856–1857 (fl.), *Schimper A.81* (B, photo at K!); "prope Adoam", Sept. 1909, "*Rousseau s.n.*" (L*) - see note above; Tigré, Mai Cio, tra Adua e il Mareb [R.], 15 Feb. 1936 (fl., fr.), *Guidotti 764* (FT!); Mareb, N of Adua, 4 Nov. 1952 (fl.), *Scott 214* (BM!, K!); 13 km Adua–Mereb on the road to Asmara, 26 Oct. 1991 (fl.), *Ensermu 2395* (ETH!); 5 km W of the turn off towards Debra Damo on the main road from Adigrat to Adwa and Axum, 8 Oct. 2005 (fl.), *Friis et al. 12197* (C, ETH, K!, WAG*); in the Mereb Valley 15 km S of Rama on the road that connected Adwa (Adi Abun) with Asmara, 12 Oct. 2005 (fl.), *Friis et al. 12238* (C, ETH, K!, WAG*); **Gondar Region:** Gondar and vicinity, without date (fl.), *Massey 54* (K!);

### 3. *Hypoestes*

The genus *Hypoestes* R.Br. (Acanthoideae: Justicieae: Justiciinae; Manzitto-Tripp et al. 2022) is restricted to the palaeotropics and subtropics, comprising over 150 accepted species, with by far the most diversity in Madagascar (POWO 2023). In tropical Africa, 10–12 species of *Hypoestes* are currently accepted, depending on the circumscription of some of the widespread species, with the most recent additions being *H. canescens* Hedrén & Thu-

lin (syn.: *H. cinerea* Hedrén) from coastal central Somalia and *H. ecbolioides* I.Darbysh. described from western Angola (Hedrén 2006; Hedrén & Thulin 2015; Darbyshire 2015). In the *Flora of Ethiopia and Eritrea* account, Ensermu (2006) recorded only three species, the widespread and variable *H. aristata* (Vahl) Roem. & Schult., *H. forskaolii* (Vahl) R.Br. and *B. triflora* (Forssk.) Roem. & Schult. However, Ensermu's circumscription of *H. triflora* included some very distinctive woody populations from northwest Ethiopia that were previously separated as *H. microphylla* Hochst. ex Nees, and maintained as an accepted species by the African Plants Database (2023). Here, we investigate *H. microphylla* further and compare it to forms of *H. triflora* from across tropical Africa.

*Hypoestes microphylla* is known from three historic specimens from the Tigray floristic region (although one is without precise locality), all collected by Wilhelm Schimper (Clarke 1900). An additional collection has recently been uncovered in the Florence (FT) herbarium from West Eritrea (*Pappi 623*). It is a highly distinctive plant with much-branched woody stems with flaking and peeling bark, small leaves and with the cymules solitary, paired or held in lax spikes. These characters readily separate these collections from typical *H. triflora*, hence *H. microphylla* is considered to be distinct and is resurrected here. The two species are compared in Table 4.

Also of interest in this discussion is *Hypoestes busii* Pic.Serm., a further name synonymised by Ensermu (2006) for which the type collection is *Pichi Sermolli 2097* (holotype FT! [FT003247]; isotype K! [K000379091]) from "presso Ifàg", 10 March 1937 (Pichi Sermolli 1951: 142). It is superficially very similar to *H. triflora*, for example in having the umbellate cymules with obovate bracts (these are broader than in any other Ethiopian material, but similarly broad bracts are recorded elsewhere within the range of *H. triflora*). However, it does differ notably from most other material of *H. triflora* in having pubescent staminal filaments and in the stems being softly lignified and sandy brown. The filaments of typical *H. triflora* are usually glabrous, although a few specimens from Ethiopia do have sparse hairs along the dorsal side, for example *Gillett* 14537 from Agheremariam [Hagere Mariam] (K!). Of interest, the staminal filaments of *H. microphylla* on the one well preserved flowering specimen (*Schimper 573*) are also conspicuously hairy along a line on the dorsal side. However, those on the A. Pappi specimen from Eritrea do not appear to have such hairy filaments. Given the close similarity of *H. busii* to *H. triflora* it is tentatively retained within that species for now, but further collections from around the type locality would be useful to investigate that population further.

***Hypoestes microphylla*** Hochst. ex Nees in A.P.DC., Prodr.11: 504. 1847.

See Clarke (1900: 248).

Type: Ethiopia. "regionis inferioris in parte australi montis Scholoda", 13 Dec. 1837 (in bud), *W. Schimper 400* (lectotype GZU* [GZU000250794], selected here; isolectotypes BR* [BR0000008356697], HAL* [HAL0113877], HBG* [HBG502226], HOH* [HOH009282], K! [K000379102, K000379103], L* [L.2841364, L.2841365], M* [M0109722], S* [S09-5830], TUB* [TUB004397, TUB004398, TUB004399, TUB004400], WAG* [WAG0000012]).

(-) *Hypoestes uniflora* Hochst., Flora 24(1, Intelligenzbl.): 24. 184 & Anderson, J. Proc. Linn. Soc. Bot. 7: 48. 1863, *nom. nud.*

(=) *Hypoestes triflora* sensu Ensermu (2006: 450), pro parte, non (Forssk.) Roem. & Schult.

*Description*

Shrublet (to 60 cm tall *fide* Nees 1847, but apparently taller on *Pappi* 623), many-branched, stems soon becoming softly woody with pale sandy-coloured flaking or peeling bark, 6-angular, mature stems pubescent with spreading or slightly retrorse hairs 0.5–0.9 mm long or some internodes rather densely pale-pilose with hairs to 1.6 mm long, young stems puberulous. Leaves subsessile or on petioles to 3 mm long; blade ovate or lanceolate, 6–25 × 2–9.5 mm (length: width ratio 1.95–3.6: 1), base rounded to cuneate, margin bluntly but conspicuously serrate with 2–9 teeth, apex acute or attenuate, surfaces pubescent particularly along veins and margins; cystoliths conspicuous, linear, often arcuate; lateral veins 3–5 per side. Inflorescences of solitary or paired cymules at apex of branches or sometimes with 3 or more cymules in a lax, secund spike; cymule peduncles 1.5–12 mm long, can be curved, geniculate or twisted, eglandular-puberulent and glandular-puberulent to -pubescent, the latter hairs to 0.5 mm long, can be sparse; primary (main axis) bracts held erect, somewhat fleshy, narrowly oblong-elliptic or -lanceolate, 2–6.5 × 0.6–1.5 mm, base cuneate, margin entire, apex rounded or obtuse, surfaces puberulent; cymule bracts free but clasping, pairs only slightly unequal, lanceolate, 6–15 × 1.7–2.5 mm, green but can be paler towards base except for darker midrib, external surfaces ± densely glandular-pubescent to -puberulent and eglandular-puberulent; bracteoles 1 or 2 pairs per cymule, lanceolate, 6–11 × 1–1.2 mm, green or pale brown with darker apex and midrib, glandular- and

**Table 4.** The main morphological differences between *Hypoestes triflora* and the newly resurrected species *H. microphylla*.

| Character | *Hypoestes triflora* | *Hypoestes microphylla* |
|---|---|---|
| Growth habit | Creeping, ascending or straggling annual or perennial herb, stems not or only very tardily woody, leafy stems herbaceous, usually green or purple-tinged | Many-branched shrublet, even leafy stems soon woody, sandy-brown with flaking and peeling bark |
| Leaf shape, size and margin | Ovate to narrowly elliptic, 15–130 × 8–65 mm, subentire to crenate-serrate | Small, ovate to lanceolate, 6–25 × 2–9.5 mm, conspicuously bluntly serrate with 2–9 teeth per side |
| Inflorescence form | Umbellate, typically with 3–4 (– 6) cymules per umbel, sometimes becoming compounded then appearing verticillate, rarely cymules solitary | Solitary or paired cymules at apex of branches or sometimes with 3 or more cymules in a lax, secund spike |
| Primary (main axis) bracts | Leaf-like, ovate to oblanceolate, up to 20 mm long | Somewhat fleshy, narrowly oblong-elliptic or -lanceolate, 2–6.5 mm long |
| Cymule bracts | Obovate to narrowly elliptic, larger of each pair 8–17 × 2–7 mm | Lanceolate, larger of each pair 6–15 × 1.7–2.5 mm |
| Staminal filament indumentum | Glabrous or rarely sparsely pubescent above | Shortly pubescent above for most of length (*Schimper* 573) |
| Capsule indumentum | Glabrous or sparsely eglandular-puberulous towards apex, sometimes with few interspersed glandular hairs | Eglandular-puberulous with occasional glandular hairs towards apex |

eglandular-puberulent. Calyx pale-hyaline, deeply divided into 5 lanceolate lobes, each 2.4–3 mm long, puberulent. Corolla ± 11.5 mm long, colour unknown, tube twisted through 180°, 6.8 mm long, 1.3 mm wide above the twist; lip held in lower position ± 4.6 mm long; lip held in upper position ± 5 × 3.5 mm, apex 3-lobed, lobes rounded, ± 0.7 mm long. Stamens with filaments ± 7.5 mm long, shortly pubescent on upper side for ¾ of length with distal portion becoming glabrous; thecae 0.6–0.8 mm long. Ovary ± 1 mm long, glabrous; style ± 9.5 mm long, shortly pubescent towards apex, elsewhere glabrous; stigma minutely 2-lobed. Capsule 7–7.5 mm long, eglandular-puberulous with occasional glandular hairs towards apex; seeds lenticular, ± 2 mm in diameter, tuberculate.

*Distribution*

Restricted to the Tigray regional state and floristic region of northern Ethiopia, and Debub region in the Eritrea-West floristic region of Eritrea (Fig. 6).

*Habitat & Ecology*

Habitat information is limited but it has been recorded from rocky ground; in Eritrea it was recorded from ca. 2,200 m asl.

*Conservation status*

This species was last collected in the early 1900s and information on its distribution, habitat requirements, and threats is very limited. It is likely to be scarce, given that it has not been recorded during botanical exploration within its range in the intervening period, and there has been significant habitat transformation such that this species is highly likely to be globally threatened. However, given how little information we have available at present, it is currently assessed as **Data Deficient**.

*Taxonomic notes*

The description of the flowers of this species is based on a single flower from *Schimper 573*. There is an open flower on *Pappi 623* which is broadly comparable in size to the Schimper specimen, but it is insufficiently well preserved for further measurement. Clarke (1900) cites a third W. Schimper specimen without precise locality, *Schimper 1623*, but we have not seen that collection.

*Additional specimens examined*

**ERITREA: Eritrea-West Region**: Scimenzana, Guna Guna, 21 Sept. 1902 (fl.), *Pappi 623* (FT!).

**ETHIOPIA: Tigray Region**: Amba Sea, 21 Feb. 1856 (fl., fr.), *Schimper 573* (K!).

## ACKNOWLEDGMENTS

This study was funded in part by the UK government Department for Environment, Food and Rural Affairs (Defra) under the Global Centre on Biodiversity for Climate project "*Realising the potential of plant bioresources as nature-based solutions in African biodiversity hotspots: Supporting climate resilient sustainable development*". This included support for the research visit by Hanny Lidetu to Kew from November 2022 to January 2023. All partners on this project are thanked for their input and support, in

particular Sebsebe Demissew, Sileshi Nemomissa, Ermias Lulekal and Shambel Alemu of Addis Ababa University, and James Borrell, Carolina Tovar, Olwen Grace, Kelda Elliott and Jack Plummer of Royal Botanic Gardens, Kew (OG now at Royal Botanic Gardens, Edinburgh). We thank Seth Radcliffe, Alexandra Roberts, Henry Miller, Tesfanesh Ashagre and Efrata Mekebib for their Red Listing support. The Ethiopian Endemics project is supported by private philanthropic sources; we thank Tim Pearce at Kew and Feleke Woldeyes at the Ethiopian Biodiversity Institute for the coordination of that work. Olivia Lockyear and Aaron Belcher participated in this research during a summer internship at Kew. Visits to the herbarium of the Centro Studi Erbario Tropicale, Università degli Studi di Firenze (FT herbarium) in October 2023 and the Muséum National d'Histoire Naturelle, Paris (P herbarium) in January 2024 by Iain Darbyshire were supported by the Bentham Moxon Trust, under grant BMT24-2021, for which we are highly grateful. We thank Riccardo M. Baldini and Lia Pignotti (FT) and Peter Phillipson of Missouri Botanical Garden (based at P) for hosting those visits. We also thank Ranee Prakesh at the Natural History Museum, London for facilitating access to the BM herbarium. We are highly grateful to Andrew Brown for the illustrations of the two new species.

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**Appendix 1.** The endemic and near-endemic Acanthaceae of Ethiopia, their distribution and extinction risk status. The distribution in Ethiopia follows the floristic regions of *Flora of Ethiopia & Eritrea*: AR Arsi; BA Bale; GD Gonder; GG Gamo Gofa; GJ Gojjam; HA Harerge; SD Sidamo; TU Tigray; WG Wellega; WO Wello. For the IUCN Red List assessment, those in bold are published on https://www.iucnredlist.org/, those in normal font have been assessed but not yet published; those with an asterisk have been reviewed and passed and so are in press.

| Taxon | Distribution in Ethiopia; floristic regions | Endemic / near-endemic | Other countries | IUCN Red List Assessment | Notes |
|---|---|---|---|---|---|
| *Acanthopale aethiogermanica* Ensermu | AR BA GD KF SD SU | E | | VU B2ab(iii)* | Widespread but scarce in west and south Ethiopian upland forests |
| *Acanthus sennii* Chiov. | AR BA GD GG GJ HA KF SD SU WG WU | E | | **LC** | Widespread and fairly common in a range of habitats in the Ethiopian Highlands |
| *Asystasia ammophila* Ensermu | SD | E | | **VU B2ab(iii)** | Highly localised in woodlands and dry forest margins of south Ethiopia |
| *Barleria baluganii* Ensermu | IL KF WG | E | | **NT B2ab(iii)** | Fairly frequent in the forests of southwest Ethiopia |
| *Barleria boranensis* Fiori | BA SD | NE | Kenya | **LC** | Localised but unthreatened in the dry woodlands of the Ethiopia-Kenya border region |
| *Barleria ferox* Ensermu & I.Darbysh. | HA | E | | **EN B1ab(iii)** | Scarce and highly localised in dry woodland of east Ethiopia |
| *Barleria praetermissa* I.Darbysh. | TU | E | | EN B2ab(iii), provisional | Scarce and highly localised in dry woodland of northwest Ethiopia |
| *Barleria gidoleensis* Ensermu & I.Darbysh. | GG SD | E | | **EN B1ab(iii)** | Scarce and highly localised in dry woodland of south Ethiopia |
| *Barleria grandis* Hochst. ex Nees | GD KF SU TU WG | NE | Eritrea | - | Fairly widespread in the woodlands of northwest Ethiopia and extending into Eritrea |
| *Barleria induta* C.B.Clarke | TU | NE | Eritrea | **NT B2b(ii,iii,v)** | Localised in the dry bushlands and rocky terrain of northwest Ethiopia and west Eritrea |
| *Barleria longissima* Lindau | GG SD | E | | **EN B2ab(iii)** | Scarce and highly localised in dry woodland of south Ethiopia |
| *Barleria negeleensis* Ensermu & I.Darbysh. | BA SD | E | | **EN B1ab(iii)+2ab(iii)** | Scarce and highly localised in dry grassland and open woodland of south Ethiopia |
| *Barleria punctata* Milne-Redh. | HA | NE | Somalia | **VU B1ab(iii)+2ab(iii)** | Scarce and localised in dry bushland of east Ethiopia and northwest Somalia |
| *Blepharis cuspidata* Lindau | SD | E | | **DD** | Known only from the type locality from dry bushland in southeast Ethiopia |
| *Blepharis gypsophila* Thulin & Vollesen | HA | E | | **VU D2** | Known only from the type locality from dry bushland in east Ethiopia |
| *Brillantaisia grottanellii* Pic.Serm. | GD GG GJ IL KF SD WG | E | | **LC** | Widespread in upland forests of west and south Ethiopia |
| *Crossandra infundibuliformis* (L.) Nees subsp. *boranensis* Vollesen | SD | NE | Kenya | - | Highly localised in dry bushland and woodland of southeast Ethiopia and just extending into northeast Kenya |
| *Dicliptera minutifolia* Ensermu | SD | NE | Kenya | - | Scarce in dry woodland of southeast Ethiopia with one record from north Kenya, but perhaps overlooked |

(Continued)

**Appendix 1.** (Continued).

| Taxon | Distribution in Ethiopia; floristic regions | Endemic / near-endemic | Other countries | IUCN Red List Assessment | Notes |
|---|---|---|---|---|---|
| *Ecbolium albiflorum* Vollesen | SD | NE | Kenya | - | Locally common but highly restricted in southeast Ethiopia and northeast Kenya |
| *Ecbolium boranense* Vollesen | BA SD | NE | Kenya | - | Local in woodlands and dry forest of south Ethiopia and north Kenya |
| *Hypoestes microphylla* Hochst. ex Nees | TU | NE | Eritrea | DD, provisional | Scarce in northwest Ethiopia and southwest Eritrea; habitat incompletely known |
| *Ichthyostoma thulinii* Hedrén & Vollesen | SD | NE | Somalia | NT B2ab(iii)* | Highly localised in dry woodlands of southeast Ethiopia and central and south Somalia |
| *Isoglossa congesta* Hedrén | SD | NE | Somalia | EN B1ab(iii)+2ab(iii)* | Known only from two localities, in dry bushland of southeast Ethiopia and south Somalia |
| *Isoglossa parvifolia* Rendle | BA HA SD | E | | **NT B2ab(iii)** | Widespread but scarce in woodland and bushland of eastern Ethiopia, including in seasonally inundated areas |
| *Isoglossa somalensis* Lindau var. *somalensis* | AR BA GG IL KF SD SU | NE | South Sudan | LC, provisional | Widespread in upland forest in Ethiopia and extending to the Imatong Mts of South Sudan |
| *Isoglossa somalensis* Lindau var. *glandulosa* Hanny, G.Hoban & I.Darbysh. | BA SD | E | | NT B1ab(iii)+2ab(iii), provisional | Local in montane forest in southeast Ethiopia |
| *Isoglossa recurva* Hanny & I.Darbysh. | IL KF | E | | EN B1ab(iii)+B2ab(iii) provisional | Scarce and highly localised in montane forest in southwest Ethiopia |
| *Justicia aridicola* Rendle | BA HA SD | NE | Somalia | - | Widespread in dry woodland in east and southeast Ethiopia, extending into Somalia |
| *Justicia bizuneshiae* Ensermu | WG IL KF GG SD BA | NE | Kenya, Tanzania | - | Widespread in upland forest margins, woodland and scrub in south Ethiopia; only 4 collections known from south Kenya and north Tanzania |
| *Justicia dallarii* Fiori | GG IL SD WG | E | | LC | Widespread but scarce in a range of habitats in southwest and south Ethiopia |
| *Justicia grisea* C.B.Clarke | BA[?] HA SD | NE | Somalia | - | Local in dry bushland on limestone in east Ethiopia and neighbouring Somalia |
| *Justicia heterocarpa* T.Anderson subsp. *vallicola* Hedrén | GG SD SU | E | | - | Local in a range of wooded habitats in central and south Ethiopia |
| *Justicia kuchari* Hedrén | HA | NE | Somalia | - | Scarce and highly localised in dry bushland in east Ethiopia and into central Somalia |
| *Justicia potamophila* Lindau | SD | NE | Somalia | - | Highly localised in dry woodland in southeast Ethiopia and into central and south Somalia |
| *Justicia rendlei* C.B.Clarke | BA HA SD | NE | Somalia | - | Fairly widespread in dry woodland and bushland on limestone in east and southeast Ethiopia, extending into Kenya, possibly also in Somalia |
| *Justicia schoensis* Lindau | AR BA SU | E | | VU B1ab(iii)+2ab(iii)* | Local in montane grassland and woodland in central Ethiopia |

(Continued)

**Table S1.** (Continued).

| Taxon | Distribution in Ethiopia; floristic regions | Endemic / near-endemic | Other countries | IUCN Red List Assessment | Notes |
|---|---|---|---|---|---|
| *Justicia vixspicata* Lindau | SD | NE | Somalia | - | Highly localised in dry woodland and bushland of southeast Ethiopia and just extending into south Somalia |
| *Lepidagathis pseudoaristata* Ensermu | BA SD | NE | Kenya | **EN B2ab(iii)** | Highly localised in dry bushland of southeast Ethiopia and northeast Kenya |
| *Lepidagathis speciosa* (Rendle) Hedrén | BA HA SD | NE | Somalia | - | Widespread but scarce in dry open woodland in east and southeast Ethiopia, extending into south Somalia |
| *Neuracanthus lindaui* C.B.Clarke | HA | NE | Somalia | - | Localised in the dry bushland of southeast Ethiopia and west-central Somalia |
| *Rhinacanthus mucronatus* Ensermu | SD | E | | **EN B1ab(iii,v)+2ab(iii,v)** | Scarce and highly localised in dry bushland in southeast Ethiopia |
| *Ruellia boranica* Ensermu | SD | E | | **VU B1ab(iii)+2ab(iii)** | Scarce and highly localised in dry bushland in southeast Ethiopia |
| *Ruellia fiorii* Chiov. | BA HA SD | NE | Eritrea | - | Widespread in dry woodland in east and south Ethiopia; also in west Eritrea but possibly two taxa involved |
| *Ruttya speciosa* (Hochst.) Engl. | GD GJ TU | NE | Eritrea | **LC** | Note: recorded as endemic in FEE but a historic record from Eritrea has since been uncovered |
| *Thunbergia hirsuta* T.Anderson | GD GJ | E | | **EN B2ab(ii,iii)** | Scarce and localised in grassland and open shrubland in northwest Ethiopia |
| *Thunbergia mauginii* Fiori | BA SD | E | | **VU B1ab(iii)+2ab(iii)** | Scarce and localised in woodland and bushland in southeast Ethiopia |
| *Thunbergia ruspolii* Lindau | GG IL KF SD SU WG | E | | **LC** | Widespread in a range of habitats in central and south Ethiopia |