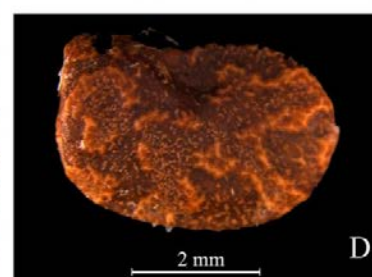


Notes on the distribution of *Tephrosia noctiflora* Bojer ex Baker (Leguminosae) in Andhra Pradesh

The genus *Tephrosia* Persoon is distributed mostly in the tropical and subtropical regions of the world with ca. 350 species (Mabberley 2008). In India, the genus is represented with 27 species and one variety (Sanjappa 1992; Krishnaraj et al. 2013).

Tephrosia noctiflora is a pantropical species initially collected from Zanzibar regions of Africa by Bojer (1837) and described without any description. This was later described and validated by Baker (1871) in Flora of Tropical Africa.

The species was later on collected from Malay Peninsula, Philippines, Celebes and New Guinea and also recorded in tropical South America, Seychelles, Madagascar, China, Taiwan, Sumatra, Flores, Borneo, Solomon Islands and New Caledonia (Boseman & de Haas, 1983).



Tephrosia noctiflora Bojer ex Baker.
A–Habit | B–Inflorescence | C–Pods | D–Seed.

In India, the species was reported by Baker (1876) in the name of *Tephrosia hookeriana* Wight & Arn, which was later correctly identified as *T. noctiflora*

by Drummond (1918). He reported the species from Tamil Nadu based on Walker collections with a question mark. Subsequently, the species was reported in

many publications based on Drummond's report (Nair & Henry 1983; Sanjappa, 1992). No collections were available in the Madras Herbarium (MH), Botanical Survey of India, Deccan Regional Centre Herbarium (BSID) and Central National Herbarium (CAL).

While working on a project entitled "Preparation of Non Detriment Findings (NDFs) Report on Red Sanders Tree (*Pterocarpus santalinus* L.f.) in India", the senior author collected an interesting *Tephrosia* species from Maddimadugu west Beat, Kadapa Forest Division of Andhra Pradesh. This was later identified as *Tephrosia noctiflora* Bojer ex Baker, an imperfectly known species from India.

It is closely related to *T. villosa* and *T. purpurea* and differentiated from the former species by its 3-4 mm long lateral calyx teeth (6-7 mm long in *T. villosa*), the carinal teeth linear, 2.2–2.5 times as long as the cup (narrowly triangular-linear, 3–4.5 times as long as the cup in *T. villosa*),

4–8 pairs of lateral nerves (6–17 pairs in *T. villosa*), and the later species by its 1–2 or rarely 3 flowered fascicles (4–6 flowered fascicles in *T. purpurea*), 3.8–5.1 mm long carinal teeth (0.8–4 mm long in *T. purpurea*), reticulately ridged seeds (smooth seeds

in *T. purpurea*). Scrutiny of literature revealed that this species presently known was from Tamil Nadu and not reported from Andhra Pradesh (Pullaiah & Ramamurthy 2018). Hence, this has been reported here as an addition to the flora of Andhra Pradesh.



Herbarium image of *Tephrosia noctiflora* Bojer ex Baker (J. Swamy 008802, BSID).

TAXONOMIC TREATMENT

Tephrosia noctiflora Bojer [Hort. Maur. 93. 1837, nom. nud.] ex Baker in Oliv., Fl. Trop. Afr. 2: 112. 1871; Drummond in Gamble, Fl. Madras 1: 318. 1918; Bosman & A.J.P.de Haas in Blumea 28: 458. 1983; Nair & Henry, Fl. Tamil Nadu Ind., Ser I: Analysis 1: 123. 1983; Sanjappa, Legumes India 257. 1992. *T. hookeriana* auct non Wight & Arn 1834; Baker in Hook.f., Fl. Brit. India 2: 113. 1876, pro parte.

Specimens examined: 008802 (BSID), 09.viii.2017, Maddimadugu West Beat, Kadapa Range, Kadapa Forest Division, Kadapa District, Andhra Pradesh, 14.333°N, 78.726°E, 265m, J. Swamy.

Annual or perennial under shrubs up to 1m high. Indument strigose to sericeous or silky pubescent to velutinous or ferruginous silky. Stipules 2.5 x 0.8 mm. Rachis of leaf 3.5–7 cm long, 1 mm diam.; the infrajugal parts of the longest 13 mm long and the interjugal parts of the longest rachis 5–8 mm long. Petiolules subsessile to 0.8 mm long. Leaflets 4–9 pairs, in the maxijugal leaf 4–10, obovate to narrowly obovate or elliptic, base cuneate or acute, apex rounded to emarginate with mucro tip, terminal leaflet larger than or as large as the lateral ones, 15–21 x 3–4 mm; lateral leaflets 8–20 x 2.5–3 mm; midrib raised, or flat, or raised in a furrow above; nerves 8–17 pairs, raised on both surfaces. Pseudoracemes terminal, or axillary, or leaf-opposed, 13–28 cm long; some basal bracts similar to vegetative leaves. Fascicles with 1–2 flowered and

rarely 3 flowered. Bracts to the fascicles narrowly triangular to linear triangular, 1–3 x 0.2–0.8 mm. Bracts to the flowers narrowly triangular to linear triangular, 1–3.5 x 0.1–0.3 mm. Pedicel 2–2.5 mm long. Flower 6–9 mm long. Calyx cup 1.8–2 x 4–4.6 mm, densely clothed with ferruginous silky hairs; teeth pubescent within at apex; the vexillary one broadly triangular, 2.62–2.82 x 3.5–4.5 mm; the lateral ones triangular to linear triangular, 3.0–4.0 x 1.25–1.5 mm; the carinal one linear, 3.8–5.1 x 0.6–0.7 mm, longer than the other teeth and 2.2–2.5 times as long as the cup.

Standard blade broadly ovate to transversely elliptic, apex truncate to emarginate, 5.7–6.0 x 7–8 mm, densely ferruginous silky hairs on upper surface; claw 2–2.38 mm long, strongly curved. Wing blades 5.28–6 x 2.4–2.6 mm, glabrous, lateral ribs extending over 1.8–2.2 mm; claw 1.9–2.1 mm long. Keel blades 4.5–5 long x 2.26–2.40 mm; claw 1.2–1.5 mm long. Staminal tube 5.4–6.6 mm long, glabrous. Vexillary filament free at base and connate halfway, 6.0–6.5 mm long, glabrous, the other filaments alternately longer and shorter; the longer ones 2–2.2 mm long and the shorter ones 1.2–1.5 mm long; anthers 0.45–0.27 mm long. Ovary densely sericeous, 4.47–5.2 x 0.8–1.2 mm; style twisted, 3.62–4.0 mm long, glabrous; stigma penicillate at base. Pod linear, flat, slightly turgid, 25–30 x 5–6 mm, slightly convex around seeds. Seeds 5–10, transversely elliptic to rectangular, reticulately ridged, brown to dark brown, 2.83–3 x 4.0–4.4 mm.

Flowering and Fruiting: July–December.

Distribution: Native of Africa and probably of India (Tamil Nadu), naturalized in the Malay Peninsula, Indonesia. Also recorded from tropical South America, Seychelles, Madagascar, China, Taiwan, Solomon Islands and New Caledonia (Bosman & de Hass, 1983).

Habitat: Occasional on rocky crevices and surface of scrub forest, associated with *Cymbopogon* sp., *Diospyros melanoxylon* Roxb., *Polycarpaea aurea* Wight & Arn and *Waltheria indica* L.

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