

11. THE GENUS OPHRESTIA Forbes Gen. Nov.

In the course of an examination of the South African material of the genus *Tephrosia*, the marked difference of the venation of the leaflets of *T. oblongifolia* E. Mey. to those of any other species of this genus was noticed. One of the most conspicuous characteristics of *Tephrosia* is the close parallel veining of the leaflets, and this feature is not present in *T. oblongifolia*, whose leaflets show 5-7 prominent veins.

Burt Davy also appears to have been puzzled by this plant, for, according to a note attached to a sheet in the National Herbarium, Pretoria, he made a new combination, *Glycine oblongifolia* (E. Mey.) B. Davy, which, however, he did not publish. In "The Flora of Transvaal and Swaziland" I, 2 (1932) he adheres to the old name, although he used the distinctive character of "4-5 veins" to key out the species.

In Engler's Jahrb. 26, 302 (1899) Harms described a Transvaal plant as *Glycine? Wilmsii*, but material so named was all incorporated under *T. oblongifolia*, and the name *G. ? Wilmsii* became a synonym. Although Harms described this plant tentatively as a *Glycine*, he does not seem to have been quite satisfied that the genus was correct. The number of leaflets probably accounted for this doubt, although he cites examples of two species having more than three leaflets.

An examination of all the material placed under *T. oblongifolia* indicates that there are four distinct species.

The plant first described as *T. oblongifolia* occurs in Natal and extends to the Eastern Cape Province as far south as East London. It is readily recognised by its oblong leaves.

Two species occur in the Transvaal, one a robust trailing plant, more or less densely hairy in all parts, and with leaflets having a retuse apex with a recurved mucro; the other with shorter stems, and leaflets with a straight acute apex.

The fourth species occurs in Swaziland.

The differences in the leaves and other characters are, in the writer's opinion, sufficient reasons to remove this group of plants from both the genera *Tephrosia* and *Glycine*. With two or three exceptions, *Glycine* has 3-foliolate leaves and, according to the material seen and to the descriptions of the various species, the leaves are distinctly long-petioled; the leaflets are generally of a membranous texture and stipellate. The group of plants under discussion all have sessile leaves with leaflets almost coriaceous in texture and no stipellae.

There are also floral characters which differentiate this group from the two other genera. In *Tephrosia* and *Glycine* the vexillum is orbicular or suborbicular and may or may not be slightly auriculate. In these other plants the vexillum is "almost lyriiform," as Harms aptly describes it, and distinctly tailed. The carina and alae are narrow and oblong, and are also distinctly tailed.

The epithet *Ophrestia*, an anagram of *Tephrosia*, is chosen for the new genus.

Ophrestia H. M. Forbes gen. nov., herba, e basi ramosa; caules procumbentes vel adscendentes, leviter flexuosi, pubescentes; folia brevissime petiolata, 1-5 foliolata; stipulae lineares vel lineari-subulatae; foliola elliptico-oblonga vel ovato-oblonga vel oblongo-lanceolata, 5-7-nervata, nerviis subtus prominentibus. *Pedunculi* axillares, graciles vel robusti, pauci vel multi florum; flores purpurei; pedicelli breves; lobi calycis

tubo subaequilongi vel longiores, ovato-acuti vel lanceolato-acuminati; vexillum oblongum, superne dilatatum, fere orbiculatum, medio paullo constrictum, apice rotundatum vel emarginatum, basi auriculatum, extra pilosum; alae sub-oblancheolatae, auriculatae, extra pilosae; carina oblonga, auriculata, extra pilosa; stamina monadelphica, stamine vexillare ad medium liberum; ovarium pilosum, 2-4 ovulatum; stylus brevis, glaber vel breviter barbatus; stigma capitata. *Legumen* linearis, compressum, glabrescens.

Herb., branching from the base, stems ascending or procumbent, slightly flexuous, pubescent. *Leaves* subsessile, 1-5-jugate; stipules linear to linear-subulate; leaflets elliptic-oblong, ovate-oblong or lanceolate-oblong, apex obtuse, acute or retuse, mucronate, mucro sometimes recurved, nerves 5-7, prominent below, impressed above. *Peduncles* axillary, slender or robust, sometimes much exceeding the leaves, few to many-flowered. *Flowers* shortly pedicelled, petals mauve; calyx usually densely hirsute, lobes ovate to lanceolate-acuminate, equaling or longer than the tube; *vexillum* oblong, upper part dilated, almost orbicular, rotund or emarginate, slightly constricted in the middle, auriculate at base, pilose without; *alae* almost oblanceolate, base auriculate, pilose without; *carina* oblong, base auriculate, pilose without; *stamens* monadelphous, vexillary stamens free from the middle; *ovary* 2-4 ovulate, pilose; *style* short, glabrous or slightly hairy; *stigma* capitate; *legume* linear, compressed, becoming glabrous.

KEY TO SPECIES.

- Leaves obovate to cuneate-oblong, apex obtuse or retuse..... A.
 Leaves oblanceolate to lanceolate, apex acute..... B.
 A. Mucro not recurved, apex obtuse..... 1. *oblongifolia*.
 Mucro recurved, apex retuse..... 2. *retusa*.
 B. Leaves lanceolate, up to 1.5 cm. broad, stipules linear-lanceolate
 Leaves oblanceolate, up to 2 cm. broad, stipules narrow subulate-
 acuminate..... 3. *swazica*.
 4. *nervosa*.

1. **O. oblongifolia** (E. Mey.) H. M. Forbes, comb. nov.; *Tephrosia oblongifolia* E. Mey. Comm. Pl. Afr. Austr. 108 (1836); Hook. Sond. Journ. Bot. 2.86 (1843); Krauss in Fl. des Cap und Natallands 54 (1846); Harvey in Fl. Cap. 2.209 (1861-62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Wood Fl. Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Burt Davy and Pott in Ann. Tvl. Mus. 3. 3.146 (1912); Bews Fl. Natal and Zululand 111 (1921); Burt Davy Fl. Tvaal. 1.2.377 (1932).

Glycine ? *Wilmsii* Harms in Engl. Jahrb. 26.302 (1899) in part.

Stems long and trailing, thinly pubescent. *Leaves* 1-5-jugate, subsessile, common petiole 2-7.5 cm. long; stipules linear, 3-6 mm. long; leaflets elliptic-oblong, entire, mucronate, glabrous above, pilose on the veins below, 2.5-7 cm. long, 0.9-2.5 cm. broad; petiolules short, densely pilose. *Peduncles* axillary, 6-32 cm. long. *Flowers* up to 1.2 cm. long, 2-4 together; pedicels about 1-2 mm. long. *Calyx* densely hairy; petals hairy without. *Style* glabrous or with a few hairs along one side. *Legume* 3.5-4 cm. long, 7-5 mm. broad. Seeds small, blackish.

Type specimen, *Drège* in Botanisches Museum, Berlin-Dahlem.

NATAL.—Inanda district: Inanda, Wood 402 (K., N., P., Z., B. H.); Pinetown district: Fields Hill, Wood 11072 (Z., P.); Ixopo district: Dumisa, *Rudatis* 1530 (K.); *Rudatis* 1792 (P.); Port Natal, Krauss 174 (K.); no definite locality, *Drège* (K., B., O., Pa., V., G.).

Var. **velutinosa** H. M. Forbes var. nov., a typo foliola utrinque velutinosa, pedunculis et calycibus velutinis differt.

Type of the variety, *Gerrard* 1082, in Natal Herbarium.

NATAL.—Ixopo district: Dumisa, *Rudatis* 520 (P.); Izotsha, *Thode* (N.); no definite locality, *Gerrard* 1082 (K., N., V., Pa.).

The variety appears to be a slightly more robust plant and is much more pubescent in all parts than typical *O. oblongifolia*.

2. *O. retusa* H. M. Forbes, sp. nov., affinis *O. oblongifoliae* (E. Mey.), H. M. Forbes, sed foliolis apicibus retusis, mucrone reflexo differt.

Caules procumbentes, leviter flexuosi, pubescentes, usque ad 90 cm. longi. *Folia* breviter petiolata, 2-4-foliolata, 2-8 cm. longa; stipulae subulato-lanceolatae, 3-6 mm. longae; foliola cuneato-oblonga 2-4.5 cm. longa, 1-2 cm. lata, utrinque leviter pubescentia, apice mucronata, retusa, nerviis subtus prominentibus dense pubescentibus. *Pedunculi* usque ad 25 cm. longi, axillares, pubescentes. *Flores* 1.3 cm. longi; bracteae setaceae, circiter 4 mm. longae; pedicelli circiter 1.5 mm. longi; bracteolae 3 mm. longae, setaceae. *Calycis* dentes tubo excedentes, dense pubescentes; vexillum 1.3 cm. longum, apice emarginatum; stylus 1.5 mm. longus, glaber.

Stems procumbent, up to 90 cm. long, slightly flexuous, pubescent. *Leaves* subsessile, 2-4-jugate, 2-8 cm. long; stipules subulate lanceolate, 3-6 mm. long; leaflets cuneate-oblong, 2-4.5 cm. long, 1-2 cm. broad, thinly pilose on both sides, apices retuse, mucronate, mucro recurved, nerves very prominent on the lower surface, veining reticulate, midrib and veins below more densely pilose. *Peduncles* up to 25 cm. long, axillary, pubescent. *Flowers* 1.3 cm. long, 2-4 together; bracts setaceous, about 4 mm. long; pedicels about 1.5 mm. long; bracteoles 3 mm. long, setaceous. *Calyx-teeth* longer than tube, densely pubescent; *vexillum* 1.3 cm. long, about 5 mm. broad at upper and widest part, emarginate, auriculate, pilose on outer surface; carina and alae slightly shorter than vexillum, about 2 mm. broad, auriculate, pilose on outer surface. *Ovary* 4 mm. long, densely pilose; style 1.5 mm. long, glabrous.

Type specimen, *Dyer* and *Verdoorn* 3405, in National Herbarium, Pretoria.

TRANSVAAL.—Lichtenburg district: Klipveld, *Liebenberg* 87 (P.); Grasfontein, *Sutton* 302 (P.); Pretoria district: Bryntirion, *Smith* 3353 (P.); Rietondale Pasture Research Stn., *Trapnell* 635 (K.); "The Willows," Pretoria, *Burt Davy* 2526 (B.H., P.); Koedoespoort, *Mogg* (P.); Daspoort, *Leendertz* 580 (Z., B.H.); Magaliesberg, *Dyer* and *Verdoorn* 3405 (P.); *Burke* 358 (K., Z.); Rustenburg district: Matlapansberge, *Rehmann* 5551 (K., Z.); Rustenburg, *Nation* 85 (K., B.H.); Vlakfontein, *Liebenberg* 138 (P., G.).

3. *O. swazica* H. M. Forbes sp. nov., affinis *O. retusae* H. M. Forbes, sed foliolis lanceolatis apicibus acutis differt.

Caules graciles, leviter pilosi, ascendentes vel procumbentes, usque ad 48 cm. longi. *Folia* breviter petiolata, 1-3-jugata; petioli 0.5-2.7 cm. longi; stipulae lineares, 2-6 mm. longae; foliola lanceolata, mucronulata, 2-5.8 cm. longa, 0.6-1.5 cm. lata, mucrone circiter 1 mm. longa, supra glabra, subtus nerviis parce pilosis. *Pedunculi* axillares, usque ad 9 cm. longi; bracteae setaceae, 3 mm. longae; pedicelli circiter 3 mm. longi; bracteolae setaceae, circiter 1.5 mm. longae. *Flores* 1.5 cm. longae; dentes calycis tubo excedentes; stylus 1.5 mm. longus, glaber vel parce pilosus.

Stems slender, thinly pilose, ascending or procumbent, up to 48 cm. long. *Leaves*; shortly petiolate, 1-3-jugate, petiole 0.5-2.7 cm. long; stipules linear, 2-6 mm. long; leaflets lanceolate, 2-5.8 cm. long, 0.6-1.5 cm. broad, mucronate, glabrous above, thinly pilose on the veins below. *Peduncles* axillary, up to 9 cm. long, few flowered near the apex; bracts setaceous, 3 mm. long; pedicel about 3 mm. long. *Calyx-lobes* lanceolate, longer than the tube, tube 3 mm. long, lobes 6 mm. long; *vexillum* 1.5 mm. long, glabrous or with a few hairs along one side. *Mature legumes* not seen.

Type specimen, *Bolus* 11845, in National Herbarium, Pretoria.

SWAZILAND.—In collibus, in terra "High Veld" dicta inter Dalriach et Forbes' Reef *Bolus* 11845 (P., K., A.M., B.H.).

4. *O. nervosa* H. M. Forbes sp. nov., affinis *O. swazicae* H. M. Forbes, sed foliolis oblanceolatis subtus nervis valde prominentibus differt.

Caules procumbentes, leviter flexuosi, pubescentes. *Folia* 1-3-jugata, 1-4 cm. longa; stipulae angusto-subulatae vel lineares, 4-7 mm. longae; foliola oblanceolata, apice acuta, mucronata, nervis subtus valde prominentibus, utrinque parce pilosa, 2.8-5.5 cm. longa, 1.7-2 cm. lata. *Pedunculi* axillares, 5-13 cm. longi; bracteae setaceae, 2 mm. longae; pedicelli 1.5 mm. longi; bracteolae setaceae, 3 mm. longae. *Flores* 1.1 cm. longi; vexillum 1.1 cm. longum, apicem versus 4 mm. latum. *Ovarium* pilosum; stylus 1.5 mm. longus, glaber.

Stems procumbent, slightly flexuous, pubescent. *Leaves* 1-3-jugate, common petiole 1-4 cm. long; stipules narrow-subulate to linear, 4-7 mm. long; leaflets oblanceolate, apex acute, mucronate, nerves very prominent on lower surface, thinly pilose on both sides, 2.8-5.5 cm. long, 1.7-2 cm. broad. *Peduncles* axillary, 5-13 cm. long; bracts setaceous, 2 mm. long; pedicels 1.5 mm. long; bracteoles setaceous, 3 mm. long. *Flowers* 1.1 cm. long. *Vexillum* 1.1 cm. long, 4 mm. broad towards the apex; alae and carina 2 mm. broad, alae slightly shorter than carina. *Ovary* pilose, 4 mm. long; style 1.5 mm. long, glabrous. *Legume* up to 3.5 cm. long and 0.8 cm. broad, shortly pubescent.

Type specimen, *Thode* A 1394 in Natal Herbarium, Durban.

TRANSVAAL.—Marico district: Zeerust, *Thode* A 1394 (N., P.); Lydenburg district: Lydenburg, *Wilms* 383 (K., B.); Lydenburg, *Schlechter* 3962 (Z., B.H.); no definite locality "Bushveld," *Rehmann* 5186 (Z.); *Zeyher* 520 (K.).