

## RUTACEAE

### *ZANTHOXYLUM LEPRIEURII*\*, A NEW RECORD FOR SOUTHERN AFRICA

The first specimen of this *Zanthoxylum* from Southern Africa was collected by Drs Codd and Dyer (No. 4564) in the Sibasa district of the Transvaal near Punda Milia in the Kruger National Park in October 1948. However, in the absence of fertile material, this specimen, like each of those collected in the Kruger Park and in north-eastern Natal (Tongaland) during the next twenty years, remained unidentified. In December 1969 good flowering material of both male and female plants was collected (*Moll* 4887, 4889) near Makanes Drift in Tongaland and it is these specimens which finally enabled the plants to be identified. There is still no fertile material from the Transvaal, although there is a photograph in the

National Herbarium, Pretoria, of a fruiting branchlet collected by Mrs E. Jenkins north-east of Sibasa in the northern Transvaal.

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\*The taxonomic position of the genera *Zanthoxylum* L. and *Fagara* L. has long been a source of controversy. Most early taxonomists, for example, Benth. & Hook.f., *Gen. Pl.* 1 : 297 (1862), regarded the two as congeneric, but later opinion favoured the argument advanced by Engler in *Pflanzenfam.* 3, 4:95-102 (1896), which supported the retention of both genera. In recent years evidence has accumulated which supports the view that the genera are not distinct. Following Hartley, in *J. Arn. Arb.* 47:171-221 (1966), and Waterman, in *Taxon* 24:361-366 (1975), *Fagara* and *Zanthoxylum* are here regarded as congeneric, *Zanthoxylum* being the correct name for the combined genera.

The specimens are referable to *Z. leprieurii* Guill. & Perr., a species described from Senegal, but widespread in the forests of west tropical Africa to the Equatoria Province of the Sudan, Uganda, Tanzania, northern Mozambique, Zaire and Angola. Although not specifically distinct, the Southern African plants do nevertheless differ from typical *Z. leprieurii* in certain characters.

In typical *Z. leprieurii* the inflorescence is a very robust structure up to 30 cm long with the axis 2–3 mm in diameter basally, and the axis and its many lateral branches are sparingly to densely glandular-puberulous, particularly the lateral branches. It is not clear whether the inflorescence is carried erect or whether it is pendulous as none of the collector's notes refer to this feature. The inflorescence in the Tongaland plants (and presumably in the Transvaal) is smaller, seldom attaining a length of 20 cm and the axis is slender and  $\pm 1$  mm in diameter basally. The inflorescence in these plants is pendulous and glabrous, and the lateral branches are fewer and more widely spaced so that the inflorescence forms a more open lax panicle. The flowers are more consistently aggregated into fascicles along the lateral branches, particularly in the male, and there are fewer flowers per lateral branch. This contrasts with the tropical material where the flowers are more often solitary.

The Southern African specimens also differ from material of typical *Z. leprieurii* in having consistently smaller leaves with fewer pairs of smaller leaflets, but there is no discontinuity in any of these characters between specimens from the two areas.

Typical *Z. leprieurii* is a forest species which grows to a height of 27 m, while the Southern African plants grow on sandy soils as shrubs or small trees and seldom attain a height of 8 m. Plants are known from only two localities in Tongaland, namely, False Bay Park and the Makanes Drift-Sihangwane area where

they form one of the constituents of the sand-forest and grow in association with species such as *Albizia forbesii* Benth., *Newtonia hildebrandtii* (Vatke) Torre and *Cleistanthus schlechteri* (Pax) Hutch., to name but a few. Only six male plants have been found at False Bay Park, but in the Makanes Drift-Sihangwane area plants are locally quite common.

In Tongaland the specimens of *Z. leprieurii* are entirely leafless in winter. In spring the young leaves and inflorescences appear together, but while the leaves develop the young flower buds remain closed for several months before finally opening. The male inflorescences are relatively long and conspicuous and project beyond the leaves, while the female inflorescences are usually smaller and are sometimes partially hidden in amongst the leaves.

*Zanthoxylum leprieurii* Guill. & Perr., Fl. Seneg. Tent. 141 (1831). Type: Senegal, *Leprieur* (P, holo.!).

*Fagara leprieurii* (Guill. & Perr.) Engl. in Pflanzenfam. 3, 4:118 (1896). *F. angolensis* Engl. in Bot. Jahrb. 23:148 (1896). Type: Angola, without locality, *Welwitsch* 4575 (K, iso.!). *F. nitens* (Hiern) Engl., Pflanzenw. Afr. 3, 1:749 (1915). *F. sp.*, Ross, Fl. Natal 213 (1973); Palmer & Pitman, Trees S. Afr. 2:982–3 (1973).

*Zanthoxylum nitens* Hiern, Cat. Afr. Pl. Welw. 1:112 (1896). Type: Angola, Golungo Alto, road to Bango, *Welwitsch* 4558 (K, iso.!).

The following specimens from Southern Africa have been examined:—

TRANSVAAL.—2231 (Pafuri): Kruger National Park, 5 km N.E. of Punda Milia, *Codd & Dyer* 4564; Kruger National Park, Punda Milia, *Van der Schijff* 230; 3803.

NATAL.—2632 (Bela Vista): 8 km W. of Muzi border post, *Moll* 5654 (NH). 2732 (Ubombo): 3, 2 km N.E. of Makanes Drift, *Moll* 4887; 4889; *Ross* 2368; near Jobe's Kraal, *Garland* 442; 10 km Pongolo bridge/Maputa, *Moll* 4382; Sihangwane, *Tinley* 901 (E, NU); *Pooley* 727 (E, NU); 2 km W. of Sihangwane Store, *Moll* 4880; False Bay Park, *Ward* 3850; *Ross* 2229.