

ZYGOPHYLLACEAE

A NEW SPECIES OF *ZYGOPHYLLUM* FROM THE CAPE PROVINCE

Zygophyllum chrysopteron *Retief*, sp. nov., *Z. retrofractum* Thunb. affinis, sed fructibus 5-alatis non fusiformibus; ramis minus implexis; distributione dissimili differt.

TYPE. —Cape Province, 3021 (Vanwyksvlei): 1 km out of Vanwyksvlei, roadside (–BD), *Smook & Harding 782* (PRE, holo.) Figure 1.

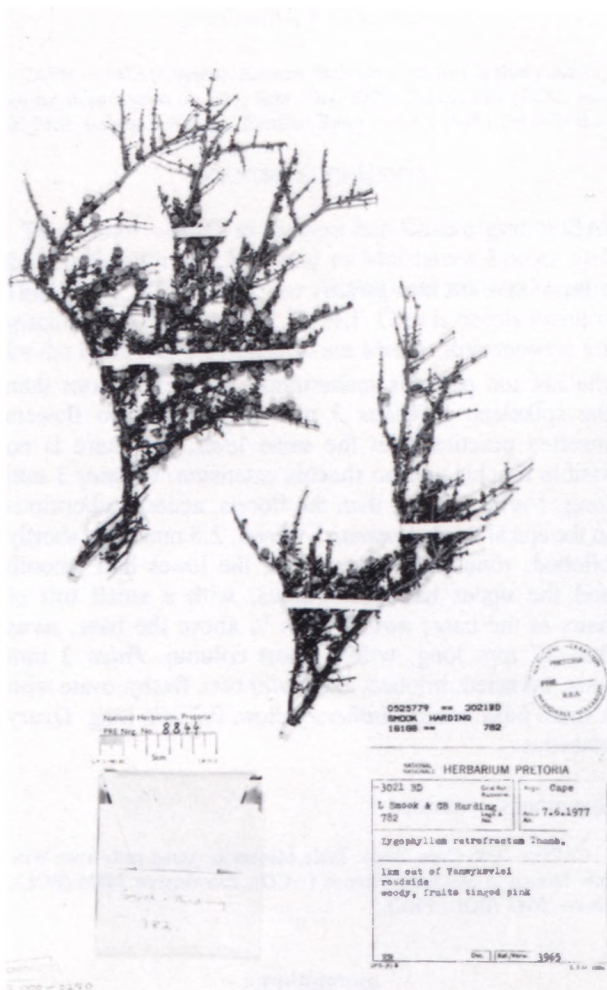


FIGURE 1.—Holotype of *Zygophyllum chrysopteron* (Smook & Harding 782).

A much-branched woody shrub up to 1 m high; branchlets ascending, reflexed or secund, striate, internodes short, 0.5–3.0 mm. *Leaves* bipinnate; lamina broadly obovate to orbicular, 1.5–2.0 × 1.5–2.0 mm, sometimes very shortly petiolate with only the two leaflets visible against the stems. *Stipules* ovate, very small. *Flowers* solitary in the axils of the leaves; 5-partite; pedicels 1 mm long. *Calyx* with lobes adnate at the base; lobes oblong, 2.5 × 1.0 mm. *Corolla* with petals spatulate, 3 mm long, white. *Stamens*

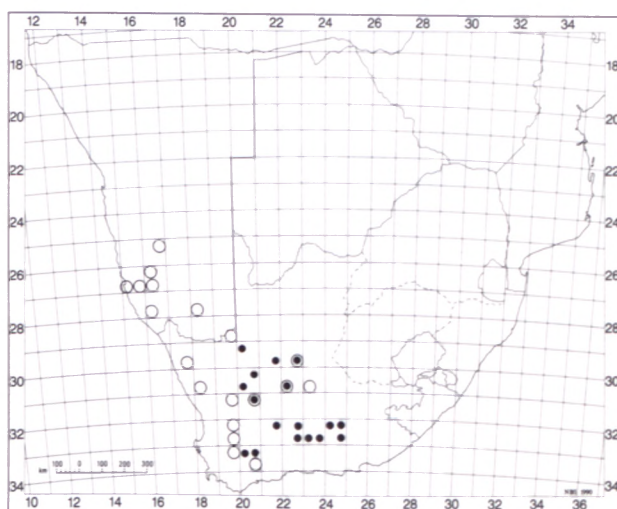


FIGURE 2.—Distribution of *Zygophyllum chrysopteron*, ●; *Z. retrofractum*, ○.

10, adnate to a disc; filaments 2.5 mm long, appendages deeply divided, margins entire; anthers 1 mm long. *Style* 1.5 mm long. *Ovary* glabrous. *Fruit* a 5-winged capsule, subglobose in outline, 3–4 × 2–3 mm. *Seeds* trigonous to oblong, 0.5–1.5 mm long.

CAPE PROVINCE.—2920 (Boomrivier): 5 miles [8 km] W of Loogkolk (—AC), *Pole Evans* 2244 (PRE). 2921 (Kenhardt): Jagbult, 40 miles [64 km] W of Marydale (—DA), *Story* 1108 (PRE). 2922 (Prieska): Prieska (—DA), *Bryant, J.* 293 (PRE); Karabee (—DB), *Roux* 131 (PRE). 3020 (Brandvlei): Rietkolk (—BC), *Le Roux & Lloyd* 230 (PRE); Kroon (—CB), *Dean* 645 (PRE). 3021 (Vanwyksvlei): 1 km from Vanwyksvlei (—BD), *Smook & Harding* 782 (PRE). 3022 (Carnarvon): Rhenosterkolk (—CA), *Acoks* 1719 (PRE). 3120 (Williston): Williston Station (—BD), *Smith* 2442 (PRE). 3221 (Merweville): Layton (—BB), *Shearing* 1379 (PRE). 3222 (Beaufort West): Nieuweveld escarpment (—BA), *Adamson* D155 (PRE); Aardooms (—DD), *Retief & Reid* 92 (PRE). 3223 (Rietbron): Rooidam (—CA), *Retief & Reid* 45 (PRE); Kalkdam (—CD), *Retief & Reid* 349 (PRE); 1 m [1.6 km] S of Kiwietskuil (—DA), *Acoks* 14657 (PRE). 3320 (Montagu): Touws River (—AC), *Van Breda* 206 (PRE); 17 km N of Matjiesfontein (—BA), *Van Wyk* 524 (PRE). 3322 (Oudtshoorn): 5 km from the Beaufort West/Laingsburg road on the road to Oudtshoorn (—BC), *Van Wyk* 1850 (PRE).

Zygophyllum chrysopteron is endemic in the Cape Province (Figure 2). It occurs in various veld types of the Karoo. The veld types are characterised by dwarf trees and shrubs, grass and succulents. The rainfall is very low in these areas, up to 200 mm a year. *Z. chrysopteron* can be found growing on red or grey sandy soil; on stony, gravelly soil; limestone and shaly slopes. The species flowers in October and November and bears fruit till July. *Z. chrysopteron* is often heavily grazed.

In the past, dwarf shrubs, much-branched with re-curved, tangled and secund branches have been identified as *Zygophyllum retrofractum* Thunb. A study of the species revealed that two different fruit types occur within specimens placed under this name, known as *Z. retrofractum*. In February 1937, Acoks however, collected two specimens at Rhenosterkolk, Carnarvon District, and noted on one of the labels that his numbers 1719 & 1731 did not represent the same entity, which is indeed the case.

The winged fruits of *Z. chrysopteron* (Figure 3), together with a more erect habit and a different distribution pattern (Figure 2) separate this species from its nearest relative, *Z. retrofractum*. This latter species has spindle-shaped fruits with ridges (Figure 3), a conspicuously spreading habit and occurs from Namibia through Namaqualand as far south as Barrydale (Figure 2). In the Williston, Carnarvon and Prieska areas, both species are found

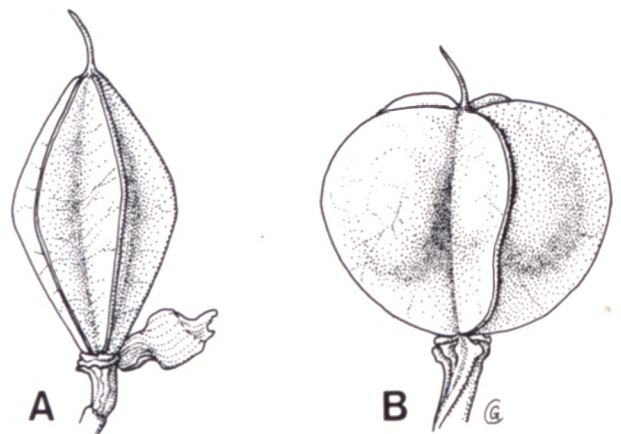


FIGURE 3.—Fruit of *Zygophyllum*: A, *retrofractum*, × 8; B, *chrysopteron*, × 8.

growing in the same region, as Acocks's specimens also revealed.

Besides *Z. chrysopteron*, a number of other species of *Zygophyllum* (e.g. *Z. morgsana*, *Z. suffruticosum* and *Z. microcarpum*) have winged fruits. The fruits of these species are larger in size and the structure of their leaves is not the same as those of *Z. chrysopteron*, which are bipinnate with broadly obovate to orbicular blades, very small in size.

The specific epithet *chrysopteron* refers to the golden yellow colour of the fruits. According to the label of *Smook & Harding 782*, the fruits can be tinged with pink.

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