

THYMELAEACEAE

THE TRUE IDENTITY OF *SYNAPTOLEPIS KIRKII*

INTRODUCTION

Synaptolepis kirkii was originally described by Oliver (1870) in *Hooker's Icones Plantarum* 11, and the type locality of *Kirk 37* given as Zanzibar. Subsequently, *S. oliveriana* was described by Gilg (1894a) from a specimen, *Monteiro 45*, collected in Delagoa Bay [Maputo] in Mozambique in 1876. In a second publication in the same year, Gilg (1894b) does not mention *S. oliveriana*, but the illustration of the flowers (fig. 81), represents *S. oliveriana*. Peterson (1959) in his revision of *Synaptolepis* in Mozambique recognizes *S. oliveriana* and refers to *S. kirkii* as occurring in Tanzania.

Peterson (1978) mentions under the distribution of *Synaptolepis kirkii*, that besides occurring in Kenya and Tanzania, it also occurs in Mozambique and South Africa (Natal). Bredenkamp & Beyers (2003) and Bredenkamp (2006) also mention *S. kirkii* occurring in South Africa. However, Peterson & Verdcourt (2006) bring clarity to this taxonomic confusion by stating that all the Mozambique material referred to in the above-mentioned publications, has proved to be *S. oliveriana*. *S. oliveriana* grows in sand forest or thicket on coastal dunes in sandy soil at low altitudes in the far northern parts of KwaZulu-Natal and Mozambique, mainly in the Maputaland Centre of Endemism (Van Wyk & Smith 2001). In Mozambique it occurs in Maputo, on the Inhaca and Bazaruto Islands, Xai-Xai and as far north as Quelimane, Pemba and Moçimboa da Praia, north of the Zambezi River.

A third species, *Synaptolepis alternifolia* Oliv. (including *S. longiflora* Gilg) occurs in Zimbabwe, Malawi, central and northern Mozambique and Tanzania. It differs mainly from *S. kirkii* and *S. oliveriana* by its terminal, 3–10-flowered cymose inflorescences. The first-mentioned

species has inflorescences comprising axillary, solitary flowers or flowers in 2–4-flowered axillary fascicles. *Synaptolepis* therefore comprises five species on the African continent (two more in West Africa and Sudan) and one species in Madagascar (Herber 2003; Peterson & Verdcourt 2006; Mabberley 2008).

Therefore, *S. kirkii* is considered as a misapplied name in the *FSA* region and only occurs along the coast of Somalia (Thulin 2006), Kenya and Tanzania, including the island of Zanzibar.

DIAGNOSTIC CHARACTERS

Distinctive characters among members of the genus are the transversely elongated lenticels of older stems that become wart-like (Figure 5A) and the pedicels are sometimes glandular (Figure 5B). These characters are present in all three southern and tropical African species which are very closely related. However, the main morphological differences between *Synaptolepis kirkii*, *S. oliveriana* and *S. alternifolia* are given in Table 2 and a key is provided.

Key to species of *Synaptolepis*

- 1a Leaves usually shorter than 24 mm; South Africa and Mozambique *S. oliveriana*
- 1b Leaves usually longer than 24 mm:
 - 2a Inflorescences axillary, solitary or few-flowered fascicles; petals comprise lobed ring without hairs; Somalia, Kenya and Tanzania *S. kirkii*
 - 2b Inflorescences terminal, 3–10-flowered cymes; petals comprise lobed ring with stiff white hairs; Zimbabwe, Malawi, Mozambique, Tanzania *S. alternifolia*

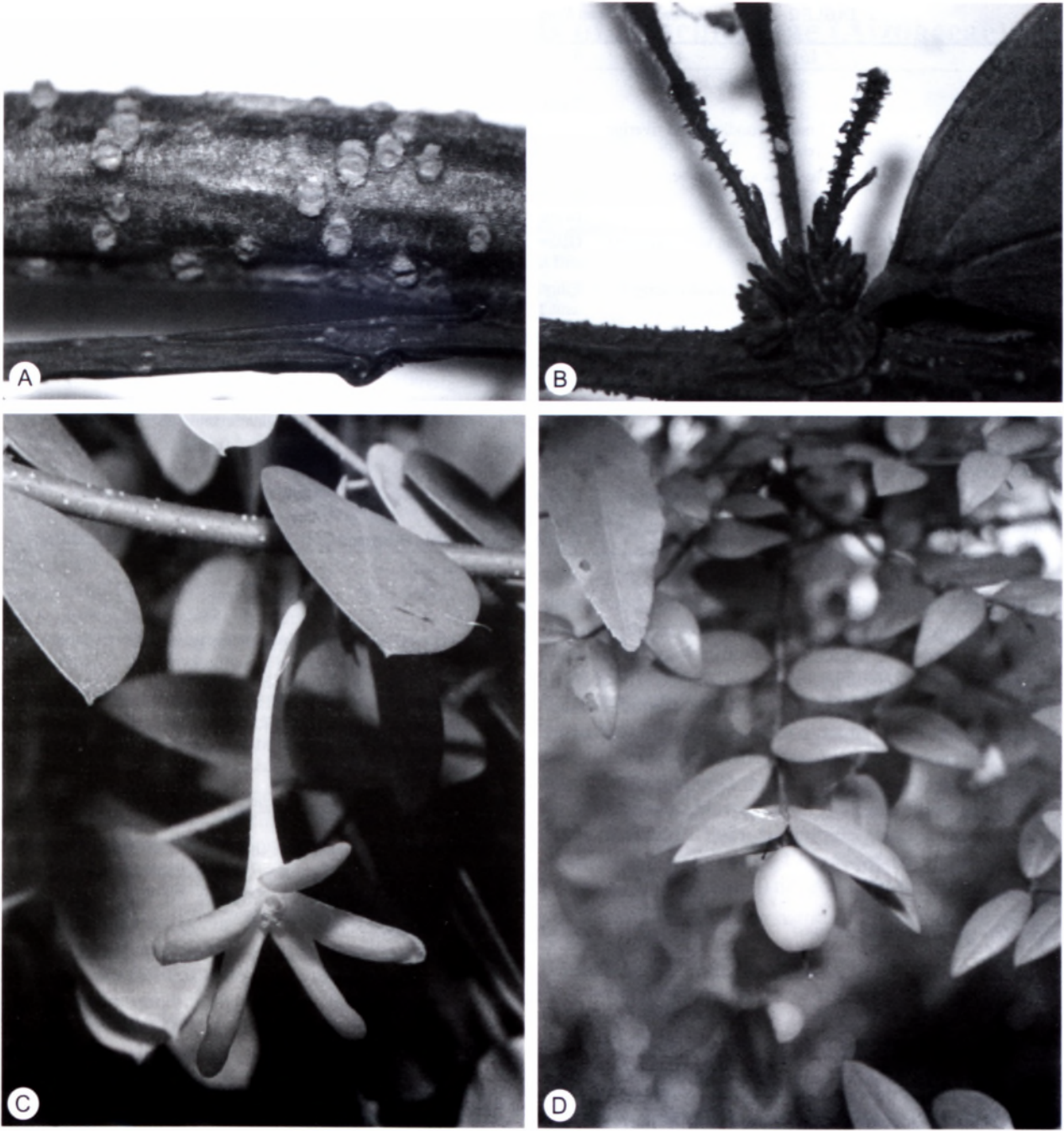


FIGURE 5.—*Synaptolepis*. A, transversely elongated lenticels of older stems; B, glandular pedicels. C, D, *Synaptolepis oliveriana*: C, flower; D, fruit. Photographers: A, B, M. Jordaan; C, D, G. Nichols.

TAXONOMY

Specimens seen on the Aluka Library website, <http://www.aluka.org/> are distinguished by the code e! in the citations. For flowers and fruits see Figure 5C, D.

Synaptolepis oliveriana Gilg in *Botanische Jahrbücher* 19: 276 (1894a); Gilg: 231, fig. 81 F–J (1894b); C.H.Wr.: 80 (1915); B.Peterson: 218 (1959); B.Peterson & Verdc.: 87 (2006). Type: Mozambique, Delagoa Bay [Maputo], *Monteiro 45* [B, holo.†; K, lecto. e!, designated by Peterson & Verdcourt (2006); P, isolecto. e!].

S. kirkii sensu C.H.Wright: 80 (1915) quoad *Bolus 9762*.

Erect, straggling or scrambling shrub up to 1 m high or a woody climber up to 3 m, occasionally up to 5 m tall, much-branched; branches divaricate, longitudinally

ribbed, brown or blackish, hairless, young branches sometimes glandular, covered with numerous rounded lenticels, becoming horizontally elongated, very prominent and wart-like on older stems (Figure 5A). *Bark* dark brown, rough, flaky, fibrous. *Stipules* lanceolate, 1.0–1.5 mm long; margin ciliate. *Leaves* simple, opposite or subopposite, leathery, dark glossy green above, paler below, hairless, bundles of fibrous vessels in blade visible when torn apart, especially along midrib; lamina elliptic or ovate, 8–20(–24) × 5–15(–17) mm, apex obtuse, acute or abruptly acuminate, base cuneate, rounded to truncate, margin entire, thickened; midrib sunken above, prominently raised below, with parallel lateral veins running straight into margin or disappearing before reaching margin, inconspicuous above, prominent below, reticulate venation obscure; petiole 1–2 mm long, transversely wrinkled and grooved above. *Inflorescence*

TABLE 2.—Main differences between *Synaptolepis kirkii*, *S. oliveriana* and *S. alternifolia*

	<i>S. kirkii</i>	<i>S. oliveriana</i>	<i>S. alternifolia</i>
Distribution	Kenya, Somalia, Tanzania	Mozambique, South Africa (KwaZulu-Natal)	Malawi, Mozambique, Tanzania, Zimbabwe
Habitat	Miombo woodland and riverine forest	Sand forest, coastal dunes or thicket	Miombo woodland, riverine and sand forest
Habit	Usually woody climber or scrambling shrub	Small shrub in open grassland or disturbed areas, in forest, terminal twigs twining in vegetation	Shrub or woody climber
Young branches	Glandular, often with short, stiff hairs	Glabrous or glandular, rarely with short, stiff hairs	Glabrous or often with few long white hairs
Leaves	Broadly ovate, usually longer than 24 mm	Elliptic to broadly elliptic, or ovate, usually shorter than 24 mm	Elliptic, usually longer than 24 mm, sometimes shorter
Inflorescence	Axillary, solitary or few-flowered fascicles	Axillary, solitary or in pairs	Terminal, 3–10-flowered cymes
Pedicel	Glandular	Often glandular	Usually glabrous, sometimes with few long white hairs, occasionally glandular
Pedicel length from 2nd bract to base of hypanthium	5–6 mm	3.0–4.5 mm	3.5–6.0 mm
Hypanthium	Hairy or glabrous on outer surface	Glabrous on outer surface	Glabrous on outer surface
Petals	Lobed ring without hairs	Lobed ring with ciliate margins	Lobed ring with stiff white hairs

escence axillary, of solitary or paired flowers; bracts with ciliate margins, 1–2 mm long. Flowers white, sweetly scented (Figure 5C); pedicels \pm 3–4 mm long, often glandular (Figure 5B). Hypanthium funnel-shaped, 10–15(–19) mm long, hairless on outer surface; lobes elliptic, 3.5–5.0 \times 1.0–2.0 mm, apex obtuse, hairless. Petals forming a ring with membranous lobes, margin ciliate. Stamens 10, in 2 whorls in throat of calyx, included. Disc cup-shaped with small lobes, \pm 0.5 mm long. Ovary ovoid, sessile, hairless. Fruit a drupe, oblong-ellipsoid, \pm 12 \times 10 mm, enclosed in persistent, \pm fleshy base of hypanthium, yellowish to orange, turning blackish, smooth (Figure 5D).

Selected specimens examined

MOZAMBIQUE.—1140 (Moçimboa da Praia): Cabo Delgado Prov., Moçimboa da Praia, (–AD), *Mendes 151* (PRE). 1340 (Pemba): Porto Amelia [Pemba], (–BA), *Gerstner 7171* (PRE). 1737 (Quelimane): Zambesia, 20 miles [32 km] N of Quelimane, (–CA), *Wild 5870* (PRE, SRGH). 2135 (Bazaruto Island): Bazaruto Island, (–CB), *Mogg 28625* (PRE). 2434 (Chidenguele): Chidenguele [Chidenguel], (–CC), *Pedro & Pedrogar 1806* (PRE). 2435 (Nhacoongo): Sul do Save Prov., Nhacoongo [Inhacoongo], (–AC), *Macedo & Balsinhas 1102* (PRE). 2532 (Maputo): Maputo [Lourenço Marques], (–DC), *Borle 158, 181* (PRE); Rikatla [Ricatla], (–DC), *Junod TVM20144* (PRE). 2533 (Xai-Xai): Gazaland, Masiyena [Masiyani], mouth of Limpopo River, (–AB), *Earthy 87* (PRE). 2632 (Bela Vista): Inhaca Island, (–BB), *Mogg 27211, 27624, 27645, 27521, 28308* (PRE).

KWAZULU-NATAL.—2632 (Bela Vista): Maputaland, Tembe-Nduma corridor, (–CD), *Burrows 7015* (PRE); 5 miles [8 km] NE of Makanes Drift, (–CD), *Ross 2366* (NH, PRE); Makanes drift, 3 miles [4.8 km] S of drift in sand forest, (–CD), *Ross & Moll 1809* (PRE); Kosi Bay, at NW side of Lake Nhlanga, (–DD), *Venter 11,536* (PRE); Kosi, Sifungo, NW of Sifungo, (–DD), *Ward 8473* (PRE). 2732 (Ubombo): Ingwavuma Dist., Lake Vasi, (–BA), *Vahrmeijer 1109* (PRE); Maputaland, Sileza, (–BA), *Williams 968* (NH, PRE); Mbazwana Forest Reserve, Mobola veld, (–BC), *Gerstner 4808* (PRE); Sibayi area, between Sordwana Bay and Jozini, (–BC), *Van der Schijff 6585* (PRE); Ubombo Dist., near Manzengeyena Inspection Quarters, (–BD), *Moll 4862* (PRE); Hlabisa Dist., False Bay Park, (–CD), *Gerstner 5068* (PRE); Ubombo Dist., Mpangazi, (–DA), *Strey 5088* (PRE). 2832 (Mtubatuba): Nyalazi State Forest, Kentron area, (–AB), *Nicholas 1598* (PRE); Hlabisa Dist., E of Nyalazi River, (–AB), *Ward 3042* (PRE); St Lucia System, Bhangez Lake, (–BA), *Ward 9502* (PRE).

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