

Noteworthy records to the Flora of Saudi Arabia

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ABSTRACT

Seven taxa: *Tridax procumbens* L. *Pterolobium stellatum* (Forssk.) Brenan, *Indigofera arrecta* Hochst. ex A. Rich., *I. spicata* Forssk., *I. trita* var. *maffeii* (Chiov.) Ali, *Oncoba spinosa* Forssk. and *Leucas martinicensis* R.Br. are reported new to the flora of Saudi Arabia. *Tridax*, *Pterolobium* and *Oncoba* are new genera to the flora. Family Flacourtiaceae, to which *Oncoba spinosa* belongs, is also reported new to the flora of Saudi Arabia.

INTRODUCTION

Although floristic exploration of the Arabian Peninsula has intensified during the past few decades, particularly in the southwestern region, many remote regions remain to be explored. The southern region, particularly Yemen, has been famous botanically since the time of Forsskal in the eighteenth century. Later the taxonomic and phytogeographic studies were further accelerated by Blatter (1919–36) and Schwartz (1939). Most of the collections in all previous works (Forsskal 1775; Deflers 1889; Blatter 1919–36; Schwartz 1939) were from Arabia Petreae and Arabia Felicis which include part of the present day Saudi Arabia.

These were followed by works on the flora and vegetation of Saudi Arabia such as Vesey-Fitzgerald (1955); Zohary (1957); Khattab & El-Hadidi (1971); Mandaville (1973); De Marco & Dinelli (1974); Abulfatih (1981); Hedge (1982); Collette (1985); Abedin *et al.* (1985); Boulos (1985); Chaudhary *et al.* (1988); Konig (1988); Migahid (1988 & 1989); Mandaville (1990) and Heemstra *et al.* (1990). During the exploration of Fayfa Mountains, some species were recorded which proved to be either new to the flora of Saudi Arabia or to the entire flora of the Arabian Peninsula.

The Fayfa region (17 14' N 43 05' E) consists of eight mountains, of which Jabal Al-Abseea is the highest reaching an altitude of 1950 m. Other mountains which are comparatively low in altitude (Al-Salmani, 1200 m; Al-Akhamia, 1300 m; Al-Ghardha 900 m; Al-Abdali 1400 m; Al-Adadhiri 1200 m; Al-Nafeeeya 1600 m and Al-Aitham 1500 m) encircle the highest one.

This paper is a part of Master of science work undertaken by the third author, aiming to study the flora of the Fayfa mountains. Representative specimens are deposited in the Herbarium (KSU) of King Saud University.

LIST OF NOTEWORTHY SPECIES

Asteraceae

Tridax L.

This genus includes 26 species according to the revision by Powell (1965), all native in the New World only, and with one species widely naturalised in the Old World.

Tridax procumbens L., Sp. Pl. 900 (1753); Andrews, Fl. Pl. Sudan, 3: 55 (1956). Fig. 4b.

Jabal Fayfa, 19-1-1995, M.I.H. Alallah, 1837 (KSU).

Distribution: Native from Mexico to Venezuela, now widely naturalized in other parts of the world, including Saudi Arabia. It is also reported from Yemen.

Fabaceae

sub family *Caesalpinioideae*

Pterolobium Wight & Arn.

In their revision of the genus, Vidal & Hul Thol (1974) recognised 10 species under this genus. All of them are present in the Asian continent except *Pterolobium stellatum* which is also present in Tropical Africa.

Pterolobium stellatum (Forssk.) Brenan; Polhill & Thulin, in Fl. Ethiopia 3: 54 (1989). Fig. 1.

Jabal Fayfa, 20-1-1995, M.I.H. Alallah 1817 (KSU).

Previous collection: Jabal Fayfa, 4800 ft., 23-10-1986, S. Collenette 5869 (K).

Distribution: Saudi Arabia, Yemen (Wasil, Schweinf. 1225 (B)! *vide* Blatter; Okeber, Schweinf. 803 (B); near Attara, Defl. 393 (MPU); near Mekhader, Defl. 654 (MPU), Eastern Africa from Sudan to South Africa.

The typical samaroid fruit of this tree is unique among the fruits of the plants present in the whole flora region of Saudi Arabia.

sub family *Papilionoideae*

Indigofera spicata Forssk., Fl. Aegy.-Arab., 138 (1775); Thulin, in Fl. Ethiop., 136 (1989). Fig. 3a.

Jabal Fayfa, 13-5-1995, M.I.H. Alallah, 1851 (KSU).

Distribution: Saudi Arabia, Yemen (Jabal Nakhai; Hadiyab), Tropical Africa, India, Sri Lanka, SE Asia.

I. trita var. *maffei* (Chiov.) Ali, Bot. Not. 111: 558 (1958); Thulin, Fl. Ethiopia 3: 134 (1989). Fig. 3b.

Jabal Fayfa, 13-5-1995, M.I.H. Alallah, 1829 (KSU).

Distribution of the variety: Saudi Arabia, Yemen (below Wasi; near Manakhah), Tropical East Africa, Ethiopia, Pakistan, India.

Four varieties have been recognized under *I. trita* by Ali (1958) of which var. *trita* occurs in tropical Asia and Australia, whereas var. *subulata* (Vahl ex Poir.) Ali is widespread in tropical and southern Africa, var. *scabra* (Roth.) Ali in tropical Africa,

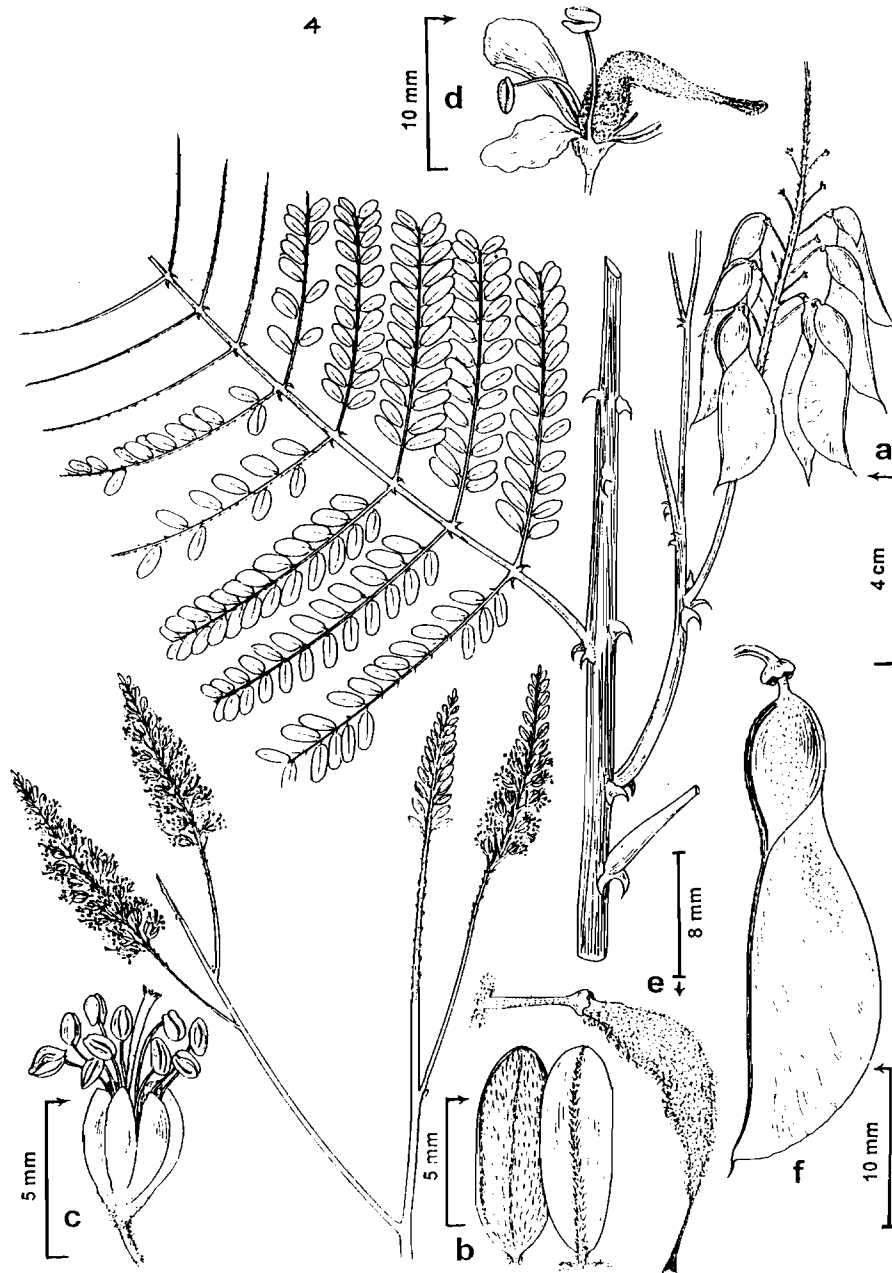


Fig. 1. *Pterolobium stellatum* (Forssk.) Brenan. a. habit; b. dorsal and ventral view of a leaflet; c. flower; d. part of the flower; e. pistil; f. fruit; g. inflorescence.

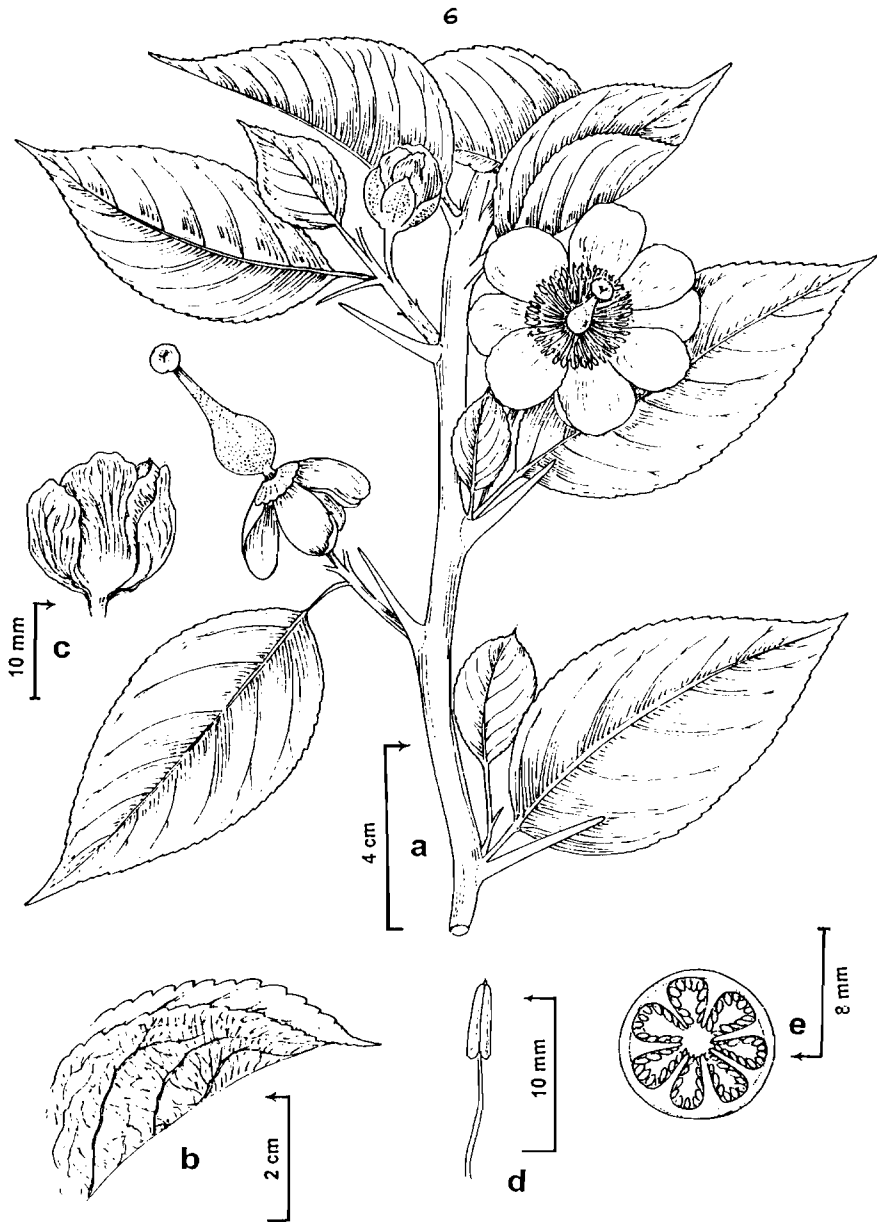


Fig. 2. *Oncoba spinosa* Forssk. **a.** habit; **b.** leaf; **c.** a bud; **d.** stamen; **e.** c.s. of ovary.

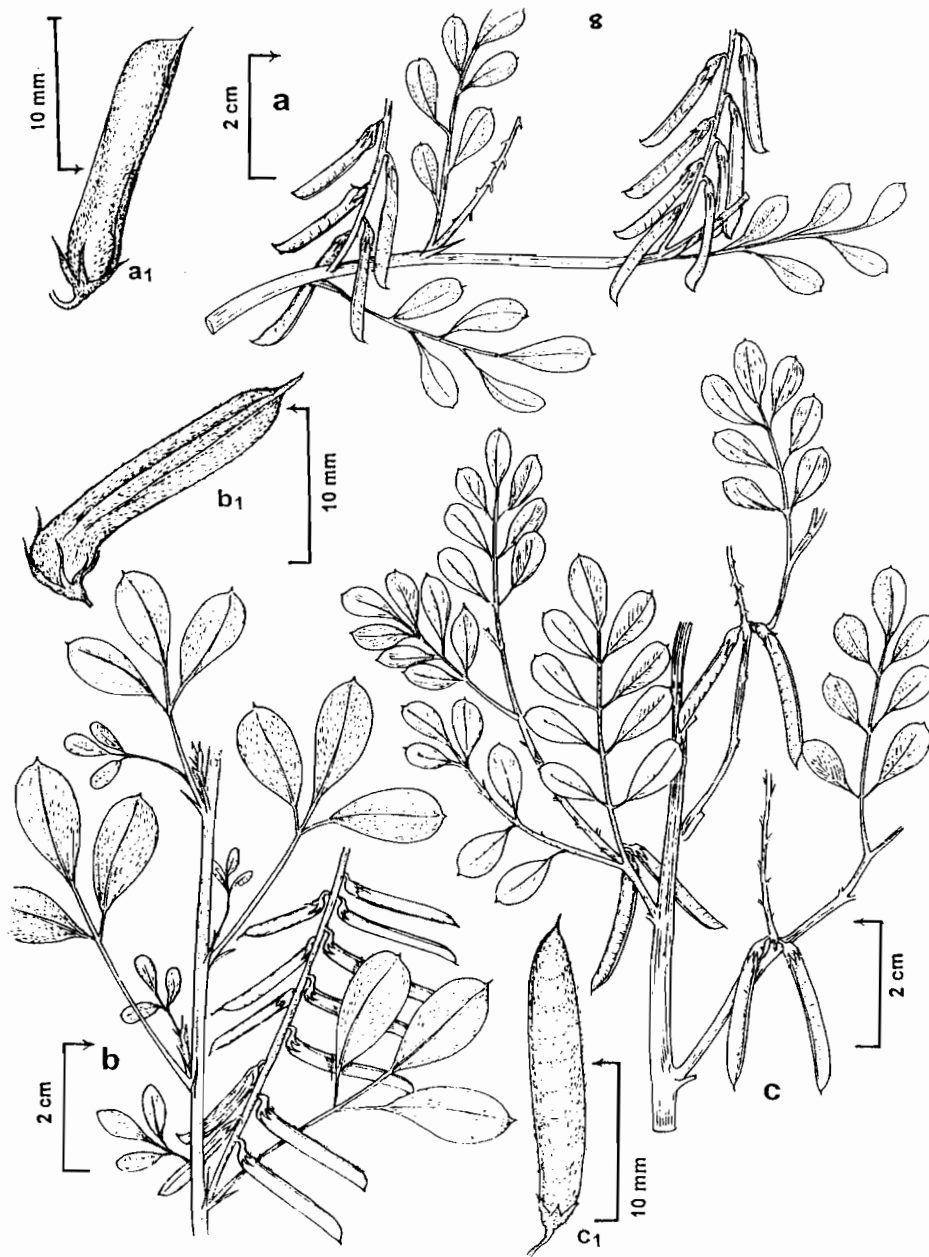


Fig. 3. *Indigofera spicata* Forssk.: **a.** habit, **a1.** fruit; *I. trita* var. *maffei* (Chiov.) Ali: **b.** habit, **b1.** fruit; *I. arrecta* Hochst. ex A. Rich.: **c.** habit, **c1.** fruit.

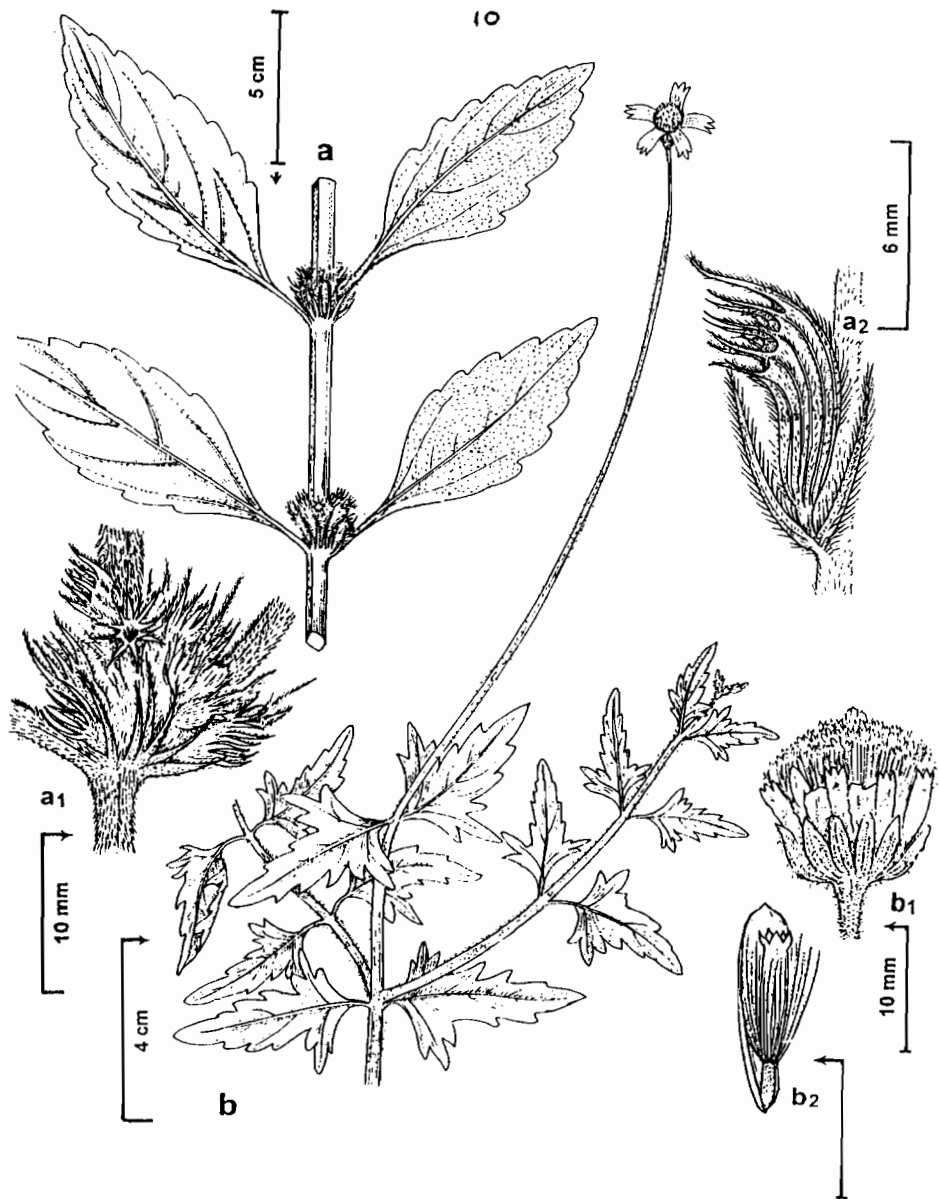


Fig. 4. *Leucas martinicensis* R. Br.: **a.** part of a flowering stem, **a1.** inflorescence, **a2.** calyx; *Tridax procumbens* L.: **b.** habit, **b1.** inflorescence, **b2.** disc floret.

Transvaal, Madagascar, India and central America and var. *maffeii* in Sudan, Somalia, East Africa, Mosambique, south western Arabian Peninsula, Pakistan and India.

I. arrecta Hochst. ex A. Rich., Fl. Abyss., I 184 (1847); Blatter, Fl. Arabica, 145 (1919–36); Andrews, Fl. Pl. Anglo-Egypt. Sudan, 2: 215 (1952); Thulin, in Fl. Eithiopia 3: 135 (1989). Fig. 3c.

Jabal Fayfa, 13–5–1995, M.I.H. Alallah 1840 (KSU)

Previous collection: Jabal Fayfa, 1988, Collenette 6797 (K)

Distribution: Saudi Arabia, Yemen (near Sanah, Deflers-530; top of J. Shibam, Deflers-344, (Blatter, 1919–36)) Tropical Africa, Madagascar.

Flacourtiaceae

Oncoba Forssk.

A genus of 5 species confined to Tropical Africa and Arabia.

Oncoba spinosa Forssk. Fl. Aegypt. Arab. 103 (1775); Oliver, Fl. Trop. Africa 1: 114 (1868); Andrews, The Fl. Plants Anglo-Egypt. Sudan, 1: 158 (1950); Blatter, Fl. Arabica 53 (1919–1936). Fig. 2.

Jabal Al-Akhamiya, Fayfa region, 7–5–1995, M.I.H. Alallah, 1816 (KSU).

Distribution: Tropical Africa, Yemen and Saudi Arabia.

Lamiaceae

Leucas martinicensis R.Br. Prod. 504 (1810); Thiselton-Dyer, Fl. Trop. Afr. V, 479 (1900); Andrews, Fl. Pl. Sudan 3: 215 (1956); Blatter, Fl. Arabica 381 (1919–36). Fig. 4a.

Jabal Fayfa, 11–5–1995, M.I.H. Alallah, 1818 (KSU).

Distribution: Saudi Arabia, Yemen, Tropical Africa. Sebald (1980) recorded *L. martinicensis* from only north and south Yemen in the Arabian Peninsula.

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اضافات جديدة بالملاحظة الى فلورا المملكة العربية السعودية

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خلاصة

نتيجة للمسح النباتي الذي تم لجبل فيفا تبين أن بعض الأجناس والأنواع لم يسبق تسجيلها ضمن فلورا المملكة العربية السعودية، لاسيما في جبل فيفا الغني بالتنوع النباتي، ولما كانت منطقة فيفا منطقة زراعية مما قد يؤدي الى أختفاء العديد من الأنواع النباتية خاصة الأنواع النادرة أو التي لم تسجل من قبل، لذلك يوصى المؤلفون بعمل دراسات مكثفة لهذه المنطقة.

وقد تم تسجيل الفصيلة Flacourtiaceae لأول مرة يمثلها النوع *Oncoba spinosa* أما الأجناس التي تسجل لأول مرة هي *Pterolobium*, *Tridax*, *Oncoba* والأنواع الجديدة هي:

Pterolobium stellatum, *Tridax procumbens*, *Oncoba spinosa*, *Indigofera arrecta*,
I.spicata, *I.trita var. maffei*, *Leucas martinicensis*.