

NEW GENERIC RECORD AND RECLARIFICATION OF *THESPESIA POPULNEOIDES* (ROXB.) KOSTEL

SULTANUL ABEDIN, ZAMARRUD, RUBINA ABID AND JAN ALAM

*Department of Botany,
University of Karachi, Karachi-75270.*

Abstract

Decaschistia Wight & Arn., is reported for the first time from Pakistan and the validity of *Thespesia populneoides* (Roxb.) Kostel, has been discussed with necessary photographs.

New generic record

Decaschistia Wight & Arn. Prodr. Fl. Ind. Orient. 52. 1834, is a new generic record of the family Malvaceae from Pakistan.

A genus with c. 18 species distributed in India and N.Australia (Mabberley, 2008). Four species are endemic to India and the present one is extended to Pakistan.

The genus is characterized by having 10-loculed capsule, each locule is 1-seeded and they are separated at maturity from the central axis. It is close to *Hibiscus* L. which has 5-loculed capsule; each locule with 3-many seeds and locules remain attached at maturity to the central axis.

Decaschistia crotonifolia Wight & Arn., Prodr. Fl. Ind. Orient., 52, 1834.

Icon. Pl. Ind. Orient pl. 42, 1838; Mast in Hook. f., Fl. Brit. Ind., 1. 332. 1874; Paul in Sharma & Sanjappa, Fl. Ind., 3: 296. f. 82. 1993.

Sub prostrate to erect, c. 2 m tall herb to shrub, leaves stipulate, petiolate, lanceolate ovate, serrate, hairy. Flowers axillary, 1-2 below, and in whorls of 5 above, pedicellate, epicalyx segments 10, linear, connate at base. Sepals 5, acute, connate at base. Corolla *ignota*. Capsules c. 1 cm in diameter, 10 valved, each valve with glabrous, brownish-black, single seed.

Representing specimens: Swat District, between villages Banda Barai and Matta, western bank of Swat River, subprostrate herb with fruits. 5. 10. 1988. A. *Ghafoor & Tahir Ali* 3961(KUH).

Distribution: It is common in South India and reported for the first time from Pakistan (Northern part). It shows quite disjunct distribution.

Reclarification of *Thespesia populneoides* (Roxb.) Kostel

The attention has been drawn to write reclarification of *Thespesia populneoides* (Roxb.) Kostel by the work of Philcox (1997), who discussed in detail the morphology of *Thespesia populnea* (L.) Sol. ex Corr., and followed the view of Borssum-Waalkes

(1966) that was earlier followed by Wight & Arnott (1834) and Masters (1874) that *Thespesia populneoides* (Roxb.) Kostel is the synonym of former. He did not consider the work of Fosberg & Sachet (1972), Abedin (1977, 1979), Kalaudi *et al.*, (1985) and Paul (1993). However the present authors revisited the field that was earlier visited with Fosberg and found both the species are growing side by side bearing the same differentiating characters and support the view that both these species are distinct. Most recently Bayer & Kubitzki (2003) have also mentioned that Linnaeus's species is pantropical on seashore while Roxburg's species is in Indian Ocean. The works of these authors indicate that they have not seen the right specimen of *Thespesia populneoides* (Roxb.) Kostel. Roxburg(1832) was so convinced about the strongness of the characters that he suggested to form a new genus. The authors are not adding anything new but providing necessary photographs in support of the views that the two species are clearly distinct that are given in Table 1.

Table 1. Comparative characters of *Thespesia* species.

<i>Thespesia populnea</i> (L.) Corr.	<i>Thespesia populneoides</i> (Roxb.) Kostel
All parts green, sparsely peltate hairy.	At least the young parts bronzed or coppery and densely peltate hairy.
Leaves usually truncate. Leaf apex usually acute (Fig. 1A). Stipules sulcate-lanceolate, 5-8 mm long.	Leaves usually deeply cordate. Leaf apex usually acuminate (Fig. 1B) Stipules linear, 2-3 mm long.
Pedicle articulate at base, usually stout, 1-5 cm long with bracteate joint (Fig. 1E).	Not articulate, very thin, 5-8 cm long, tending to droop, without bracteate joint (Fig. 1F).
*Fruit slightly hard but easily pressed between thumb and fingers, exocarp not separated from endocarp (Fig. 1C, 2A).	Very hard, not pressed even by strong force, exocarp separating longitudinally into five equal valves (Fig. 1D, 2B).
Seeds broadly ovate (Fig. 2C). Densely hairy above, less so at base and on angles, otherwise glabrous, hairs sericeous (Fig. 2E).	Seeds narrowly ovate (Fig. 2D). Hairy all over but dense above and less at base, hairs paliformis (mistakenly described previously as clavate or bulbous) (Fig. 2F).

*It has been noted that if immature green fruits are pressed then with time become black and are not breakable. Epicarp remains intact.

Thespesia populnea is a coastal species but has been reported from Udhampur, Kashmir (Sharma & Kachroo, 1981, under *Thespesia macrophylla* Blume; Naqshi *et al.*, 1988; Baludi 2002). All these authors based the entry of this taxon in their works on Lambert (1931) whose specimen appears to be rightly placed under *Thespesia lampus* Cav., by Stewart (1972) which may possibly grow in Kashmir – a noncoastal area.

Acknowledgement

We are thankful to the Director, Karachi University Herbarium, University of Karachi for providing the facilities of library, herbarium and scanning electron microscopy.

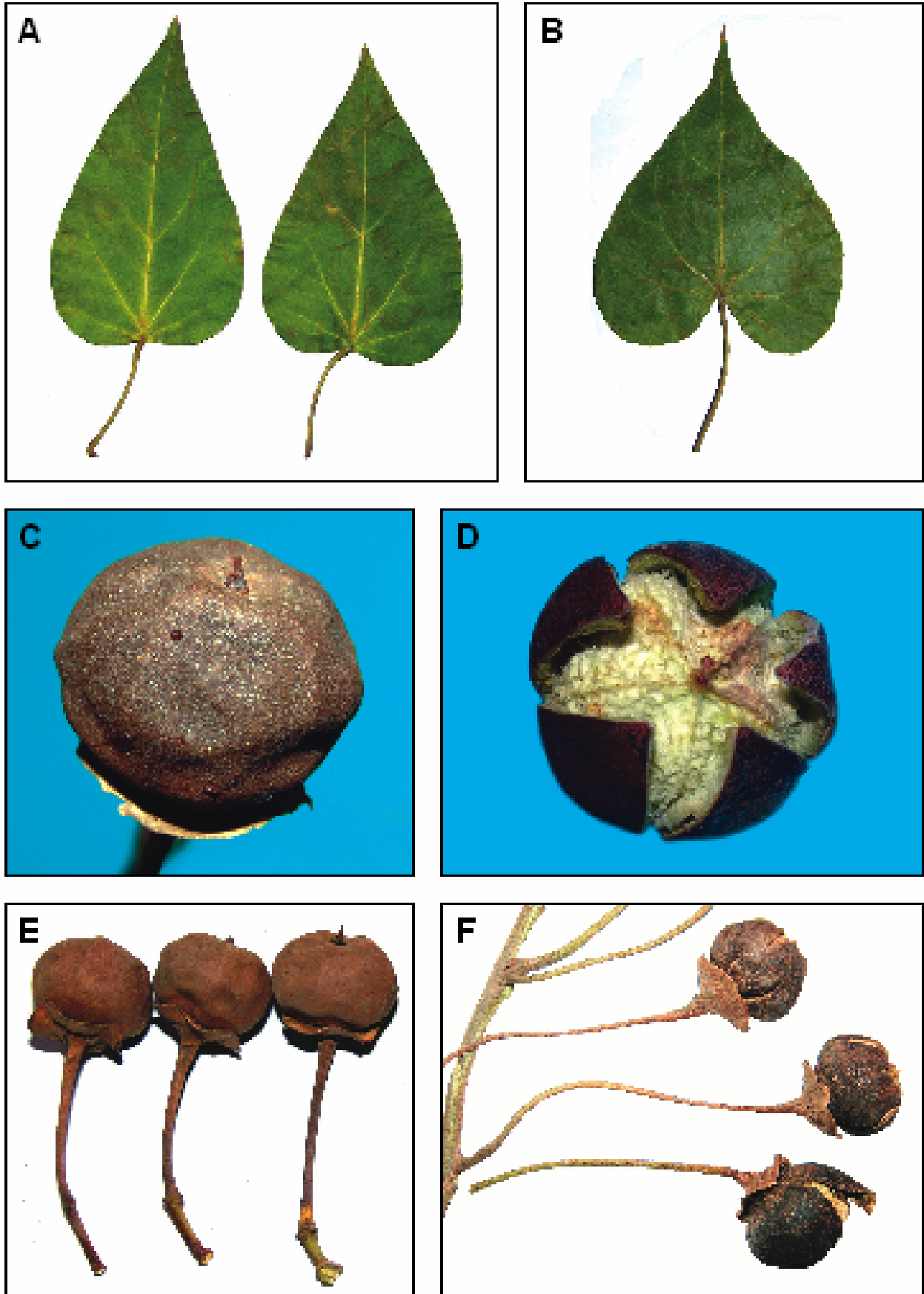


Fig. 1. *Thespesia populnea*: A, Leaves; C, Fruit; E, Fruits with basally articulated pedicels. *Thespesia populneoides*: B, Leaf; D, Fruit with ruptured epicarp; F, Fruits with smooth and thinner pedicels.

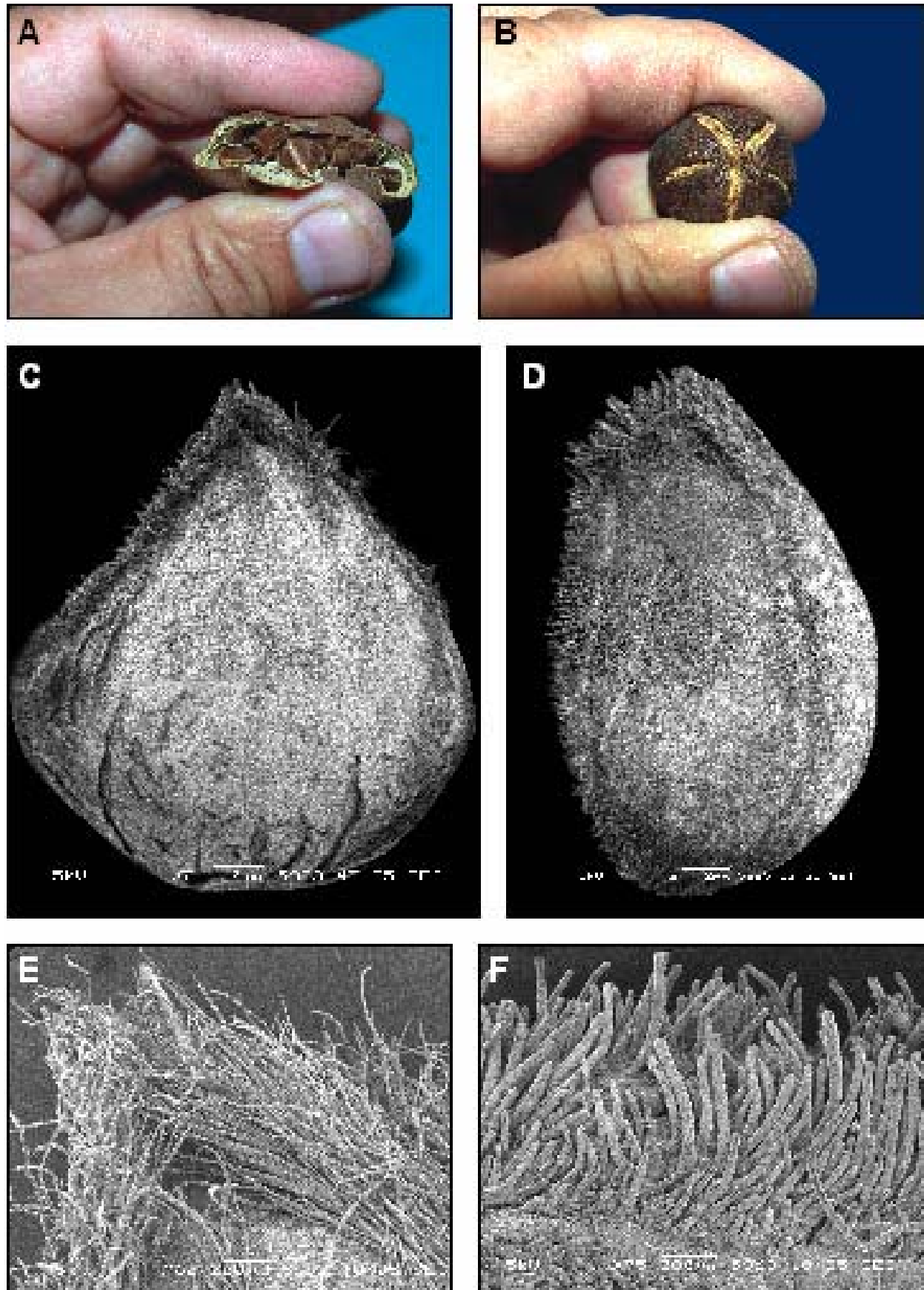


Fig. 2. *Thespesia populnea*: A, Mature fruit easily broken; C, Broadly ovate seed; E, Apex of seed with sericeous hairs. *Thespesia populneoides*: B, Mature fruit not broken; D, Narrowly ovate seed; F, Apex of seed with peliform hairs (Scale bar: C,D=2mm; E,F= 200 μ m).

References

- Abedin, S. 1977. Taxonomic notes on *Fioria Mattei* and *Thespesia* Sol. ex Corr., from Pakistan. *Pak. J. Bot.*, 9(1): 59-66.
- Abedin, S. 1979. Malvaceae. *Flora of Pakistan*. (Eds.): E. Nasir & S.I. Ali, 130: 31-34. Karachi.
- Bayer, C. and K. Kubitzki. 2003. The *Family and Genera of Vascular Plants. Malvaceae* (Eds.): O. Bayer and K. Kubitzki, 5: 290-291. Springer, Berlin.
- Borssum-Waalkes, J. Van. 1966. Malesian Malvaceae revised. *Blumea*, 14: 105-110.
- Kalaudi, M.A., S. Abedin A. Husain and Z.H. Zaidi. 1985. Studies on Carbohydrates and Amino Acids composition of *Thespesia populnea* and *Thespesia populneoides*. *Pak. J. Bot.*, 17(1): 49-53.
- Linnaeus, C. 1753. *Species Plantarum*, Stockholm.
- Mabberley, D.J. 2008. *The Plant Book*. Ed.3. Cambridge University Press, Cambridge.
- Masters, M.T. 1874. Malvaceae. *Flora of British India*. (Ed.): J.D. Hooker. 1: 345. London.
- Naqshi, A.R., G.H. Dar, G.N. Javeid and P. Kachroo. 1988. Malvaceae of Jammu and Kashmir State, India. *Ann. Miss. Bot. Gard.*, 75: 1510.
- Paul, T.K. 1993. Malvaceae. (Eds.): B. D. Sharma and M. Sanjappa, 3: 352-353.
- Philcox, D. 1997. *Malvaceae in Flora of Ceylon*. (Eds.): M.D. Dassnayke, F.R. Fosberg and W.D. Clayton, 11: 310-315.
- Roxburgh, W. 1832. *Flora Indica*. (Ed.): W. Carey. Calcutta, London.
- Sharma, B.M. and Kachroo 1981. *Flora of Jammu and Plants of Neighbourhood*, 1: 113. Dehra Dun, India.
- Stewart, R.R. 1972. *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir*. (Eds.): E. Nasir and S.I. Ali. Fakhri Printing Press, Karachi.
- Wight, R. 1838. *Icones plantarum India orientalis*, vol. 1. pl. 42. Madras.
- Wight, R. and G.A.W. Arnott. 1834. *Prodromus flora peninsulae Indiae Orientalis*. London.

(Received for publication 20 December 2009)