

Pavonia sepioides (Malvaceae: Malvaceae), a new record for Asia

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Abstract: *Pavonia sepioides* Fryxell & Krapov. (Malvaceae), recently collected from Chitradurga district, Karnataka state, is reported here for the first time from Asia. A detailed taxonomic account with description, ecological notes, photographs, and key to the species of *Pavonia* Cav. in India are provided in order to facilitate easy identification and further collection.

Keywords: India, Karnataka, Mericarp, New record.

Introduction

The genus *Pavonia* Cav. consisting of about 250 species is distributed widely in the tropical and subtropical regions of the World (Fryxell, 1999). Paul (1993) reported seven species from India, of which *P. procumbens* (Wight & Arn.) Walp. and *P. glechomifolia* (A. Rich.) Garcke ex Schw. were later found to be conspecific and treated under the name *P. burchelli* (DC.) Dyer (Sivarajan & Pradeep, 1996). Babu (2011) has included two species of *Pavonia* from Chitradurga district, *P. zeylonica* (L.) Cav. and *P. odorata* Willd. *P. arenaria* (Murray) Roth was a subsequent addition (Ravikumar *et al.*, 2022), thus the total number of species in India including the present report of *P. sepioides* Fryxell & Krapov. is eight.

During a field visit to the iron rich hills at the outskirts of Dindadahalli, Chitradurga district, the authors collected a species of *Pavonia*. The plant did not match with any of the Indian *Pavonia* species reported so far (Paul & Nayar, 1988; Paul, 1993; Sivarajan & Pradeep, 1996). On further scrutiny with the monograph on Neotropical *Pavonia* (Fryxell, 1999), it was identified as *Pavonia sepioides* Fryxell & Krapov. The specimens were also compared with the holotype and all the characters except the leaf length/width ratio and

pedicel length were matching. The specimens collected are different from all other species in India in having prominent sharp mericarp spines up to 7 mm long and a comparatively large yellow corolla. *Pavonia sepioides* is closely allied to *P. sepium* A.St.-Hil. and *P. uniflora* (Sessé & Moc.) Fryxell but differs in having the lower leaf surface uniformly covered in stellate hairs (<1 mm diam.), a calyx and involucre sparsely hispid-ciliate (hairs 0.5–1 mm long) and the leaves are ovate-lanceolate or ovate-elliptic, widest below the middle. Hitherto, the species has been reported only from South America and introduced to Uganda (Verdcourt & Mwachala, 2009). Hence, the present collection of *P. sepioides* forms its first report not only for the Flora of India but also for the Asian continent. A detailed description, ecological notes, photographs, and key to the species of *Pavonia* Cav. in India are provided for easy identification of this species.

Taxonomic Treatment

Pavonia sepioides Fryxell & Krapov., Fl. Neotrop. Monogr. 76: 221–222. f. 73. 1999. **Type:** COLOMBIA, **Antioquia:** Mun. Medellín, via Santa Helena, 8–12 km, 1520–1680 m, 26.03.1987, *Callejas & Escobar* 3313 (holo TEX [TEX00375782 digital image!]). **Fig. 1**

Undershrubs, erect, up to 1 m high; stems weak. Leaves ovate, lanceolate or elliptic-oblong, 5–10 × 2–5 cm, usually wider below the middle, acute or obtuse at base, acuminate at apex, margins biserrate with alternate small and big teeth; 3–5 nerved at base, sparsely stellate pubescent only on nerves adaxially, uniformly stellate pubescent abaxially; nerves 3–5, distant; petioles 5–20 mm long, densely pubescent; stipules linear-lanceolate, c. 11 mm long, early caducous. Flowers axillary, solitary; pedicels 1–1.8 cm long in flowers and up to 3 cm long in fruits,

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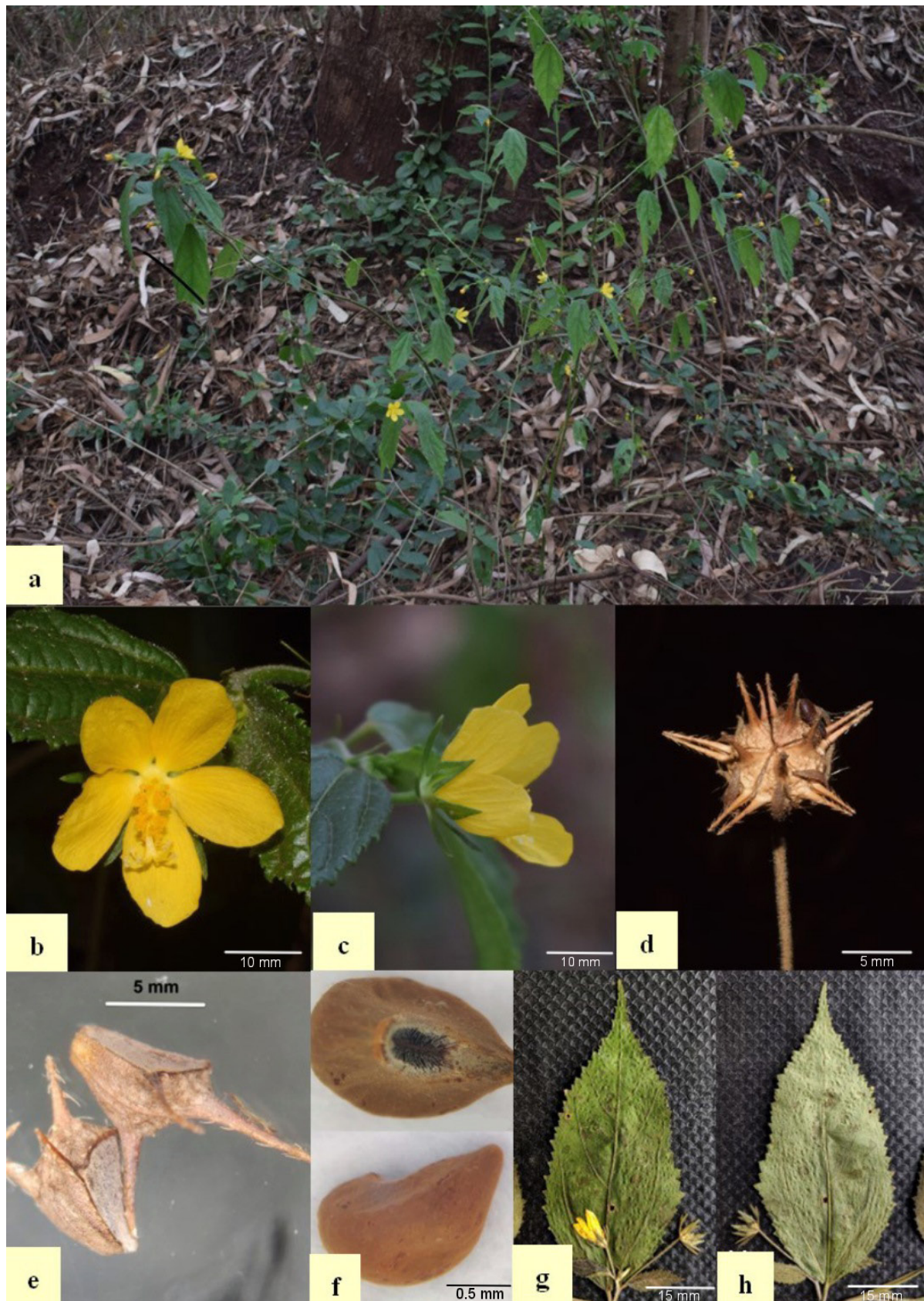


Fig. 1. *Pavonia sepioides* Fryxell & Krapov.: **a.** Habit; **b.** Flower–front view; **c.** Flower–side view showing calyx and epicalyx; **d.** Mature schizocarp; **e.** Mericarps; **f.** Seeds; **g.** Leaf–dorsal view; **h.** Leaf–ventral view (from Arun Kumar & Seema Mali 124389; photos by Arun Kumar).

pubescent, terete. Epicalyx segments 6 or 7, free, 7–11 mm long, linear, sparsely pubescent, with long simple hairs along margins. Calyx 5-lobed; lobes triangular-ovate, 5–9 mm long, acuminate at apex, long ciliate along the margins, sometimes basally greenish white, slightly united below. Corolla yellow; petals 5, obovate to ovate, entire along margins, obtuse at apex, narrowed at base, sparsely hairy outside, glabrous inside. Staminal column c. 3–7 mm long, glabrous, antheriferous throughout, apex toothed; filaments filiform, 1–2 mm long; anthers dorsifixed. Styles emerging from the column, inserted, 7–10-fid. Schizocarps 7–9 mm long; mericarps 5, c. 6 mm long, glabrous, reddish gland dotted, with 3 sub-equal spines with 1 spine longer than the others; spines 3–7 mm long, divergent, retrorsely barbed. Seeds convexly ovate, 1.5–2 mm long, pale brown with few simple hairs with prominent strophiole and hilum; hilum with prominent blackish ridges and furrows.

Flowering & fruiting: Flowers and fruits were observed during April.

Habitat: The plants were found growing inside a *Eucalyptus* plantation as a weed at an altitude of 735 m asl. The other associated plants were *Oureta lanata* (L.) Kuntze (Amaranthaceae), *Cadaba fruticosa* (L.) Druce, *Capparis zeylanica* L. (both Capparaceae), *Cipadessa baccifera* (Roxb. ex Roth) Miq. (Meliaceae), *Lantana camara* L. (Verbenaceae), *Flueggea leucopyrus* Willd. (Phyllanthaceae) and *Synedrella nodiflora* (L.) Gaertn. (Asteraceae).

Distribution: Bolivia, Colombia, Ecuador, Peru, Venezuela, Uganda (introduced) (Fryxell, 1999; POWO, 2023), and now in India.

Specimen examined: INDIA, Karnataka, Dindadahalli village, Bheemasamudra, Chitradurga district, 735 m asl, 17.04.2022, N 14° 12' 16.11", E 76° 13' 34.38", N. Arun Kumar & Seema Mali 124389 (FRLH).

Key to the species of *Pavonia* in India

1. Leaves with nectaries on veins beneath; flowers in axillary or terminal clusters; pedicels 1–5 mm long..... *P. repanda*
1. Leaves without nectaries on veins beneath; flowers axillary, solitary; pedicels 10–60 mm long..... 2
2. Epicalyx segments 5–7..... 3
2. Epicalyx segments 8–14 4
3. Mericarps echinate, without spines *P. burchellii*
3. Mericarps with 3 retrorsely barbed sharp spines

- up to 7 mm long..... *P. sepioides*
4. Mericarps with 3 stout horns and 4 basal protuberances..... *P. propinqua*
4. Mericarps without horns and protuberances.. 5
5. Mericarps winged at angles..... 6
5. Mericarps wingless..... 7
6. Flowers white to pale pink..... *P. zeylonica*
6. Flowers cream to yellow *P. arenaria*
7. Leaves lobed or angular; mericarps glabrous.....
..... *P. odorata*
7. Leaves unlobed; mericarps villous..... *P. arabica*

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