

# *Tylophora indica* (Burm. f.) Merr.

**Standardized Common Name:** *Tylophora asthmatica*

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**Family:** Asclepiadaceae

**Taxonomy:** *Tylophora* includes about 50 species of the Old World tropics, of which 21, including *T. indica*, are found in India. The best known of several synonyms is *T. asthmatica* (L. f.) Wight & Arn., which provides the Standardized Common Name according to *Herbs of Commerce*. However, where botanical nomenclature is concerned the name *T. indica* has priority over *T. asthmatica*. Three varieties are recognized, based mostly on the pubescence of the vegetative and reproductive parts. The two common and well-known varieties are var. *indica* (stem, leaves and inflorescences all pubescent) and var. *glabra* (Decne.) Huber (all parts glabrous). A third, var. *intermedia* Rahman & Wilcock (some parts hairy, but leaf undersides and corolla lobes glabrous) is apparently rare and poorly known, and its status may be doubtful.

**Description:** Vine; stems twining or creeping, <3 mm in diameter, pubescent or glabrous. Leaves opposite, petiolate, separat-

ed by internodes 2–15 cm long; blade usually 1.5–9.5 cm long, ovate-oblong to elliptic-oblong; apex mucronulate to apiculate or acute; base rounded, often somewhat oblique, or shallowly cordate; margins entire, ciliate. Inflorescences axillary, umbellate. Calyx 5-lobed, the lobes narrowly lanceolate, 2.5–3.5 mm long, pubescent; corolla orangish to yellowish with violet spots or interior, rotate, 5-lobed, ca. 9 mm in diameter, the inner surface pubescent; stamens fused into staminal column, with pollen borne in pollinia; corona fused below to staminal column, with 5 lobes and 5 free appendages 1.5–2 mm long, tipped with narrow fleshy points; carpels 2. Fruit a pair of follicles, 5–7 cm long by about 1 cm in diameter, narrowly lanceolate; seeds numerous, milkweed-like, small, brown, with tuft of white hair ca. 3 cm long.

**Parts in commerce:** Leaves

## Identification:

- Blade (1.5–)2.5–7(–12.5) cm long
- Elliptic-oblong to ovate-oblong
- Petiole 3–20 mm long; when long, usually less than one-fourth (at the extreme, one-third) of blade length
- Apex usually rounded with a mucron, sometimes acuminate or acute
- Base weakly cordate or rounded and often asymmetrical
- Margins entire
- Pubescence variable: glabrous in var. *glabra*, otherwise pubescent at least on lower surface, petiole and margins; sometimes also on upper surface along veins or sparsely throughout
- Hairs, where present, all very short, soft, straight, white
- Venation pinnate; secondary veins weak but frequently darker colored in dried material
- Secondary veins 3–8 pairs, irregularly alternate, diverging from midrib at 30–45(–60)-degree angle, splitting and the main branch curving forward to anastomose with the backward-curving branch of the next secondary vein well inside the margin
- Tertiary veins irregularly branching, weak or concealed by hair in densely pubescent individuals, often few in number, some arising from midrib between secondary veins; higher-order veins very inconspicuous
- Pale green or tan-green to moderately dark on upper surface
- Odor and taste usually weak (sometimes reported to be nauseating)

Some pharmacognostic references indicate that the leaves of *T. indica* may exceed 12 cm in length. However, the latest revision of the Indian species of *Tylophora* states that the leaves do not exceed 10 cm. Some of the material described by older sources may have been of related species, although it is possible that variation within *T. indica* is greater than recognized. For example, the lowermost leaves of a vine, which might be larger than the apical leaves, are rarely included in the herbarium material that is used to produce most revisions. Leaves over 10 cm in length should receive extra scrutiny; they should otherwise resemble the smaller leaves and have no unexpected features.

## References:

Bentley R, Trimen H. *Medicinal Plants*. Vol. 3. Delhi: Periodical Expert Book Agency and International Book Distributors; 1880 reprinted 1981:No. 177.

Greenish HG. *Materia Medica*. Jodhpur: Scientific Publishers (India); 1920 reprinted 1999:60.

Jagtap AP, Singh NP. *Fascicles of Flora of India: Fascicle 24*. Calcutta: Botanical Survey of India; 1999.

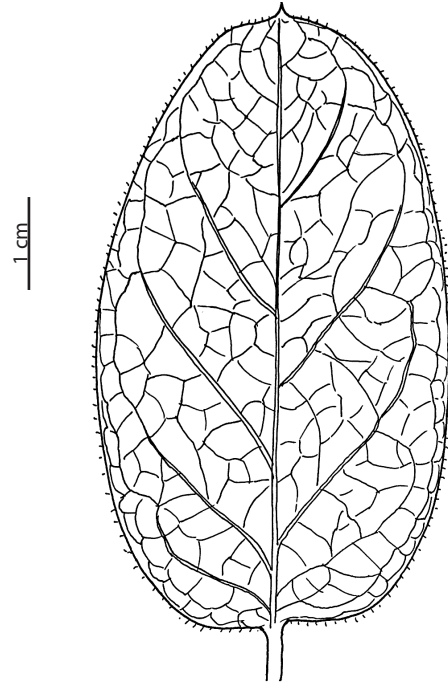


Figure 80: *Tylophora indica* leaf.