

Jacquemontia tamnifolia (Convolvulaceae): an addition to the flora of India from Gujarat

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Abstract: *Jacquemontia tamnifolia* (L.) Griseb. (Convolvulaceae), is reported here for the first time from India, from the Patan district, Gujarat. A detailed description, notes and photographic images are provided.

Keywords: Convolvulaceae, India, New record, Taxonomy.

Introduction

Convolvulaceae Juss., the morning glory family comprising 58 genera and approximately 1,850 to 1,900 species, is distributed worldwide (Staples & Brummitt, 2007; Mabberley, 2017). The family is represented by 158 species in less than 20 genera in India. *Jacquemontia* Choisy, one of the largest genera in the family Convolvulaceae, was established by Choisy in 1834 based on the species formerly included under *Convolvulus* L. and *Ipomoea* L. He described the genus, based on its stellate trichomes, two oval-flat stigmatic lobes, and 8-valved capsules. The genus includes c.120 species (Staples & Brummitt, 2007; Pastore & Simão-Bianchini, 2016) mostly distributed in tropical America, with fewer species in tropical Asia, Australia and Africa. The most complete taxonomic treatment of this genus was made by Robertson (1971) who revised the group from North and Central America, and Buril (2013) with the treatment of 50 species from Brazil. Other studies have demonstrated that the origin of *Jacquemontia* is probably in Asia, subsequently dispersed to Mesoamerica and finally diversified

over the entire continent (Namoff *et al.*, 2007, 2010).

In India, three species of *Jacquemontia* have been reported, such as *J. ovalifolia* (Choisy) Hallier f., *J. paniculata* (Burm.f.) Hallier f. and *J. pentanthos* (Jacq.) G.Don (Efloraofindia, 2007 onwards; Sankara Rao *et al.*, 2019).

Materials and Methods

During floristic explorations in November 2019, the author collected a specimen of the family Convolvulaceae from Nedra village, Patan district of Gujarat in India. After preliminary laboratory studies it has been identified as a species of *Jacquemontia*. Since the specimen was not matching with any of the three species of *Jacquemontia* reported from India, the author have contacted Dr. Marc S. Frank (Florida Museum of Natural History, Florida) for his expert opinion and the specimens were identified as *J. tamnifolia* (L.) Griseb.. The identity was further confirmed by referring to published literature (Stefanovic *et al.*, 2003; Buril, 2013) and comparing digital images of specimens held in the Kew database (<http://apps.kew.org/herbcat/navigator.do>), the JSTOR virtual herbarium (<https://plants.jstor.org/search>) and the NYBG Steere Herbarium (<http://sweetgum.nybg.org/science/vh/specimen-list>).

This species has not been reported in earlier Indian Floras (Hooker, 1882; Cooke, 1908; Saxton & Sedgwick, 1918; Shah, 1978; Raghavan *et al.*, 1981; Biju, 1997; Patel, 2004). Therefore it forms a new addition to the flora of India and a detailed description and photographs are provided for easy

identification of the species. Voucher specimens were deposited at CAL and the Department of Botany, SPT Arts & Science College, Godhra, Gujarat, India.

Taxonomic treatment

Jacquemontia tamnifolia (L.) Griseb., Fl. Brit. W. Ind.: 474. 1861. *Ipomoea tamnifolia* Linnaeus, Sp. Pl. 162. 1753. *Convolvulus tamnifolia* (L.) G. Mey. Prim. Fl. Esseq. 95. 1818. *Thyella tamnifolia* (L.) Raf. Pl. Tellur. iv. 84. 1836; Peter in Engl. & Prantl, Pflanzenfam. ed. 1: 33. 1891; Dandy in F. W. Andr., Fl. Pl. Anglo-Egypt. Sudan 3: 123. 1956; Munday & Forbes, Journ. S. Afr. Bot. 45: 9. 1979. *Type*: BRAZIL, Territory of Roraima, SEMA Ecological Reserve, 07.07.1987, W. Milliken 411 (K [K000945202 digital image!]).

Fig. 1

Annual herbs, climbing. Stems appressed pilose with silky hairs, glabrescent to pubescent; trichomes stellate 2-armed; internodes 3.5–9.5 cm long. Leaves ovate, up to 7 × 6 cm, entire, base commonly cordate, apex acuminate, glabrescent with white trichomes, ciliate; petiole slender, *c.* 3.5 cm long. Inflorescences compound dichasium capitata.

Flowers in dense clusters, upto 15-flowered; peduncles 2–14.5 cm long, axillary, pubescent; outer bracteoles similar to the leaves but smaller, ovate to obovate, *c.* 2.5 × 1.2 cm, the base rounded to attenuate, hirsute; inner bracteoles smaller and more trichomes inwards, linear to elliptic, 1 cm long, densely hirsute; pedicel *c.* 1 mm long. Sepals equal, lanceolate, 6–7.5 × 1–1.5 mm, base rounded, apex acuminate, densely hirsute with brownish-yellowish trichomes. Corolla funnel-shaped, 1.5–2 cm long, infundibuliform, blue; anthers sagittate, *c.* 1.5 mm long; nectary entire; ovary globose; stigmatic lobes 1 mm long, oval-flat. Capsules globose, 4–5 mm diameter, 8 valved. Seeds usually 4, *c.* 2–2.5 mm long, brown, minutely verrucate.

Flowering & fruiting: Flowering from August to December and fruiting from December to February.

Habitat: Grows along road sides, edges of crop fields. It was found climbing on bushes of *Acacia nilotica* (L.) Delile and *Prosopis juliflora* DC. (both Fabaceae).

Distribution: Mascarene Islands, Madagascar, Tropical and Subtropical Americas (Argentina to

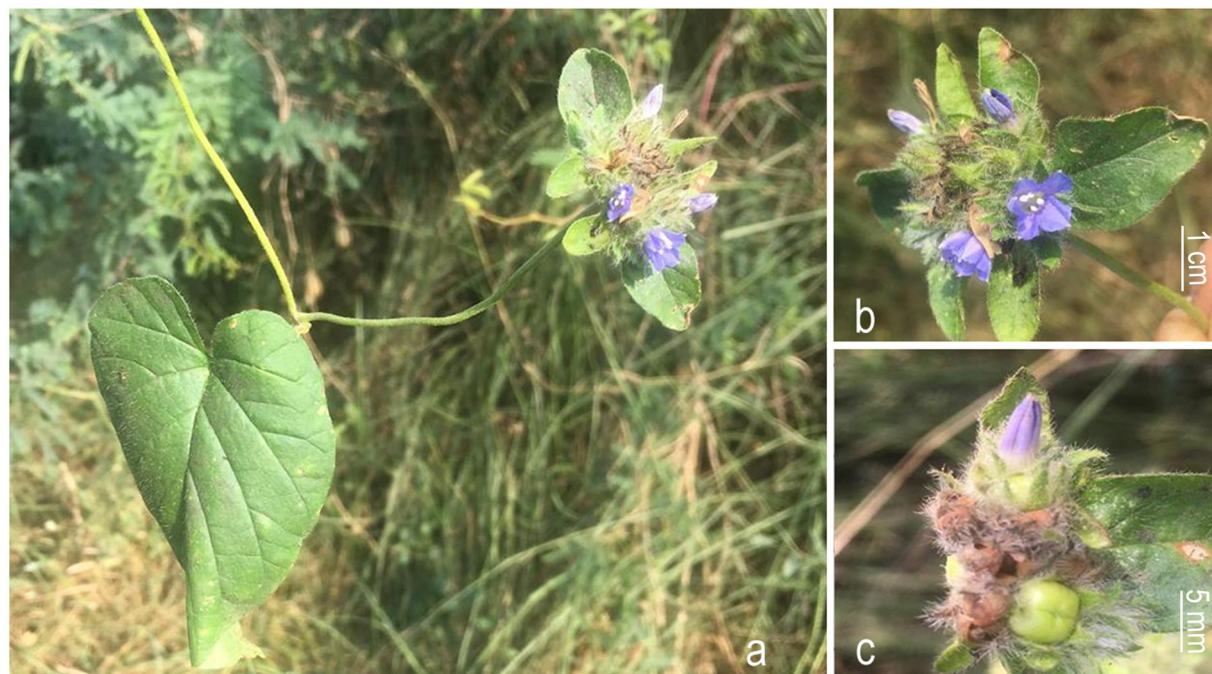


Fig. 1. *Jacquemontia tamnifolia* (L.) Griseb.: a. Habit; b. flowers; c. Capsule (photos by P.K. Patel).

Southern United States), Tropical and South Africa and India (present report).

Specimens examined: INDIA, Gujarat, Patan district, Nedra village, 23°53'143, 72°19'503, 120 m, 05.11.2019, Patel 00740 (Department of Botany Herbarium, SPT Arts & Science College, Godhra, Gujarat)

Notes: *Jacquemontia tamnifolia* is commonly known as hairy clustervine. This species can be identified by its capitate inflorescence but easily distinguished from other species by the two ovate to lanceolate foliaceous bracts below the inflorescences.

Key to species of *Jacquemontia* in India

1. Leaves sub-orbicular to narrowly elliptical with a wedge base and a slightly acute or orbicordate apex *J. ovalifolia*
1. Leaves narrowly or broadly ovate with a truncate or cordate base and an acute or acuminate apex 2
2. Inflorescences enveloped, capitate; bracts foliaceous *J. tamnifolia*
2. Inflorescences umbellate cymes, not capitate; bracts inconspicuous or narrowly elliptical to ovate 3
3. Bracts subulate, 3–6 mm. long *J. paniculata*
3. Bracts falcate or lanceolate, 10 mm long
.....*J. pentanthos*

Acknowledgements

The author is thankful to Dr. Marc S. Frank, Plant Identification and Information Service, University of Florida Herbarium, Florida Museum of Natural History, Florida for confirming the identity of the specimen and Mr Naranbhai R. Baria for their constant support during field work. Also thankful to Dr. Ram Suthar (Science College, Kadi) for valuable comments on the preparation of the manuscript. The author is also thankful to the anonymous reviewers, for their valuable comments and suggestion to improve the manuscript.

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