

The rediscovery of *Polyalthia crassa* (Annonaceae) from Andaman and Nicobar Islands, India

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Abstract

Polyalthia crassa described by R. Parker based on his Burmese collection and of C.E. Parkinson's from Andaman Islands during 1920s was never recollected. The present report concerns its recent recollection from North Andaman Islands with its updated nomenclature, detailed description and distribution notes. A note on its distinction with *P. andamanica* is added for taxonomic clarity.

Keywords: India, *Marsypopetalum crassum*, North Andaman Islands, *Polyalthia andamanica*, Rediscovery

Introduction

Quantitative Assessment and Mapping of Plant Resources of Andaman and Nicobar Islands, a project taken up under Department of Biotechnology sponsorship, has facilitated the collection of a *Polyalthia* species with olive-green-coloured flowers, the petals of which are tightly arching/clasping over the stamens and carpels, but partly exposing them. The collections were made from North Andamans from two different localities. The material did not match with any of the *Polyalthia* collections at PBL or CAL. Its identity was confirmed as *Polyalthia crassa* R. Parker based on critical study of the material, combined with close scrutiny of literature and types from DD and digital images from Kew herbarium catalogue. While describing *P. crassa* in 1929, Parker had quoted his own collection made during 1926 from erstwhile Burma (Myanmar). He also cited specimens collected by Parkinson (*Parkinson* 213, 584, 880, 1010) from Chiriatapu and Baratang Islands of Andaman Islands. Parkinson (1923) did not recognize its distinctiveness and enlisted it as *P. andamanica* Kurz ex King but with a description that is in full agreement with *P. crassa*. Mitra (1999) and Karthikeyan *et al.* (2009) included *P. crassa* based on Parker's report (1929). Rao (1999) and Pandey & Diwakar (2008) in their checklist on flora of Andaman and Nicobar Islands included it based on Mitra's authority. But none of the authors could see the specimens leading to its scant description or, description when made, reproduced from that of Parker. Further, *P. crassa* was erroneously cited as an endemic to

Andaman and Nicobar Islands in the cited reports from India. Xue *et al.* (2011) based on affinity of *P. crassa* with *Marsypopetalum pallidum* (in venation with arcuate brochidodromous loops, extra-axillary inflorescences, inwardly curved petals forming floral chamber and support from molecular studies) have made a new nomenclatural combination for *P. crassa* as *Marsypopetalum crassum* (R. Parker) B. Xue & R.M.K Saunders. *Marsypopetalum* which had no representation from India, is now represented by this taxon. Its updated nomenclature, detailed description including an illustration and field photographs and distributional notes are presented below. The authors used old name both in title and in certain places in the text to recount it more effectively with its Indian references.

Marsypopetalum crassum (R. Parker) B. Xue & R.M.K. Saunders, *Syst. Biodivers.* 9: 24. 2011. *Polyalthia crassa* R. Parker, *Indian Forester* 55: 375. 1929; Debika Mitra in N.P. Balakr. & Hajra, *Fl. India* 1: 271. 1999. *P. andamanica* sensu C.E. Parkinson, *Forest Fl. Andaman Isl.*: 75. 1923, non Kurz ex King, 1892.

Fig. 1, 2a – d

Evergreen trees with drooping branches, 4 – 5 m high; main stem *c.* 45 cm across; bark smooth, olive green with white patches, brownish when peeled off; young branches glabrous, brownish. Leaves simple, alternate, oblong, 12 – 18 × 4.5 – 6 cm, acute to rounded at base, entire at margins, acute to acuminate at apex, glabrous, shining green above, pale beneath; secondary veins 10 – 12

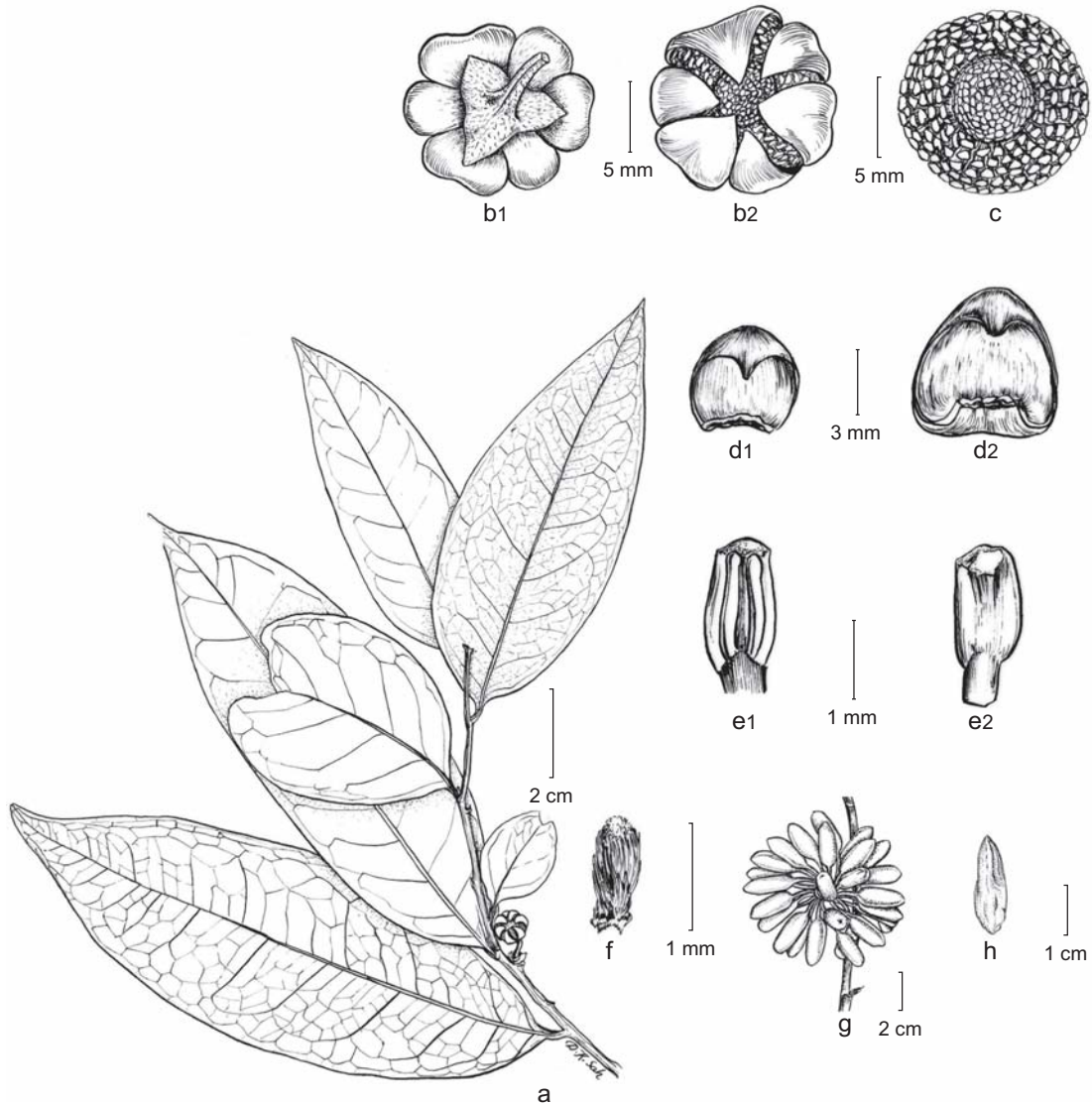


Fig. 1. *Marsyopetalum crassum* (R. Parker) B. Xue & R.M.K. Saunders: a. A flowering twig; b1. Flower – bottom view; b2. Flower – top view; c. Arrangement of stamens and carpels; d1. Outer petal; d2. Inner petal; e1. Stamen abaxial face; e2. Stamen adaxial face; f. Pistil; g. Fruitlets in cluster; h. Seed.

pairs, joining near the margin forming arcuate brochidodromous loops; petioles 5 – 8 mm long with corky lower surface. Flowers on small tubercles and on leafless old branches in clusters of 2 – 5, rarely solitary, *c.* 1.2 cm across, pendulous; pedicels *c.* 1 cm long, trigonous, puberulous; bracts minute. Sepals 3, broadly triangular, *c.* 2 × 4 mm, obtusely pointed, puberulous outside. Petals 6 (3+3), 2-whorled, roughly elliptic; inner 3 larger, *c.* 1.2 cm long; outer 3 smaller, *c.* 9 mm long, much thicker and not fleshy, puberulous, olive green, bending in the middle and compactly arching over the stamens and carpels at two

heights. Stamens numerous, oblong, *c.* 2 mm long; filaments *c.* 0.5 mm long, shortly bent in middle; anthers prominent, connectives suborbicular. Carpels numerous, oblong-ellipsoid, *c.* 1 mm long, silky hairy at base; style almost wanting; ovule 1, basal, erect. Fruitlets numerous, radiating all sides with *c.* 1 cm long stipes, oblong-ellipsoid, *c.* 2 cm long, glabrous, shining blood red when ripe; seed 1, oblong-obovoid, *c.* 1.8 cm long, faint brick red.

Flowering & Fruiting: February – July.

Distribution: India (Andaman and Nicobar Islands) (Fig. 2e) and Myanmar.

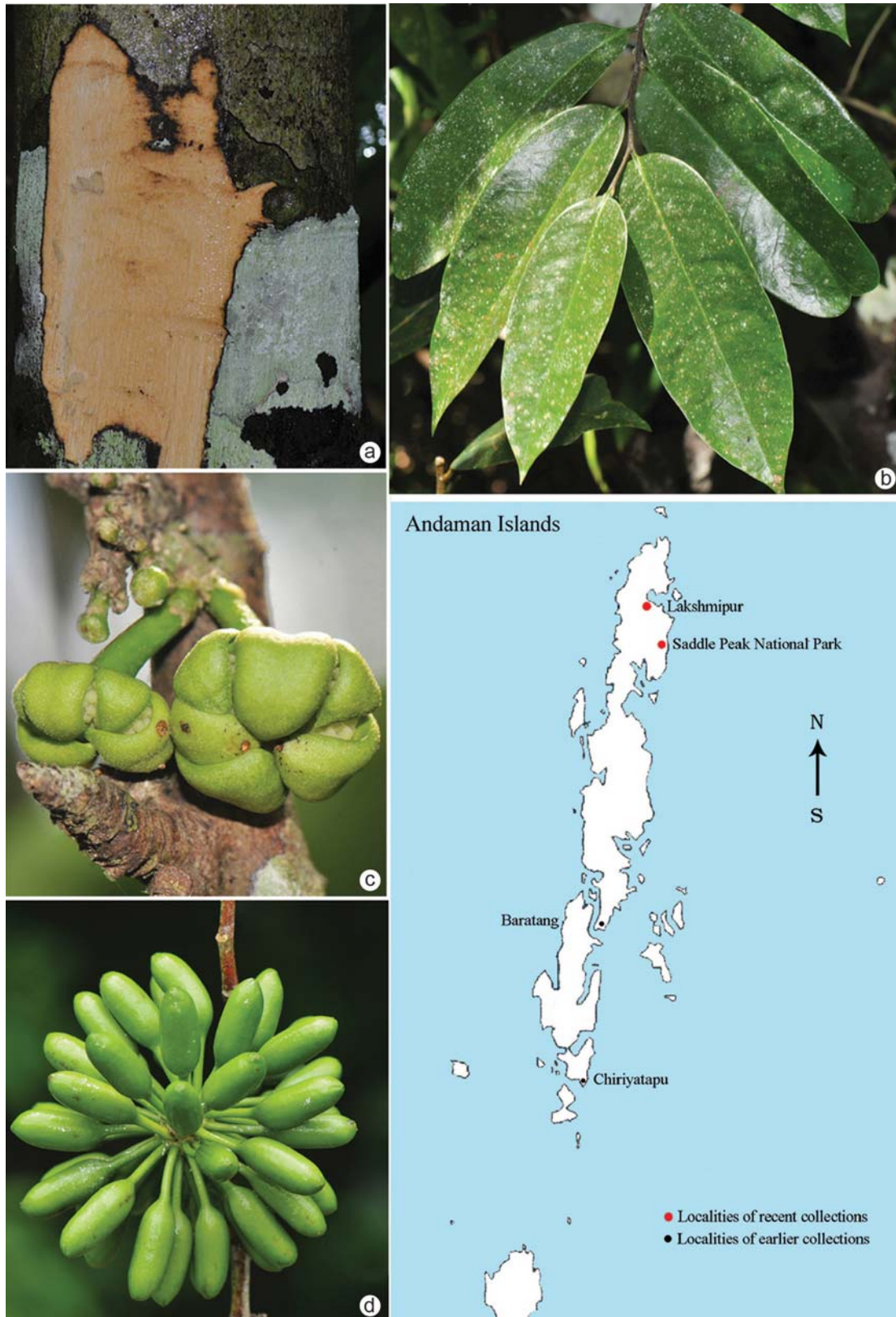


Fig. 2. *Marsyopetalum crassum* (R. Parker) B. Xue & R.M.K. Saunders: a. Trunk; b. Leaves; c. Flowers; d. Fruitlets in cluster; e. Distributional map.

Habitat & Conservation: Evergreen forests; in Andamans, it is presently found in plains and hill slopes below 25 m elevation in two different localities, viz. foot hills of Saddle Peak National Park and Laxmipoor forest range, each with 4 or 5 individual trees; in association with *Actephila excelsa*, *Tabernaemontana alternifolia* and *Crematosperma* sp. and in the shade of *Terminalia bialata* and *Dipterocarpus grandiflorus*. The documented habitats are the habitual feeding grounds of elephants of forest department which are tied by long ropes to graze through the day which might cause a threat. This calls for their *ex situ* conservation in all gardens in these islands.

Notes: *Polyalthia andamanica* [= *P. jenkinsii* (Hook.f. & Thomson) Hook.f. & Thomson] is distinctive by flowers being axillary, solitary; petals relatively thin, moderately spreading and not arched over reproductive parts and monocarps 4 or 5, less than 1 cm long and mucronate at apex. In contrast, in *P. crassa*, flowers on small tubercles, 2 – 5 in clusters; petals thick, arched over reproductive parts and never spreading and monocarps numerous, more than 1 cm long and not mucronate at apex. Though Parkinson's collections turned out to be *P. crassa*, true *P. andamanica* collections (Middle Andaman, K. Thothathri 8897; North Andaman, M.K. Vasudeva Rao 9042; Interview Island, K. Thothathri 9209; Middle Andaman, K. Karthigeyan 9508, Middle Andaman, N. Bargava 16602; North Nicobar, P. Chakraborty 1142) exist in PBL and CAL, confirming its distribution in these Islands.

Specimens examined: INDIA, **Andaman and Nicobar Islands**, Andaman Islands, North Andaman, Saddle Peak National Park, foot hills, 13° 11' 57.0" N, 093° 02' 15.3" E, 15.2.2011, M.V. Ramana 0009; Lakshmipur forest range, 8.5.2011, M.V. Ramana 0179 (CAL, PBL); Andaman Island, January, 1913, C.E. Parkinson 213 (K: K000580913); Baratang Island, January, 1914, C.E. Parkinson 213, 584; Baratang Island, 16.2.1916, C.E. Parkinson 1010; Chiriyatapu, s. die, C.E. Parkinson 880 (DD). MYANMAR, Ngawam Reserve, Mergui, 16.2.1927, R. Parker 2616 (K: K000580914).

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