



## First record of *Lindernia dubia* (Linderniaceae) in India and reduction of *Lindernia nellyampathiensis* as one of its synonyms

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### Abstract

*Lindernia dubia* is reported for the first time from India. Its description, illustration, distribution and habitat notes are provided. The taxonomic identity of *Lindernia nellyampathiensis*, a recently described new species from India is discussed. Since it is closely matching with *L. dubia*, here we synonymize *L. nellyampathiensis* under *L. dubia*.

### Introduction

The genus *Lindernia sensu lato* Allioni (1766: 178.t5) represents about 31 taxa in India (Mukherjee 1945, Sivarajan & Mathew 1983, Sivarajan 1983, Murugan *et al.* 2002, Tandyekkal & Mohanan 2010, Ratheesh Narayanan *et al.* 2012, Prasad & Sunojkumar 2014, Prasad *et al.* 2014). The generic circumscription of *Lindernia s. l.* was recently revised by Fischer *et al.* (2013) based on phylogenetic study of the family Linderniaceae and they resurrected the old genera *Bonnaya* Link & Otto (1821: 25) and *Vandellia* Linnaeus (1767: 384) together with *Lindernia sensu stricto* and a new genus *Linderniella* Fischer *et al.* (2013: 209).

The genus *Lindernia s. str.* is characterized by its palmately 3–5 veined ovate or ovate-linear leaves with entire or slightly dentate margin, often with cleistogamous flowers, in having 2 or sometime 4 fertile stamens, abaxial stamens usually reduced to staminodes, seeds with non-alveolate endosperm and smooth surface.

While conducting a field study for a revision of the family Linderniaceae of South India, the authors could locate a remarkable population of *Lindernia* from Chinnar Wildlife Sanctuary, Idukki district of Kerala, India. A critical study of the specimen was carried out with the relevant literature and type specimens and the results are given below.

### Materials and Methods

The present study is based on the examination of live specimens collected during field studies in South India and type and additional specimens deposited at BM, MH, KFRI and CALI herbaria.

### Results

Critical examination enabled us to identify specimen as *Lindernia dubia* (Linnaeus) Pennell (1935: 141), a species which was not reported from India so far. Hence this forms the first report of this taxon from India. Close observation of herbarium specimens deposited in various South Indian herbaria revealed that this species was collected from many localities in India, but wrongly identified as *Lindernia parviflora* (Roxburgh) Haines (1922: 635). Accordingly, hereupon we provide an emended *L. dubia* description with the incorporation of our observations.

the variable forms of *L. dubia*. After the critical study of type specimens and protologue of both *L. nellyampathiensis* and *L. dubia*, we could confirm that both are conspecific. Therefore here we treat *L. nellyampathiensis* as a synonym of *L. dubia*. The specimen based on which *L. nellyampathiensis* has been recognised matches exactly with the characters of *L. dubia* var. *anagallidea* (Michaux) Cooperrider (1976: 224) [ $\equiv$  *L. anagallidea* (Michx.) Pennell (1935: 152)], a variety merged under *L. dubia* by Fischer *et al.* (2013).

## Acknowledgements

The authors are grateful to the Forest Department, Kerala state, for permission to undertake field studies in protected areas and to curators of BM, MH, KFRI and CALI. Our special thanks to Dr. Yolande Ferreira of the Natural History Museum, London for kindly sending the image of type specimen. PS thanks the Department of Science & Technology, Government of India for the financial support (Order No. SR/FD/LS-119/2010) and MGP thanks University Grants Commission for Rajiv Gandhi Fellowship.

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