



RESEARCH ARTICLE

Note on the status of *Buchanania lanzan* var. *palodensis* (Anacardiaceae)

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Abstract

The paper proposes elevating *Buchanania lanzan* var. *palodensis* to the species level.

Keywords

Endemic; Western Ghats; nomenclature; variety; species

Introduction

As part of revisionary studies on the genus *Buchanania* Sprengel (Anacardiaceae) in India, Kumar et al., 2020 (1) described a new variety of *Buchanania lanzan* from Palode in the Thiruvananthapuram district, Kerala (SW India). Subsequently, Kumar and Shareef, 2020 (2) identified another unique species from the same site, naming it *Buchanania abrahamiana*. While defining *Buchanania abrahamiana*, the authors critically examined several herbarium and live specimens of *B.lanzan* var. *palodensis* collected from its type locality. This research revealed that some key qualitative and quantitative morphological features were unintentionally overlooked during its original description. A thorough evaluation of these traits provided deeper insight into the taxonomy and nomenclature of *B.lanzan* var. *palodensis*. The findings indicate that this variety possesses sufficient morphological traits to warrant elevation to species rank. *Buchanania palodensis* closely resembles *Buchanania abrahamiana* and *B. cochinchinensis* in its broadly ovate bracts, suborbicular bracteoles, flowers with fairly long pedicels, deltoid calyx lobes, and flowers containing 5-7 carpels. However, *Buchanania palodensis* can be further distinguished from these allied species by the characteristics listed in Table 1.

Buchanania palodensis (E.S.S.Kumar, Shareef et Raj Vikr.) E.S.S. Kumar et Shareef, **comb. et stat. nov.**

Buchanania lanzan var. *palodensis* E.S.S.Kumar, Shareef et Raj Vikr., I3 Biodivers. 8-801: 3. 2020.

Type: **INDIA**, Kerala, Thiruvananthapuram District, Palode, 80 m., 20.11.2019, *E.S.Santhoshkumar & S.M.Shareef 79289* (holotype TBGT!)

Additional specimens examined: **INDIA**, Kerala, Thiruvananthapuram District, Peringamala, elevation 80 m., collected on 19.11.2021 by *E.S.Santhoshkumar & S.M.Shareef 85824* (TBGT!); *ibid.*, collected on 06.12.2021 by *E.S.Santhoshkumar & S.M.Shareef 85825* (TBGT!)

Table 1. Morphological differences between *Buchanania cochinchinensis*, *B. palodensis* and *B. abrahamiana*

| Characters | <i>B. cochinchinensis</i> | <i>B. palodensis</i> | <i>B. abrahamiana</i> |
|-------------------------------|---|--|---|
| Habit | Deciduous trees | Semi-evergreen trees | Semi-evergreen trees |
| Bark | Rough, tessellate, cracks deep and narrow, resembling crocodile's hides | Smooth or slightly fissured. | Smooth or slightly fissured |
| Lamina texture | Thick coriaceous | Thin coriaceous | Thick coriaceous |
| Lamina | Broadly oblong | Obovate or narrowly obovate | Broadly elliptic-oblong |
| Lamina base | Rounded | Cuneate or obliquely cuneate | Cuneate or obliquely cuneate |
| Lamina apex | Obtuse or emarginate | Obtuse or retuse or emarginate | Obtuse or emarginate |
| Secondary and tertiary nerves | Very prominent | Obscure | Prominent |
| Petioles | 12-22mm long, glabrous | 25-35mm long, tomentose | 18-35mm long, densely tomentose adaxially, glabrous abaxially |
| Bracts | Ovate-deltoid, 2mm long | Broadly ovate, 0.8mm long | Ovate-deltoid, 0.5-1mm long |
| Bracteoles | Deltoid | Suborbicular | Ovate-deltoid |
| Pedicels | 0-0.5mm long | 1-2mm long | 1-1.5mm long |
| Calyx lobes | Broadly ovate, ciliate on margins | Deltoid, hairy without, glabrous within | Ovate, villous without, glabrous within |
| Petals | Oblong or ovate-oblong, 2mm long | Broadly ovate-deltoid, 2-2.5mm long | Broadly ovate-oblong, 3mm long |
| Anthers | More or less equal to staminal filaments | Distinctly shorter than the staminal filaments | Distinctly shorter than the staminal filaments |
| Disc | Pilose | Pilose | Glabrous |
| Carpels | 5 | 5-7 | 4-5 |
| Fruits | Black when ripe | Pink when ripe | Pink when ripe |

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Authors' contributions

SMS prepared the draft version of the manuscript, which SKES corrected. All authors read and approved the final manuscript.

Compliance with ethical standards

Conflict of interest: Authors do not have any conflict of interest to declare.

Ethical issues: "None".

References

1. Santhosh Kumar ES, Shareef SM, Raj Vikraman R. A new variety of *Buchanania lanzan* (Anacardiaceae) from Kerala, India. *Biodiversity*. 2020;8:801:1-5.
2. Santhosh Kumar ES, Shareef SM. *Buchanania abrahamiana* (Anacardiaceae), a new species from Kerala, India. *Ann Bot Fenn*. 2022;59(1):23-27. <https://doi.org/10.5735/085.059.0104>