

ISSN (Online): 2349-1183; ISSN (Print): 2349-9265 TROPICAL PLANT RESEARCH The Journal of the Society for Tropical Plant Research

Research article

Nicandra Adans.: A new generic addition for the flora of Odisha, India

Sidhanta S. Bisoi¹*, Anil K. Biswal² and Mahendra K. Satapathy¹

¹Department of Botany, Regional Institute of Education (NCERT), Bhubaneswar-751022, Orissa, India ²Department of Botany, North Orissa University, Baripada-757003, Orissa, India

*Corresponding Author: sidhantasekhar91@gmail.com

[Accepted: 20 August 2018]

Abstract: *Nicandra physaloides*, finds its extended phyto-geographical range from Deccan peninsula to part of Eastern Ghats in Odisha, India. The detailed description, correct nomenclature, ecological notes and distribution along with photographs of the taxon has been provided. **Keywords:** Solanaceae - *Nicandra physalodes* - New generic record - Odisha.

[Cite as: Bisoi SS, Biswal AK & Satapathy MK (2018) *Nicandra* Adans.: A new generic addition for the flora of Odisha, India. *Tropical Plant Research* 5(2): 224–226]

INTRODUCTION

The southern part of the state of Odisha forms a part of Deccan peninsula. The pioneer workers namely, Haines (1924) and Mooney (1950) have not mentioned any collection from undivided Koraput and Ganjam districts. A comprehensive flora of Odisha was published by Saxena & Brahmam (1996) after the reorganisation of modern Odisha in 1936. Recently, additions to the flora of Odisha from Koraput have been made by Mishra et al. (1999). Moreover, floristic account of pteridophytes of Koraput has been made by Das et al. (1989) and Panigrahi (1998). Gamble (1892) was to comment that Odisha is the meeting ground for the Himalayan and south Indian elements (Subbarao & Kumari 2006). The flora of Odisha offers an ideal database for the phytogeographical analysis of Indian sub-continent (Panda & Das 1997). Gamble (1915-36) cited five species from Jeypore hills, Koraput in his treaties "The Flora of Madras" based on the collection of R. H. Beddome. In connection with the project entitled "Exploration of local plant biodiversity used as fun and games by childrens in tribal and rural pockets of Odisha" funded by NCERT, New Delhi, the authors made an extensive survey in the Koraput district. The genus Nicandra Adans. is reported from Kharaguda (Semiliguda), Koraput as an extended distribution of Deccan peninsula. After critical analysis and careful scrutiny of works by Hooker (1885), Saxena & Brahmam (1996), Dassanayake & Fosberg (1987) and Singh et al. (2001) the identity and distribution of the taxon has been confirmed. The detailed description, correct nomenclature, ecological notes and distribution along with photographs of the taxon has been provided. The herbarium specimen has been deposited in the herbarium, P.G. Department of Botany, North Orissa University, Baripada.

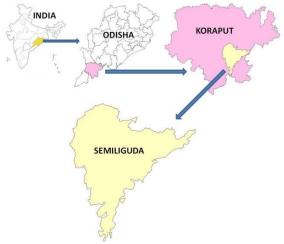


Figure 1. Map showing the collection site in Odisha, India.



Figure 2. Herbarium specimen of Nicandra physalodes (L.) Gaertn.



Figure 3. Nicandra physalodes (L.) Gaertn.: A, Plant in natural habitat; B, Flower twig and unripe fruit; C, Ripe fruits.
Nicandra physalodes (L.) Gaertn. Fruct. Sem. Pl. 2(2): 237. t. 131, fig. 2.1791.
Hook, f., Fl. Brit. India 4: 240.1885.

Atropa physaloides L., Sp. Pl. 181.1753.

Annual, erect under shrubs, upto 1.5-2.0 m high; branches spreading. Stems fistular, grooved, glabrous. Leaves alternate, ovate, ovate-lanceolate or rhomboidal, $5-20 \times 2-16$ cm, cuneate, margin coarsely sinuate or sinuate-dentate, apices acute or acuminate, upper surface sparsly pilose, lower surface glabrescent. Flowers in axillary solitary cymes; pedicels 2.5-3 cm, calyx lobes-5, up to 3 cm, prominently veined, broadly ovate, deeply cordate at base, apices acute to acuminate, accrescent; corolla 3-4 cm, bluish to purple, white centred, campanulate, basal half enclosed by sepals. Stamens-5, filaments up to6 mm long, anthers yellow. Carpels-3, ovary superior,

obvoid, style 3–4 mm long, pilose below, stigma yellow, ovules many. Berries globose, 1–2 cm in diam., smooth, enclosed by accrescent chartaceous, calyx lobes, yellow on ripe. Seeds discoid, pitted, reddish brown.

Illustration: Dassan. et Fosb. Rev. Handb. Fl. Ceylon, 400. fig. 10.1987

Flowering & Fruiting: November-January.

Specimen Examined: INDIA, Odisha, Kharaguda, Similiguda, Koraput, 15.12.2017, S.S. Bisoi 1568 (NOU).

Ecology: Annual weed, probably sown by birds. Occasional in wasteland, grows well in fertile soil

Distribution: Native of Peru. India (Kashmir to Sikkim, Tamil Nadu, Maharashtra, Karnataka, Kerala). As informed by local inhabitants, the plant is observed in the locality since more than 20 years. The population of the taxon is not spreading as invasive species.

ACKNOWLEDGEMENT

The authors are thankful to the Principal, Regional Institute of Education (NCERT), Bhubaneswar for providing the library and laboratory facilities for this study.

REFERENCES

- Das PK, Mishra MK & Panigrahi G (1989) Fern Flora of Koraput District, Orissa. *Plant Science Research* 11(1): 7–44.
- Dassanayake & Forsberg FR (1987) A Revised Hand Book to the Flora of Ceylon, Vol-6. Oxford & IBH Publishing Co., pp. 399–400.

Gamble JS (1892) The Ferns of Panchmarhi and those of Mahendragiri. Indian Forester 18: 55-57.

Gamble JS (1915-36) Flora of the Presidency of Madras, London. Reprint Edition 1967, Kollkata.

- Haines HH (1924) *The Botany of Bihar and Orissa*, *Vol. 3*. Adlard & Sons and West Newman Ltd., London pp. 1235–1280.
- Hooker JD (1885) The flora of British India, Vol. 4. L. Reeve & Co., London.
- Mishra MK, Dash SS & Das PK (1999) Addition to Flora of Koraput. Rheedia 9(2): 163–172.
- Mooney HF (1950) Supplement to the Botany of Bihar and Orissa. Catholic Press, Ranchi.

Panigrahi G (1998) Pteridophytic Flora of Orissa. Plant Science Research 20(1&2): 1-45.

Panda PC & Das P (1997) Addition to Bibliography of Systematic Botany in Orissa. *Journal of Economic & Taxonomic Botany* 21(1): 129–142.

Saxena HO & Brahmam M (1996) *The Flora of Orissa*, Vol. 4. Orissa Forest Development Corporation, Bhubaneswar. pp. 2536–2654.

Singh NP, Mudgal V, Khanna KK & Srivastava SC (2001) Flora of Bihar. Botanical Survey of India, Calcutta.

Subbarao GV & Kumari GR (2006) Phytogeography of Eastern Ghats of India: A Historical Glimpse. *ENVIS-SDNP Newsletter* Special Issue: 1–6.