

RESEARCH ARTICLE

A New Distribution Record of Darkling Beetle (Coleoptera, Tenebrionidae, Cnodalonini) from Goa and Kerala, India

Aparna Sureshchandra Kalawate^{1*}, Faizi Taha² and Thapasya K.¹

^{1*}Zoological Survey of India, Western Regional Centre, Vidya Nagar, Sector-29, P.C.N.T (PO), Rawet Road, Akurdi, Pune, Maharashtra 411044, India.

²Fergusson College, Shivajinagar, Pune, Maharashtra 411004, India.

ABSTRACT

Gebienocamaria girardi Masumoto, 1993 (Coleoptera: Tenebrionidae: Stenochiinae: Cnodalonini) is recorded for the first time from Goa and Kerala, India. The species was previously known from Tamil Nadu and Maharashtra. The present record extends the known distribution of the species in the Western Ghats biodiversity hotspot.

Received: 29 Dec 2025

Revised: 24 Mar 2026

Accepted: 27 Apr 2026

Key words: *Tenebrionidae*, *Cnodalonini*, *Gebienocamaria*, *New state record*, *Western Ghats*, *India*.

INTRODUCTION

The tribe Cnodalonini Oken, 1843 (Coleoptera: Tenebrionidae: Stenochiinae) comprises a group of moderately sized to large darkling beetles distributed mainly in tropical and subtropical regions. Globally, the tribe includes more than 600 described species, most of which occur in the Oriental and Afrotropical regions (Bouchard *et al.*, 2005).

In India, the tribe is moderately represented, with about 25–35 species reported mainly from the Western Ghats and northeastern parts of the country (Masumoto, 1993; Hegde & Vasanthakumar, 2021). Members of this tribe are characterized by an elongate body form, incrassate antennae, distinct elytral striae, and sexually dimorphic tibial modifications in some taxa.

The genus *Gebienocamaria* Masumoto, 1993 includes large, flattened beetles distributed in South and Southeast Asia. *Gebienocamaria girardi* Masumoto, 1993 was originally described from India (Tamil Nadu) and later reported from Maharashtra (Masumoto, 1993; Hegde & Vasanthakumar, 2021). The present study reports *G. girardi* for the first time from Goa and Kerala, based on collections in the

National Zoological Collections of the Zoological Survey of India, Western Regional Centre, Pune (ZSI-WRC).

MATERIALS AND METHODS

The identification of the specimen was carried out under a Leica S9i stereomicroscope with inbuilt photographic facility, following Masumoto (1993). Body measurements, including total body length and maximum body width, were taken using vernier callipers. Male genitalia were dissected following the method of Kalawate & Hillert (2021) and examined under the microscope. The images were processed and enhanced in Adobe Photoshop 2019. The identified specimens are deposited at the National Zoological Collections of the Zoological Survey of India, Western Regional Centre, Pune, Maharashtra, India (ZSI-WRC).

RESULTS AND DISCUSSION

Systematic account

Order: Coleoptera Linnaeus, 1758

Family: Tenebrionidae Latreille, 1802

Subfamily: Stenochiinae Kirby, 1837

Tribe: Cnodalonini Oken, 1843

Genus: *Gebienocamaria* Masumoto, 1993

*Corresponding author mail: devarpanento@gmail.com



Copyright: © The Author(s), 2026. Published by Madras Agricultural Students' Union in Madras Agricultural Journal (MAJ). This is an Open Access article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited by the user.

***Gebienocamaria girardi* Masumoto, 1993 - Fig. 1**

Material examined. 01 Male, Goa, South Goa, Biodiversity Park and vicinity, Bhagwaan Mahaveer Wildlife Sanctuary and Mollem National Park; 26.ix.2024; coll. Rita Deb & Party (ZSI, WRC, Ent-1/5341); 01 Male, Kerala, Wayanad, Tholpetty Wildlife Sanctuary; 06.x.2024; coll. Md. Jafer Palot (ZSI-WRC-Ent-1/5342).

Diagnostic characters. Body length: 26-27.5mm, Body width: 9-10mm. Body elongate, moderately flattened and robust, dark bronze to blackish with a slight metallic sheen; dorsal surface finely punctate.

Head slightly narrower than pronotum with small but prominent eyes; antennae moderately long, gradually incrassate distally. Pronotum sub-rectangular, slightly wider than long, with evenly distributed punctures. Elytra elongate, parallel-sided, bearing distinct longitudinal punctate striae with slightly convex intervals. Ventral surface dark, sparsely punctate; legs strong. In male specimens, the protibia bears a noticeable fringe of hairs along the apical half, which serves as a useful sexual diagnostic character.

Male genitalia. The genitalia capsule is elongate; the median lobe is narrow and gradually tapers towards the apex. Apex pointed in dorsal view and

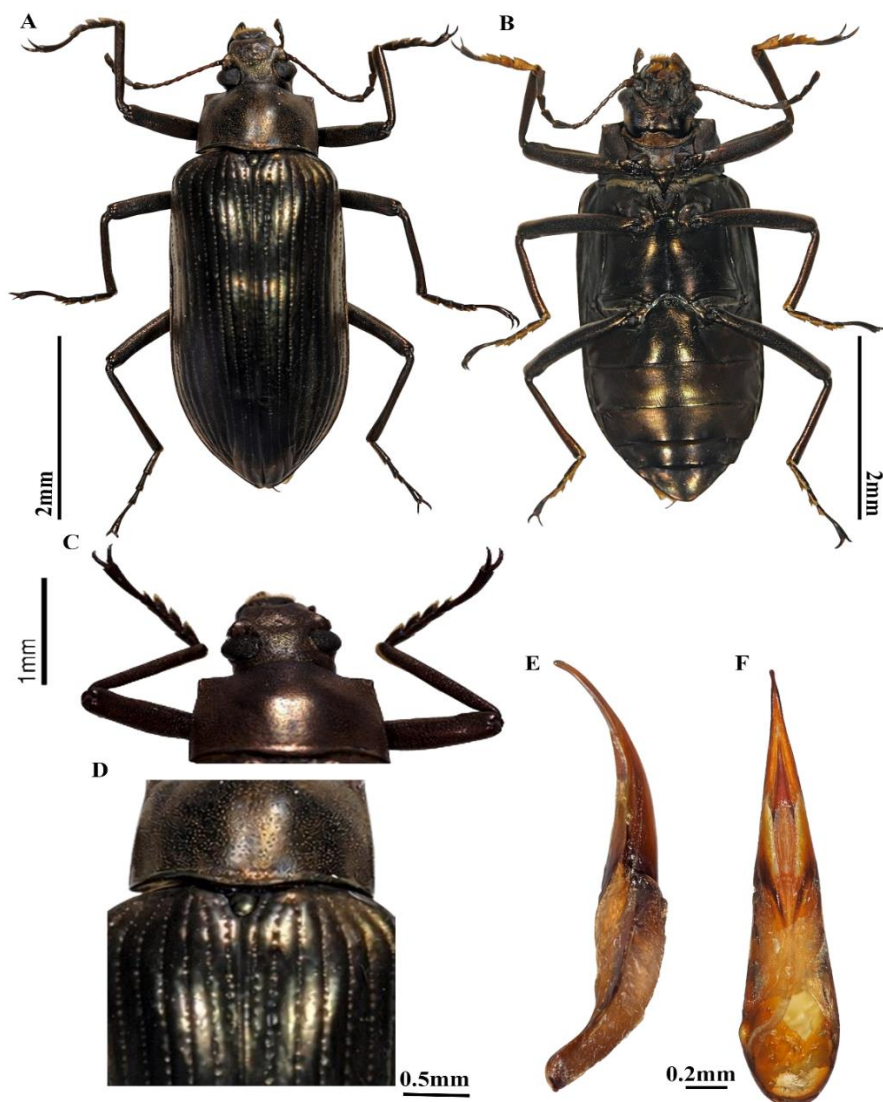


Figure 1. *Gebienocamaria girardi* Masumoto, 1993 male. A. Dorsal habitus, B. Ventral habitus, C. Head and pronotum, D. Scutellum with basal elytra, E. Aedeagus, lateral view, F. Aedeagus, dorsal view.



slightly curved in lateral view, consistent with the original description of the species.

Distribution. India: Tamil Nadu, Maharashtra (Hegde & Vasanthakumar 2021), Goa and Kerala (present study).

These records extend the known distribution of the species within the Western Ghats region.

CONCLUSION

The examined specimens conform to the original description of *Gebienocamaria girardi* Masumoto, 1993, in overall morphology and male genital characters. The present records from Goa and Kerala extend its known distribution within the Western Ghats, highlighting its wider range and contributing to a better understanding of regional faunal diversity and biogeography.

ACKNOWLEDGEMENTS

We would like to thank the Director, Zoological Survey of India, Kolkata and the Officer-in-Charge, WRC, Pune for their support and access to research facilities. The authors are grateful to the comments and suggestions from the reviewers. Thanks are due to the Goa and Kerala Forest Department for permission, permit and logistic support during the survey.

Ethics statement

No specific permits were required for the studies.

Originality and Plagiarism

This manuscript is an original work has not been previously published, and proper citations are provided.

Consent for publication

All the authors agreed to publish the content.

Competing interests

There were no conflicts of interest in the publication of this content.

Data Availability

The specimens listed in this study are deposited in the 'National Zoological Collections' of the Zoological Survey of India, Western Regional Centre, Pune, Maharashtra, India (ZSI-WRC) and are available from the curator, upon request.

Author contributions

ASK: Idea conceptualization, writing original draft, Identification confirmation; F.T.: Specimen Identification, Genitalia dissection, writing original draft, Photography; TK: formatting the MS.

REFERENCES

- Bouchard, P., Lawrence, J. F., Davies, A. E. and A. F. Newton 2005. Synoptic classification of the world Tenebrionidae. *Annales Zoologici*, **55**: 499–530. https://www.zin.ru/animalia/Coleoptera/pdf/bouchard_synoptic_classification_tenebrionidae.pdf
- Hegde, V.D. and D. Vasanthakumar 2021. The tribe Cnodalonini from Maharashtra with two new records. *Journal of Threatened Taxa*, **13**(7): 18947–18948. <https://doi.org/10.11609/jott.5799.13.7.18947-18948>
- Kalawate, A.S. and O. Hillert 2018. A new species and new records of the genus *Bolboceras* Kirby, 1819 (Coleoptera: Geotrupidae: Bolboceratinae) from India. *Zootaxa*, 4457. 595–599. <https://doi.org/10.11646/zootaxa.4457.4.10>.
- Masumoto, K. 1993. Larger flattened species of camariine genera from Asia. *Japanese Journal of Entomology*, **61**(2): 217–234.