

An anomalous moss-bug from Southern Chile and notes on *Pantinia darwini* (Hemiptera, Coleorrhyncha, Peloridiidae)

Autor(en): **Burckhardt, Daniel / Cekalovic K., Tomas**

Objektyp: **Article**

Zeitschrift: **Mitteilungen der Schweizerischen Entomologischen Gesellschaft = Bulletin de la Société Entomologique Suisse = Journal of the Swiss Entomological Society**

Band (Jahr): **75 (2002)**

Heft 1-2

PDF erstellt am: **22.07.2024**

Persistenter Link: <https://doi.org/10.5169/seals-402817>

Nutzungsbedingungen

Die ETH-Bibliothek ist Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Inhalten der Zeitschriften. Die Rechte liegen in der Regel bei den Herausgebern.

Die auf der Plattform e-periodica veröffentlichten Dokumente stehen für nicht-kommerzielle Zwecke in Lehre und Forschung sowie für die private Nutzung frei zur Verfügung. Einzelne Dateien oder Ausdrucke aus diesem Angebot können zusammen mit diesen Nutzungsbedingungen und den korrekten Herkunftsbezeichnungen weitergegeben werden.

Das Veröffentlichen von Bildern in Print- und Online-Publikationen ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. Die systematische Speicherung von Teilen des elektronischen Angebots auf anderen Servern bedarf ebenfalls des schriftlichen Einverständnisses der Rechteinhaber.

Haftungsausschluss

Alle Angaben erfolgen ohne Gewähr für Vollständigkeit oder Richtigkeit. Es wird keine Haftung übernommen für Schäden durch die Verwendung von Informationen aus diesem Online-Angebot oder durch das Fehlen von Informationen. Dies gilt auch für Inhalte Dritter, die über dieses Angebot zugänglich sind.

An anomalous moss-bug from Southern Chile and notes on *Pantinia darwini* (Hemiptera, Coleorrhyncha, Peloridiidae)

DANIEL BURCKHARDT¹ & TOMAS CEKALOVIC K.²

An anomalous specimen of *Pantinia darwini* from Chepu, on Chiloé Island, Chile is described and figured. This is the first record of a morphological abnormality within the family affecting head and pronotum. In addition information is provided on the habitats in which the species was found.

Keywords: Hemiptera, Coleorrhyncha, Peloridiidae, *Pantinia*, morphological anomaly, Chile, temperate rain forests

INTRODUCTION

Moss-bugs or peloridiids (Hemiptera, Coleorrhyncha) are small, cryptic insects which are restricted to wet, temperate and subantarctic forests of the Southern hemisphere. The last comprehensive treatment is by EVANS (1981) who recorded some 600 specimens of 13 genera and 25 species from New Zealand (10 species), Australia including Tasmania and Lord Howe Island (8 species), Chile and Argentina (6 species), and New Caledonia (1 species). Moss-bugs are interesting for several reasons. Their phylogenetic position within the Hemiptera has been debated for a long time. Using morphological similarity MYERS & CHINA (1929) and other authors assigned them to the "Homoptera". Based on morphological and molecular characters SCHLEE (1969), HAMILTON (1981) and CAMPBELL et al. (1995) postulated, in contrast, a sister-group relationship to Heteroptera, a hypothesis which is well-supported. Peloridiidae form the sole extant family of Coleorrhyncha, a group which has according to POPOV & SHCHERBATOV (1996) a long and quite extensive fossil record. Peloridiids are restricted to the Southern continents, fossil Coleorrhyncha, however, have also been recorded from the Northern hemisphere (POPOV & SHCHERBATOV 1991). Peloridiids, finally, are with their transantarctic distribution an often cited example in biogeographic literature used to illustrate sometimes contradicting hypotheses (DARLINGTON 1965, BURCKHARDT 1992, 1996).

Despite the big interest in the group, which is reflected in a comparatively extensive literature, many aspects of their systematics and biology remain unknown due to the scarcity of material in collections and of field observations.

Here, for the first time for the family, an anomalous specimen is recorded belonging to *Pantinia darwini* CHINA, 1962. In addition the habitats in which the species has been found are briefly described.

MATERIAL AND METHODS

Pantinia darwini CHINA, 1962: 151, was originally described based on five specimens (deposited in the Natural History Museum, London) from Chile: XII

¹ Naturhistorisches Museum, Augustinergasse 2, CH-4001 Basel, Switzerland
E-mail daniel.burckhardt@unibas.ch

² Casilla 764, Concepción, Chile. E-mail tcekalov@mi.terra.cl

Region, Chiloé Island, Chepu, x.1958 (W. KUSCHEL). Subsequently the species was recorded from Chiloé Island, Cucao, and Cautín, Huerquehue National Park (deposited in the Muséum d'Histoire naturelle, Geneva) (BURCKHARDT & AGOSTI 1991). An anomalous specimen was collected at Chepu, 42°03'S 74°03'W, 12.ii.1994, berleseate from forest litter (T. CEKALOVIC) (deposited in the collection of J. T. POLHEMUS, Englewood, Colorado).

RESULTS AND DISCUSSION

Description of the anomalous specimen

The specimen from Chepu possesses a deformed right half of the head and right paranotal lobe (Fig. 1). The right eye is completely missing, the the right arolea of the head is much reduced. The head, in dorsal view, is obliquely twisted to the right in an angle of 9° to the longitudinal body axis. The right antenna is normally developed. The right paranotal lobe is slightly smaller than the left one with an irregular venation. The rest of the body and the tegmina correspond to the other known specimens. The dimensions (in mm) of the specimen are as follows: Total body length 3.03; length of head along the middle 0.50; maximum head width measured from tip of eye on the left to widest extension of head on the right 1.01; length of pronotum along the middle 0.40; widest extension of pronotum 1.07; abdominal length along the middle 2.04; maximum abdominal width 1.09.

The cause of the anomaly remains unknown. It may be due to an injury of the larva.

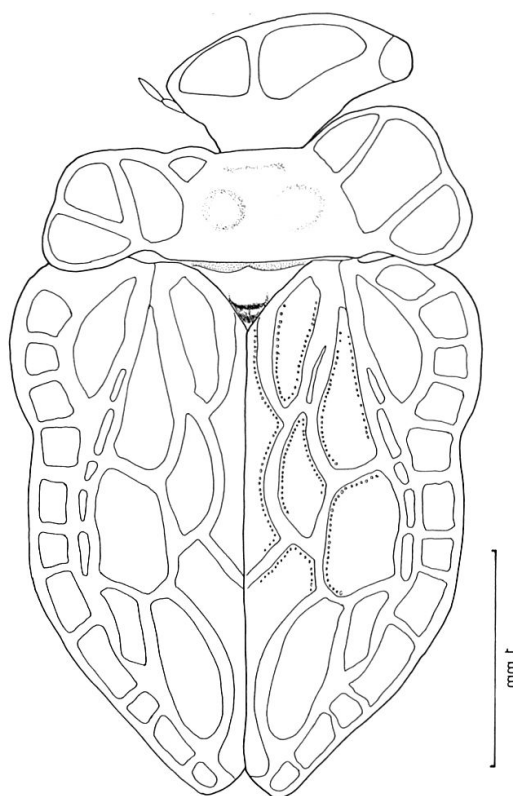


Fig. 1. Anomalous specimen of *Pantinia darwini* from Cepu.

Habitat of Pantinia darwini

Moss-bugs live in wet moss upon which they feed. They are often but not exclusively associated with *Nothofagus* forests. In the forest in Chepu, where *Pantinia darwini* was collected, following tree, shrub and fern species are characteristic: *Nothofagus betuloides* (roble de Magallanes), *N. nitida* (coihue de Chiloé), *Tepualia stipularis* (tepú), *Drymis winteri* (canelo), *Luma apiculata* (luma), *Lomatia hirsuta* (radal), *Aristotelia chilensis* (maqui), *Chusquea quila* (quila), *Berberis buxifolia* (calafate), *B. ilicifolia* (michay), *Fuchsia magellanica* (chilco), *Gunnera tinctoria* (nalca), *Lophosoria quadrispinata* (ampe), *Dryopteris pectabilis* and *Blechnum chilensis*. The presence of lichens, such as *Hypogimnia lugubris*, *Usnea barbata* and *U. aureolata*, as well as epiphytic ferns and a large variety of mosses is notable on the bark at the base of trees as well as on dead, decaying tree trunks. The specimens from Cucao and the Huerquehue National Park were sifted in moss and vegetational debris in a degraded temperate rain forest and a *Nothofagus dombeyi* - conifer forest (BURCKHARDT & AGOSTI 1991). Similar biotopes have been described for the two South American species *Peloriidius hammoniorum* BREDDIN and *Peloriidius kuscheli* CHINA (CEKALOVIC 1986).

ACKNOWLEDGEMENTS

CONAF provided collecting permits to DB which is gratefully acknowledged.

REFERENCES

- BURCKHARDT, D. 1992. 500 ans d'Amérique, 100 ans de Péloridiidés. *Musées de Genève* 320: 14–18.
- BURCKHARDT, D. 1996. Entomologische Reisen in Chile: Fauna und Biogeographie. *Mitt. ent. Ges. Basel* 46: 85–116.
- BURCKHARDT, D. & AGOSTI, D. 1991. New records of South American Peloriidiidae (Homoptera: Coleorrhyncha). *Rev. Chilena Ent.* 19: 71–75.
- CAMPBELL, B. C., STEFFEN-CAMPBELL, J. D., SORENSEN, J. T. & GILL, R. J. 1995. Paraphyly of Homoptera and Auchenorrhyncha inferred from 18S rDNA nucleotide sequences. *Systematic Entomology* 20: 175–194.
- CEKALOVIC, T. 1986. Homoptera Peloriidiidae: Chilean species and new records of *P. hammoniorum* and *P. kuscheli*. *Bol. Soc. Biol. Concepción, Chile* 57: 49–54.
- CHINA, W. E. 1962. South American Peloriidiidae. *Trans. R. ent. Soc. Lond.* 114: 131–161.
- DARLINGTON, P. J. 1965. *Biogeography of the southern end of the World*. Cambridge, Harvard University Press, x+236 pp.
- EVANS, J. W. 1981. A review of present knowledge of the family Peloriidiidae and new genera and new species from New Zealand and New Caledonia (Hemiptera: Insecta). *Rec. Australian Museum* 34(5): 381–406.
- HAMILTON, K. G. A. 1981. Morphology and evolution of the rhynchotan head (Insecta: Hemiptera, Homoptera). *Canadian Entomologist* 113: 953–974.
- MYERS, J. G. 1926. Biological notes on New Zealand Heteroptera. *Trans. New Zealand Institute* 56: 449–468, 511.
- MYERS, J. G. & CHINA, W. E. 1929. The systematic position of the Peloriidiidae as elucidated by a further study of the external anatomy of *Hemiodoecus leai* CHINA. *Ann. Mag. nat. Hist.* (10) 3(15): 282–294.
- POPOV, Y. A. & SHCHERBAKOV, D. E. 1991. Mesozoic Peloriidoidea and their ancestors (Insecta: Hemiptera, Coleorrhyncha). *Geologia et Palaeontologica* 25: 215–235.
- POPOV, Y. A. & SHCHERBAKOV, D. E. 1996. Origin and evolution of the Coleorrhyncha as shown by the fossil record. In: SCHAEFER, C. W. (ed.), *Studies on Hemiptera phylogeny*, 9–30. Entomological Society of America.
- SCHLEE, D. 1969. Morphologie und Symbiose; ihre Beweiskraft für die Verwandtschaftsbeziehungen der Coleorrhyncha. *Stuttg. Beitr. Naturk.* 210: 1–27.

(received January 28, 2002; accepted March 25, 2002)

