

Case 3670***Chilicola vicugna* Toro & Moldenke, 1979 (Insecta, Hymenoptera, COLLETIDAE): proposed replacement of the holotype by a neotype**

Spencer K. Monckton

Department of Biology, York University, 4700 Keele Street, Toronto, ON M3J 1P3 (e-mail: monckton@yorku.ca)

Abstract. The purpose of this application, under Article 75.5 of the Code, is to replace the damaged holotype of *Chilicola vicugna* Toro & Moldenke, 1979, which is missing its head, with a neotype. *Chilicola vicugna* is a small, solitary, stem-nesting bee occurring in north-central Chile. Species identifications in the subgenus *Chilicola* (*Heteroediscelis*) rely to a large extent upon diagnostic characters found on the head, and thus it is essential that an intact name-bearing type be made available for future study.

Keywords. Nomenclature; taxonomy; Insecta; Hymenoptera; COLLETIDAE; *Chilicola*; *Heteroediscelis*; *Chilicola vicugna*; stem-nesting bee; Atacama desert; Chile.

1. The type series of *Chilicola* (*Heteroediscelis*) *vicugna* Toro & Moldenke, 1979 (p. 120) comprises four specimens: a male holotype, a female allotype, one male and one female paratype (all originally held in H. Toro's collection). The description of this species was based on an intact specimen. However, since the publication of this description, both the holotype and the male paratype, now held at the American Museum of Natural History, New York (AMNH), have subsequently lost their heads.

2. The most useful diagnostic characters for this species are located on the head. While other important characters on the meso- and metasoma would be sufficient to diagnose some other species in this group, they are only subtly different between *C. vicugna* and its nearest geographic consubgener, *C. mavida*. As such, reliance on meso- and metasomal characters introduces considerable risk of misidentification, whereas the short malar space and first flagellomere shorter than the pedicel clearly differentiate *C. vicugna* from *C. mavida*.

3. I am preparing a thorough taxonomic revision of the subgenus *Heteroediscelis* and reference to intact type specimens is essential to the diagnoses, descriptions, and subsequent phylogenetic analyses. For this work, I have based my observations of *C. vicugna* on an alternative male specimen which has the diagnostic characters listed in the original description (Toro & Moldenke, 1979, pp. 120–121).

4. Under Article 75.5 of the Code, as the taxonomic identity of *Chilicola vicugna* cannot be verified from the existing holotype (therefore rendering its name a nomen dubium), I propose that the type status of this specimen be set aside, and that the aforementioned specimen be designated as neotype.

5. This specimen satisfies the required qualifying conditions:

(i) The proposed neotype will be designated with the sole intent of clarifying the taxonomic status of *Chilicola vicugna*;

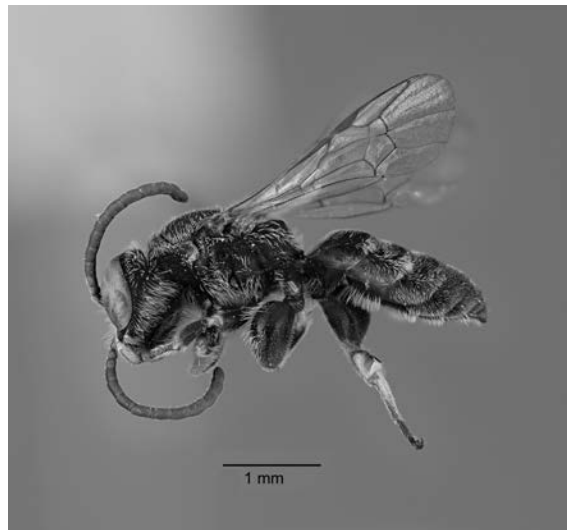


Fig. 1. *Chilicola vicugna* Toro & Moldenke 1979, lateral view of proposed neotype specimen SKM C.vcna.001. Composite image created using Helicon Focus, from stacked image slices taken with lift-operated Canon 5D Mark II camera and Canon 65mm lens.



Fig. 2. Labels attached to proposed neotype specimen SKM C.vcna.001.

(ii) The proposed neotype exhibits the characters listed above as differentiating *Chilicola vicugna* from other species in the subgenus namely, a short malar space, and first flagellomere shorter than the pedicel; these characters are missing from the existing holotype and the only male paratype;

(iii) The proposed neotype has the following data: CHILE, Elqui Prov., 26 km S Vicuña, X-5-1994, Rozen, Quinter, Ascher; SKM C.vcna.001 (AMNH);

(iv) The holotype's head has been lost or destroyed and efforts to locate the head in the containing and adjacent drawers have been fruitless; the head of the male paratype has similarly not been found;

(v) The identity of the proposed neotype was confirmed on the basis of careful comparison to the existing holotype and to its originally published description. In

particular, its malar space and first flagellomere are consistent with the original description, and all other taxonomically relevant characters are concordant with this identification;

(vi) Of the material available to me, the proposed neotype was collected nearest to the original type locality, 'Chile, Coquimbo (El Pangue)' (Toro & Moldenke, 1979, p.121), a small community approximately 22 km south of Vicuña, in Elquí Province, Coquimbo Region, Chile (estimated using Google Earth, ver. 7.1.2.2041). The proposed neotype was collected from 26 km south of Vicuña;

(vii) The proposed neotype is the property of the American Museum of Natural History, New York (AMNH); upon designation, it will be accessible for future study.

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *vicugna* Toro & Moldenke, 1979, as published in the binomen *Chilicola vicugna*, and to designate specimen SKM C.vcna.001 in the American Museum of Natural History, New York as the neotype;
- (2) to place on the Official List of Specific Names in Zoology the name *vicugna* Toro & Moldenke, 1979, as published in the binomen *Chilicola vicugna* and as defined by the neotype designated in (1) above.

References

- Toro, H. & Moldenke, A.** 1979. Revision de los Xeromelissinae Chilenos (Hymenoptera - Colletidae). *Anales del Museo de Historia Natural de Valparaiso*, **12**: 95–182.

Acknowledgement of receipt of this application was published in BZN **71**: 146.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the I.C.Z.N., Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).