

The description of a new genus for a Jamaican stick-insect

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Abstract

The holotype female of *Diapherodes (Cranidium) pumilio* Westwood, 1843 has been traced in the Bristol Museum and Art Gallery collection (not in the Natural History Museum, London as reported by Kirby (1904)). This species is transferred to a new genus *Paracranidium*, reflecting its affinity with *Cranidium* Westwood, 1843, and designated type species of the new genus. A key is provided to distinguish these genera, which belong to the family Phasmatidae, subfamily Bacteriinae.

Key words

Phasmida, *Paracranidium* new genus.

Introduction

During a visit to Bristol Museum and Art Gallery (BMAG) in February 1998, I examined a female of *Diapherodes (Cranidium) pumilio* Westwood, 1843 which appeared to exactly match Westwood's figure and description, although it had no identification or data label, and the type was listed by Kirby (1904) as being present in the Natural History Museum, London (BMNH). Following my initial research in the literature, where Westwood's original description referred to "Bristol", and a check of my photographic records of non-type material, including the BMNH specimen referred to by Kirby, enquiries were made at the BMNH, to check the origin of certain data labels pinned beneath the specimen. J.C. Bradley (senior author of a major taxonomic work of phasmids: Bradley & Galil (1977)) had written to Bristol Museum in 1971, enquiring whether they had any type material of *pumilio*. In the absence of a specimen label in that name, it is understandable why the museum informed Bradley that the specimen must have been lost.

On 13 February 1998, Judith Marshall (BMNH) replied to my letter: "I have examined our specimen of *Diapherodes (Cranidium) pumilio* Westwood, and agree it is not the holotype although Kirby clearly thought it was. I cannot trace a source for the '240' label, but the specimen does have a standard registration label: a small round label bearing '47-62' on one side, and 'Jamaica' on the other.

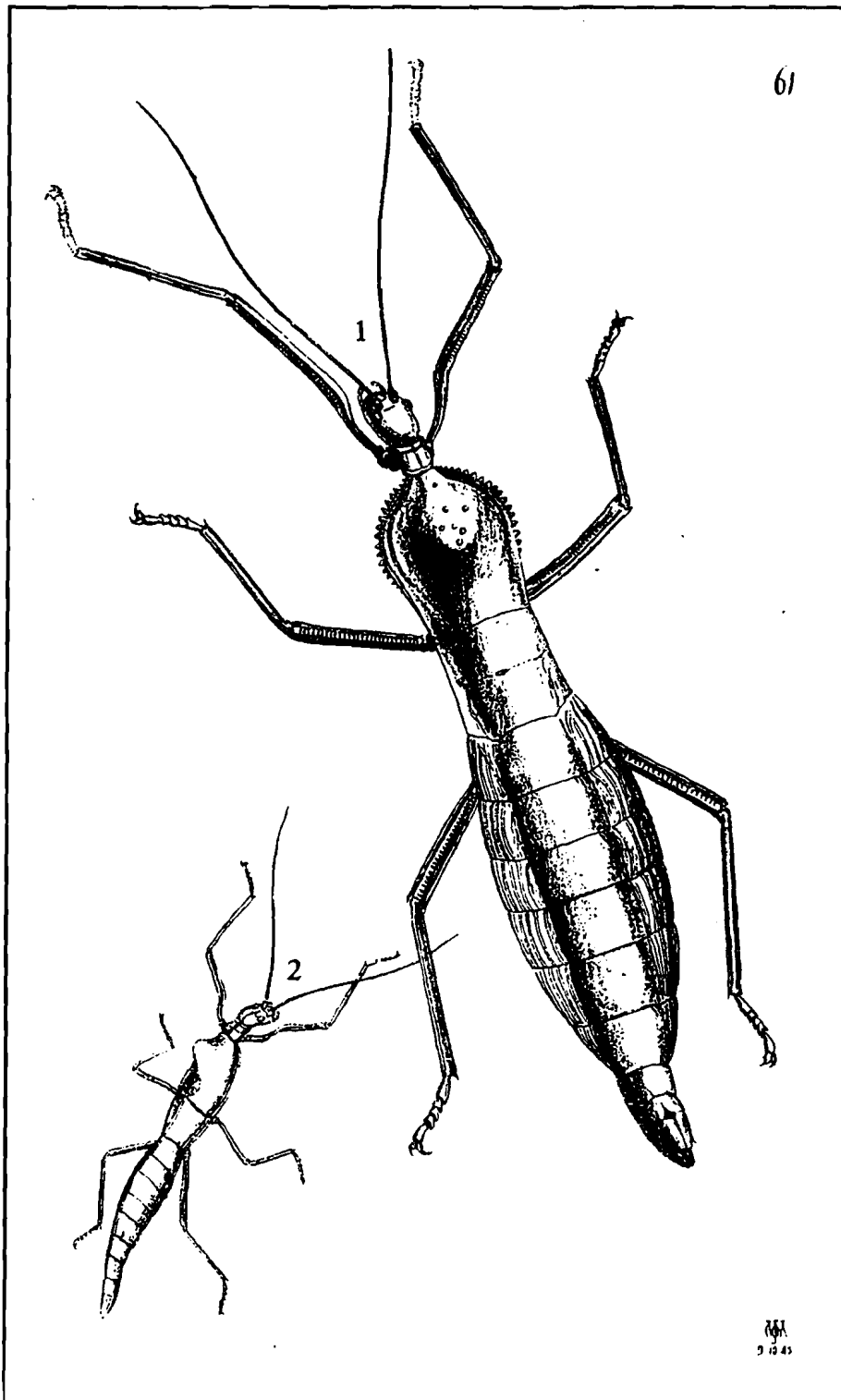
The Registration information for 1847-62 includes 26 Orthoptera, 'Purchased of Mr Gosse'. Other entries indicate that this is a Mr P.H. Gosse.

In one of our copies of Westwood, 1859: 80, following the entry for 4 (208) *Monandroptera Pumilio*, is the pencilled note 'Jamaica (certe) P.H. Gosse. B.M.' where 'certe' means 'certain'. The writing is by the same hand as that in the register, and on the other labels on the specimen quoting the Westwood 1843 reference etc."

I was later able to re-examine the BMNH insect in person and, having previously checked all known material of *pumilio* from the Academy of Natural Sciences, Philadelphia (ANSP), noted that they significantly differ from the only representative of the genus *Cranidium* Westwood, 1843 (see key below), hence I have taken this opportunity to transfer *pumilio* to a new genus. The new genus belongs in the family Phasmatidae, subfamily Bacteriinae, tribe Cranidiini (= Craspedoniini of Bradley & Galil (1977)).

Key to the tribe Cranidiini

1. Females up to approximately 140mm. Head rounded, mesonotum very rounded and spiny laterally; abdomen very broadened, operculum extending well beyond end of anal segment. Distribution: Brazil and French Guiana (Fig. 1) *Cranidium*
- Females 50-54mm. Head rectangular, mesonotum with semicircularly elevated central carina, granulated but not spined; abdomen triangular in cross section, not broadened, operculum just extending beyond end of anal segment. Distribution: Jamaica. (Fig. 2).
. *Paracranidium* New genus



Figures 1 & 2. (Life-size reproduction of Westwood, 1843, plate 61)

1. Female *Paracranidium pumilio* (Westwood).
2. Female *Cranidium gibbosum* (Burmeister).

The genera *Cranidium* Westwood, 1843 and *Craspedonia* Westwood, 1841 have caused confusion in the literature, following Bradley & Galil's (1977: 187) incorrect conclusions, which included changing the tribe Cranidiini to Craspedoniini. The correct details are recorded below:

Cranidium Westwood, 1843: 49. Type species: *Diapherodes (Cranidium) serricollis* Westwood, 1843: designated by Bradley & Galil, 1977: 187. The type species is a synonym of *Cranidium gibbosum* (Burmeister, 1838).

Craspedonia Westwood, 1841: 25. Type species: *Diapherodes (Craspedonia) undulata* Westwood, 1843 [= *Monandroptera undulata* (Westwood, 1843)], by monotypy. The specimen was originally misidentified as *Phasma (Craspedonia) gibbosa* Burmeister. *Craspedonia* became a synonym of *Monandroptera* Audinet-Serville, 1838 when Westwood (1859: 80) placed *undulata* in the genus *Monandroptera*.

It is also appropriate to mention Carrera (1960) who erected a replacement genus, *Phasmilliger*, for *Cranidium* Westwood, 1843. The replacement name was unnecessary, because *Cranidium* was valid; Westwood was entitled to use it as an available name, because Burmeister (1838) had only used *Cranidium* as a synonym of *Diapherodes* (quoting a manuscript name of Illiger).

Paracranidium New genus

Type species: *Diapherodes (Cranidium) pumilio* Westwood, 1843: 50, pl. 61: 2, here designated.

This genus is represented by a single, small species (50-54mm). Body broad, moderately long, wingless species known only from the female, with a very conspicuous shape, unique in the Phasmida. Although the holotype has brown patches, exactly in accordance with Westwood's plate, in nature it is likely that the insect would be almost entirely green.

Head: Longer than wide, granulated. Antennae slightly longer than fore legs. Eyes small, ocelli absent.

Thorax: Pronotum elongate, but much shorter than head, hind part of segment raised in centre; whole of segment with conspicuous central brown carina, with many large granulations thereon, extending to first half of mesonotum. Mesonotum over 4 times to almost 5 times the length of pronotum, aptly described by Westwood as "almost semicircularly elevated carina..."; rounded at front of segment, broadened in hind part, which is 2-2.7 times wider than front of segment. When viewed ventrally, the expansion takes the form of a triangular cross-section, with height 6.4mm to almost 7mm (compared with 4mm at hind part of segment). Second part of segment with gentler slope. Uneven granulations present centrally, on brown carina as described above, also present on thorax laterally and ventrally. Metanotum much shorter than mesonotum, suture between metanotum and median segment (first abdominal segment) absent.

Abdomen: Triangular in cross-section. Segments 8-10 tapering to apex, anal segment slightly rounded at apex, supraanal plate very small, triangular. Operculum slender, tapering to pointed tip, slightly exceeding end of anal segment. Cerci of moderate length, slender, tapering towards tip.

Legs: Long and slender, fore femora strongly curved basally.

Paracranidium pumilio (Westwood, 1843) New combination (Fig. 2).

Diapherodes (Cranidium) pumilio Westwood, 1843: 50, pl. 61: 2.

Monandroptera pumilio (Westwood); Westwood, 1859: 80.

Cranidium (?) *pumilio* (Westwood); Kirby, 1904: 361.

Material examined and notes

Holotype ♀, No locality "Africa tropicali?" (BMAG). "In Mus. Bristol Philos. Institution" [whose collection was merged with Bristol Museum].

- ♀, Jamaica (BMNH). A standard "holotype" label was present, in error. Data labels include "240" (source not traced) and "47-62" relating to registration information for 1847-62, hence specimen leg. P.H. Gosse.
- ♀, Jamaica, Newton, 3000ft. (ANSP).
- ♀, Jamaica, Cinchona, 5000ft. (ANSP).

Westwood's brief description of this species referring to a measurement of "unc. 2" [unc. = inch (1 inch = 2.54cm)] was followed up in 1859 by the same author, with more detailed measurements. Kirby (1904) is the first literature reference to "Jamaica"; the specimen in BMNH clarifies why Kirby referred to the locality in his catalogue.

Discussion

Although Kirby clearly believed that the holotype of *pumilio* was present in the BMNH, the specimen is from Jamaica (compared with Westwood's "unknown locality", which he speculated was in tropical Africa), and was lodged in the BMNH in 1847, four years after Westwood's description was published. The colours of the specimen in BMAG (which differ from other known material), perfectly matches Westwood's hand-coloured plate. Furthermore, it agrees with measurements given by Westwood (1859), who did not mention either a locality or the presence of a specimen in BMNH, resulting in a confident assessment that this is the "lost" holotype. It is the only phasmid type specimen presently in BMAG. The collection in BMAG otherwise houses a selection of mainly fairly common phasmids in seven cabinet drawers, some specimens collected around the 1920s, from various countries. Very little research has been made on the collection, although I identified some material in 1998.

Acknowledgements

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