

Redescription and validity of *Cryptops nanus* ATTEMS, 1938 from Hawaii (Chilopoda: Scolopendromorpha)

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Abstract

Cryptops nanus ATTEMS, 1938, from Hawaii is redescribed and a lectotype designated. It is confirmed that it is a distinct species and not a junior synonym of *C. hortensis* (DONOVAN, 1810).

Key words: Chilopoda, Scolopendromorpha, Cryptopidae, *Cryptops nanus*, redescription, Hawaii.

Introduction

ATTEMS (1938) described *Cryptops* (*Cryptops*) *nanus* (as *Cryptops nana*) from Honolulu (Hawaii), in compost. SHELLEY (2000), reviewing the scolopendromorph centipedes of Hawaii synonymised *C. nana* under *C. hortensis* (DONOVAN, 1810) remarking that he believed "that *C. nana*, known only from the holotype, is a synonym of *C. hortensis*, a European species widely established in North America. It (i.e. *C. hortensis*) has also been intercepted in quarantine in Hawai'i in debris with orchids from England." MINELLI (2006), however, stated that it was a different species from *C. hortensis*.

The type material of *C. nanus* deposited in the Naturhistorisches Museums in Wien (NHMW) has been examined, is here redescribed and the situation clarified. *Cryptops nanus* is a distinct species as Attems supposed and not a junior synonym of *C. hortensis*.

Cryptops nanus ATTEMS, 1938

Cryptops nana ATTEMS, 1938: 374, figs 7-9.

Cryptops hortensis: SHELLEY, 2000: 41.

Cryptops nanus: MINELLI, 2006 (ChiloBase).

Material examined: Two syntypes, NHMW 2949. Specimen 1, "*Cryptops nana* Att. Honolulu Willians"; one slide with separated head, mouthparts and forcipules, three locomotory legs and one ultimate leg. Specimen 2, a delicate contorted specimen in alcohol; "Coll. Musei Vindobonensis Honolulu (in Kompost) leg F X Willians don Attems" Attems did not indicate how many specimens he examined when describing *C. nana* and so to avoid possible future confusion specimen 1, which would appear to be the one that he primarily used to describe the species, is here designated the lectotype and specimen 2 a paralectotype.

Diagnosis: Without dark subcuticular pigment. Tergite 1 without sutures. Anterior margin of forcipular coxosternum with 2 + 2(3) setae. Sternite 21 with posterior margin

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rounded. Coxopleural pores 11-15 occupying the anterior 50% of the coxosternum. Femur of ultimate leg with one femoral, four tibial and two tarsal saw teeth. Pretarsus (claw) of ambulatory legs with a single accessory spur 50% of the length of the pretarsus.

Description: (Attems' data in parentheses where relevant). Length 7.5–8.0 mm in paralectotype (9 mm). (Colour uniform pale yellow without green pigment). Cephalic plate longer than wide, tergite 1 overlying the posterior edge in the paralectotype. (Slightly overlying tergite 1). Antennae of lectotype damaged with only 15+11 antennomeres, 17+17 antennomeres in the paralectotype (15 antennomeres). Basal three antennomeres with long and a few medium length setae, fourth with medium setae and a basal whorl of longer setae; the medium setae becoming more dense over antennomeres 5, 6 and 7 (Fig. 1). Arrangement of clypeal setae in the lectotype as in Fig. 2. Prelabral setae six.

Forcipular coxosternum almost straight, very feebly convex with 2 + 2 large setae on anterior margin and 1 + 1 minute lateral setae in the lectotype (Fig. 3). In the paralectotype (Fig. 4) the anterior edge weakly biconvex with one minute and two large setae on the specimen's right and probably three large setae on the left as suggested by the large setal sockets. The setae in the paralectotype are apparently submarginal but this may be because the coxosternum is tilted upwards in this twisted specimen. Duct of poison gland very wide, the calyx very small (Fig. 5).

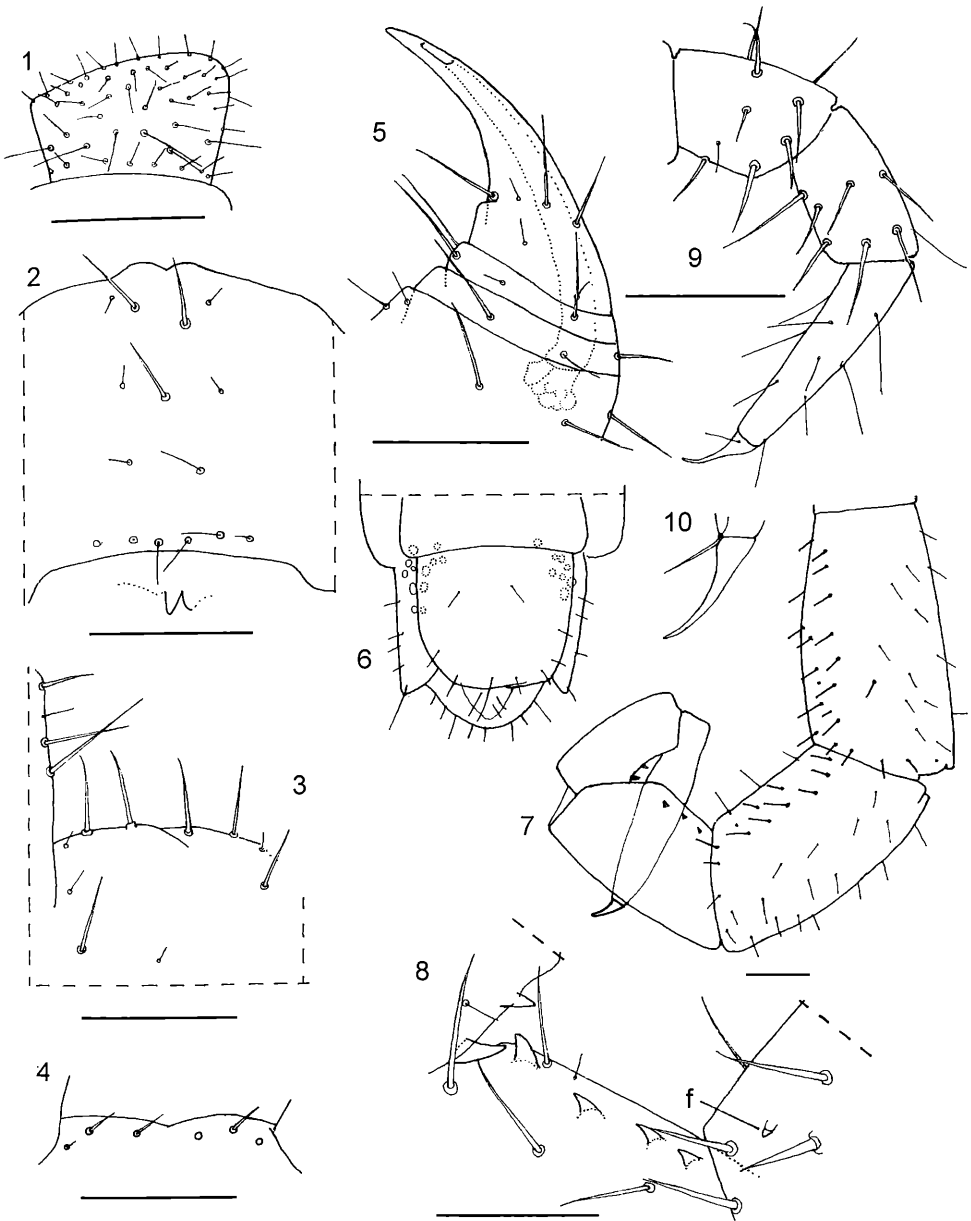
Paramedian sulci not seen under reflected light but lateral crescentic sulci apparent from tergite 3 in the paralectotype. Paramedian sutures not clear. (Tergites with two complete paramedian and lateral crescentic sulci from segment 2). Sternite longitudinal and transverse sulci not seen. (Sternites with "Kreuzfurche"). (Ultimate tergite posteriorly triangular with a shallow median depression occupying the posterior two-thirds. Ultimate sternite very large and broadly rounded posteriorly). Pore field occupying anterior 50% of coxopleuron in the paralectotype. Attems states pore field rather small, about 15, approximately equal in size, however, his text-figure 8 (Fig. 6 herein) shows 11 and 12 pores.

Ultimate legs without spinous setae. The setae on ventral half of prefemur and femur thicker than the dorsal setae. On the assumption that the flexed tarsus lies internal to the tibia, then there is a longitudinal glabrous area internally on prefemur and femur (Fig. 7). Femur with a small saw tooth, obvious in the paralectotype, easily overlooked in the lectotype, tibia with four saw teeth, first tarsus with two (Fig. 8).

Legs 1 to 19 with undivided tarsi and with strong setae laterally and ventrally on prefemur, femur and tibia (Fig. 9). Pretarsus (tarsal claw) with single long accessory spur (Fig. 10).

Discussion

It is here confirmed that *C. nanus* is a species distinct from *C. hortensis*. MINELLI (2006) gives its distribution as USA (mainland, Hawaii Islands). This is, however, incorrect as the species is only known from Hawaii. The specimens of *C. nanus* may be juveniles but can, nevertheless, be distinguished even from small specimens of *C. hortensis* which



Figs. 1–10: *Cryptops nanus* (1–3, 5 and 7–10: lectotype; 4: paralectotype; 6 after ATEMS, 1938): (1) antennomere 5 dorsal, (2) clypeus and part of labrum, (3) anterior margin of forcipular coxosternum, (4) anterior margin of forcipular coxosternum, tilted upward, (5) forcipule, (6) terminal segments ventral, (7) ultimate leg medial, NB setae not shown on tibia and tarsus 1 and 2, (8) femoral (f), tibial and tarsal saw teeth, (9) ambulatory leg, (10) pretarsus of ambulatory leg. Scale lines = 0.1 mm.

have a single seta in the coxopleural pore field, a ventral groove on the prefemur of the ultimate leg but no saw tooth on the femur and ambulatory legs with two very short pretarsal accessory spurs. These characters are seen in two small specimens of *C. hortensis* from St Helena, length 7.5mm and 11.5mm (unpublished observations). Hawaiian specimens in the Bishop Museum Honolulu hitherto referred to *C. hortensis*, and apparently small (9.0 mm), should be reassessed.

There has been confusion about the gender of the *-ops* genus group suffix but according to article 30.1.4.3 of the 1999 edition of the International Code of Zoological Nomenclature, it is to be treated as masculine, thus *C. nana* becomes *C. nanus*.

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