

## The Neotropical taxa of the genus *Dinocryptops* Crabill, 1953 (Chilopoda: Scolopendromorpha)

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### Abstract

Two Neotropical species, one of them divided into two subspecies, are currently ascribed to the genus *Dinocryptops* Crabill, 1953, and are revised here. *Dinocryptops puruensis* (Bücherl, 1941) and *D. miersii guaraniticus* (Coscarón, 1955) are synonymized with *Dinocryptops miersii* (Newport, 1845). A specimen from São Paulo State, Southeastern Brazil, is designated as neotype for *D. miersii* (Newport, 1845). *Dinocryptops miersii* is recorded for the first time for the Brazilian states of Minas Gerais, Espírito Santo, Distrito Federal, and Santa Catarina.

**Key words:** Scolopocryptopinae, *Dinocryptops miersii*, neotype, morphology, Brazil

### Introduction

In his recent revision of North American Scolopendromorpha, Shelley (2002) divides the family Scolopocryptopidae into three subfamilies: Newportiinae, Scolopocryptopinae, and Kethopinae. The Neotropical genera of Newportiinae, *Newportia* Gervais, 1847 and *Tidops* Chamberlin, 1915, were revised by Schyleiko & Minelli (1998), but the Neotropical Scolopocryptopinae (six species and four subspecies, according to current taxonomy) still need revision.

The subfamily comprises two genera: *Dinocryptops* Crabill, 1953 and *Scolopocryptops* Newport, 1845. Both genera have a primarily New World distribution, but a few species in each genus are distributed along the Western Pacific Rim (Shelley, 1997).

Newport (1845) proposed the new genus *Scolopocryptops* to include five species (*S. ferruginea* (Linné), *S. sexspinosa* (Say) and the three new species *S. miersii*, *S. melanostoma*, and *S. longitarsis*), but failed to designate a type species. Gervais (1847) transferred *Scolopocryptops longitarsis* to the new genus *Newportia* and Lucas (1849) designated one of the four remaining species, *S. melanostoma*, as the type of *Scolopocryptops*.

In 1887, Haase proposed the new genus *Otocryptops*, based on *Scolopocryptops rubiginosus* C. L. Koch, 1878. This species is very similar to most species included in *Scolopocryptops*, but it lacks spiracles at the seventh pedal segment (at the time, a character only known to be present in *S. miersii*). There was no mention of his character in Newport (1845), Gervais (1847), Meinert (1886) or Pocock (1893). The first use of this character to separate *Scolopocryptops* from *Otocryptops* was by Pocock (1895) in an identification key for Scolopocryptopidae, followed by Kraepelin (1903) and Attems (1930).

Pocock (1895) overlooked Lucas' designation of *Scolopocryptops melanostomus* Newport, 1845 as the type of the genus (Lucas, 1849) and wrongly stated that the type of *Scolopocryptops* should be *S. miersii*. Most subsequent authors followed him, until Crabill (1953) discovered Pocock's mistake. But Crabill also considered the type species of *Otocryptops* to be congeneric with *Scolopocryptops* and synonymized the two genera. For the remaining species then in *Scolopocryptops*, he proposed the new nominal genus *Dinocryptops*, with *S. miersii* as type species. The genus is thus basically supported by the presence of a spiracle in the seventh pedal segment (Crabill, 1953, 1960).

Species of *Dinocryptops* occur in the Neotropics, Asia, and Melanesia (Kraepelin, 1903; Attems, 1930). Two species have been recorded from the Neotropics: *D. miersii* (Newport, 1845), with the subspecies *D. miersii miersii* (Newport, 1845) from Brazil and *D. miersii guaraniticus* (Coscarón, 1955) from Misiones, Argentina (Coscarón, 1955, 1959), and *D. puruensis* (Bücherl, 1941). The remaining nominal taxa in *Dinocryptops* are *D. miersii fijiensis* (Chamberlin, 1920) from Fiji Islands, *D. broelemanni broelemanni* (Kraepelin, 1903) from China and *D. broelemanni esulcata* (Attems, 1938) from Vietnam.

The Neotropical species of *Dinocryptops* are the largest scolopocryptopids, resembling species of *Scolopendra* Linné, 1758 (Shelley, 2000).

*Dinocryptops miersii* was described from an unspecified locality in Brazil and was later recorded from Venezuela, Guyana, Peru, Ecuador and Argentina. In Brazil, it is known from Rio Grande do Sul, Paraná, São Paulo, Mato Grosso and Mato Grosso do Sul (Bücherl, 1939, 1941, 1974). This species has been reported from St. Lucia (Pocock, 1893, 1895), Haiti, Jamaica and Martinique (Meinert, 1886), but these records refer in fact to *S. melanostomus* (Shelley, 2000). *Dinocryptops puruensis* was described from Purus River, Amazonas State, Brazil (Bücherl, 1941, 1974).

In this paper, the Neotropical taxa of *Dinocryptops* are reviewed, and a neotype is fixed for *D. miersii*.

## Material and methods

The review was based upon the morphological analysis of type material, museum specimens, and material collected in six sites in Rio de Janeiro State, Brazil from March, 2001 to November, 2002: Guapimirim (22°32'14"S/42°58'55"W), Teresópolis (Serra dos Órgãos) (22°24'44"S/42°57'56"W), Macaé (Área de Proteção Ambiental do Sana)

(22°19'31"S/42°10'54"W), Maricá (Praia de Itaipuaçu) (22°58'00"S/43°01'00"W), Arraial do Cabo (22°57'58"S/42°01'40"W) and Cachoeira de Macacu (22°28'00"S/42°38'60"W). Specimens were examined with a dissecting microscope. Illustrations were prepared with the aid of a camera lucida. The acronyms of institutions are listed below:

IBSP – Instituto Butantan, São Paulo, Brazil. MCZ – Museum of Comparative Zoology, Cambridge, Mass., USA. MHNCI – Museu de História Natural Capão da Imbuia, Curitiba, Brazil. MLP – Facultad de Ciencias Naturales y Museo de La Plata, Argentina. MNRJ – Museu Nacional/UFRJ, Rio de Janeiro, Brazil. MZSP – Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil. ZMB – Institut für Systematische Zoologie, Museum für Naturkunde der Humboldt-Universität zu Berlin, Berlin, Germany. NHMW – Naturhistorisches Museum in Wien, Wien, Austria.

## TAXONOMY

### Family Scolopocryptopidae Pocock, 1895

*Diagnosis:* Scolopendromorphs with 23 pairs of legs, cephalic plate without ocelli.

### Subfamily Scolopocryptopinae Verhoeff, 1906

*Diagnosis:* Scolopocryptopidae with 23 pairs of legs, cephalic plate, tergites and sternites normally smooth, without furrows or depressions; last legs smooth and thin, prefemur of the last legs with ventral and lateral-dorsal spine; forcipular prefemur with inner spinous process.

### *Dinocryptops* Crabill, 1953

*Scolopocryptops* (part) Newport, 1845: 275, 405. Gervais, 1847: 297. Wood, 1862: 37; 1865:172; 1867: 128. Humbert & Saussure, 1869: 156; 1870: 204. Saussure & Humbert, 1872: 200. Kohlrusch, 1881: 53. Meinert, 1886: 179. Bollman, 1893: 128, 176. Kraepelin, 1903: 76. Attems, 1930: 255. Bücherl, 1939: 291. Bücherl, 1941: 326.

*Dinocryptops* Crabill, 1953: 96.

*Type species:* *Scolopocryptops miersii* Newport, 1845 (by original designation).

*Diagnosis:* Scolopocryptopinae with spiracles on the 7<sup>th</sup> pedal segment and ultimate second tarsus undivided.

***Dinocryptops miersii* (Newport, 1845)**

(Fig. 1-6)

*Scolopocryptops miersii* Newport, 1845: 405-406; Gervais, 1847: 298; Meinert, 1886: 181; Bollman, 1893: 177; Pocock, 1893: 465-466; Kraepelin, 1903: 77-78; Brölemann, 1909: 33; Chamberlin, 1914: 163-164; Attems, 1930: 256; Bücherl, 1939: 249-250.

*Dinocryptops miersii* Crabill, 1953:96; 1960; 11.

*Scolopocryptops miersii puruensis* Bücherl, 1941: 129-132. **NEW SYNONYMY.**

*Dinocryptops puruensis*: Bücherl, 1974: 124.

*Scolopocryptops miersii guaraniticus* Coscarón, 1955: 410-413. **NEW SYNONYMY.**

*Type specimens: Dinocryptops miersii*, neotype (designated herewith) (IBSP 337) collected by P. Marques in 16-III-1945 from São Paulo State, Paranapiacaba [Alto da Serra], (23°46'60"S/46°19'00"W). *Dinocryptops miersii guaraniticus*, holotype (MLP 187), paratypes (MLP 188), (MLP 189) from Argentina, Misiones (26°45'00"S/54°19'60"W). *Dinocryptops miersii puruensis*, holotype (MNRJ 27), paratypes (MNRJ 49) (IBSP 293) from Amazonas, Purus river, Lago Mapixi (5°37'20"S/64°00'46"W).

*Diagnosis: Dinocryptops* with background color dark brown; cephalic plate with fine punctuations, without furrows or depressions; dental plates formed by two long, narrow, chitinous lobes, with their outer portions more elevated than the middle area (without teeth), their anterior margin a little granulated; paramedian sutures reaching from the 3rd (or 5th) to the 22th tergite; coxopleural appendices long, parallel and pointed.

*Distribution:* This species is distributed throughout the Neotropics, from Antilles to Argentina. It is known from Martinique, Trinidad & Tobago, Venezuela, Guyana, Brazil (Amazonas, Amapá, Pará, Mato Grosso, Mato Grosso do Sul, Goiás, Distrito Federal, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul), and Argentina (Misiones and Buenos Aires). It is recorded here for the first time for Minas Gerais, Espírito Santo, Santa Catarina and Distrito Federal states. Other places mentioned by Bücherl (1974) for South America as Peru and Ecuador were not confirmed (see map).

Material examined: **TRINIDAD**, Verdant Vale (10°40'60"N/61°16'60"W), MCZ 31202, 1 ex.; **MARTINICA**, MCZ 33154, 4 ex.; **VENEZUELA: RAUDAL** (08°22'60"N/61°40'60"W), Rio Orinoco, IBSP 838, 1 ex., L. Carbonell, 04-VI-1951 (*D. m. puruensis*: Bücherl det.); **BRAZIL**, NHMW 3768, Canabonca??, ZMB 3527, 2 ex.; ZMB 3590, 1 ex.; ZMB 3652, 1 ex.; ZMB 3771, 2 ex.; ZMB 4334; **AMAPÁ**, Serra do Navio (00°53'44"N/52°00'08"W), IBSP 989, 1 ex., A. Hoge, 04-VII-1968; **PARÁ**, Belém (01°27'21"S/48°30'16"W), área de dendê, MNRJ, 1 ex., H. Cunha, 10-XI-1981; Belém, IBSP 737, 2 ex., A. Hoge, 17-IX-1952; Belém, [Ananindeua], IBSP 960, 5 ex., Museu Goeldi, VI-1966; Belém, IBSP 742, 1 ex., A. Hoge, 17-VIII-1952 (*D. m. puruensis*: Bücherl det.); IBSP 666, 1 ex., P. Ledoux, 11-VI-1951 (*D. m. puruensis*: Bücherl det.); IBSP 686, 1 ex., P. Ledoux, 14-XI-1951 (*D. m. puruensis*: Bücherl det.); Igarapé-Açu [Igarapé], IBSP 739, 1 ex., A. Hoge, 17-IX-1952 (*D. m. puruensis*: Bücherl det.); Tucuruí

(03°45'58"S/49°40'21"W), MNRJ, 1 ex., H.M. Barros, I-1979; Pará, MCZ 31124, 3 ex.; **MATO GROSSO**, [MADEIRA], MCZ 31143, 1 ex.; Sinop (11°51'51"S/55°30'09"W), MNRJ, 1 ex., M. Alva Conga, IX-1980; Cáceres (16°04'14"S/57°40'44"W), IBSP 958, 2 ex., V. Veit, 05-IV-1966; Nova Xavantina (14°40'24S/52°21'11"W) [Chavantina], IBSP 633, 6 ex., H. Sick, 1948 (*D. m. puruensis*: Bücherl det.); **GOIÁS**, Parque Nacional da Chapada dos Veadeiros (14°07'00"S/47°31'00"W), MNRJ 1538, 1 ex.; Catalão (18°10'12"S/47°56'31"W), MNRJ, 1 ex., G.G. Montingelli, IX-1999; **DISTRITO FEDERAL**, Brasília (15°46'47"S/47°55'47"W), MNRJ, 2 ex.; **MATO GROSSO DO SUL**, Campo Grande (20°26'34"S/54°38'47"W), IBSP 905, 1 ex., Jairo, 09-III-1961; **MINAS GERAIS**, Mato Verde (15°23'50"S/42°51'59"W), IBSP 669, 1 ex., E. Garbe, 11-VIII-1951 (*D. m. puruensis*: Bücherl det.); **ESPIRÍTO SANTO**, Colatina (19°32'22"S/40°37'50"W), MNRJ, 1 ex., 9-X-1936, Maria Rosa; **RIO DE JANEIRO**, Parque Nacional de Itatiaia (22°29'46"S/44°33'48"W), MZSP, 1 ex.; **SÃO PAULO**, Corumbataí (22°13'12"S/47°37'33"W), IBSP 109, 2 ex., S. Burian, 02-X-1933; IBSP 116, 1 ex., S. Burian, 28-X-1944; Bueno de Andrade ?, IBSP 254, 1 ex., Fernandes, 25-III-1942; São Paulo (23°32'51"S/46°38'10"W), IBSP 280, 1 ex., S. Niessel, 31-III-1944; São Paulo [Seminário Tietê], IBSP 648, 3 ex., VII-1951; Brotas (22°17'03"S/48°07'36"W) [Lobo], IBSP 94, 1 ex., S. Delarmo, 05-X-1934; **PARANÁ**, Piraí do Sul (24°31'34"S/49°56'55"W), IBSP 35, 2 ex., J. Fonseca; Uraí (23°11'51"S/50°47'47"W), IBSP 667, 1 ex., S. Bazari, 11-VI-1951; Curitiba (25°25'40"S/49°16'23"W), MHNCI 15, 1 ex., R. Lange, III-1943; Foz do Jordão (25°39'45"S/52°07'35"W), MHNCI 59, 1 ex.; Foz do Jordão, MHNCI 216, 235, 236, 246, 274, 275, 286, 287, 294, 296, 322, 323, 330, 332, 338, 373, 374, 404, 405, 407, 410, 419, 463, 528, 704; **SANTA CATARINA**, São Bernardino, NHMW 1553, 5 spec, Dr. P. Jordan; **RIO GRANDE DO SUL**, Passo Fundo (28°15'46"S/52°24'24"W), IBSP 344, 6 ex., L. M. Niresl, 25-X-1944; IBSP 284, 1 ex., A Pontes, 28-VI-1943; IBSP 345, 4 ex., L. M. Niresl, 25-X-1944; Santa Cruz do Sul (29°43'03"S/52°25'33"W), NHMW 1552, 4 ex., Stiegelmaier; Uruguaiana (29°45'17"S/57°05'18"W), IBSP 73, 3 ex., A Leneti, 07-IX-1931; IBSP 451, 1 ex., D. Mengue, 28-IX-1931.

*Description of the neotype of D. miersii.*

**Length:** 78 mm, without antennae and anal legs.

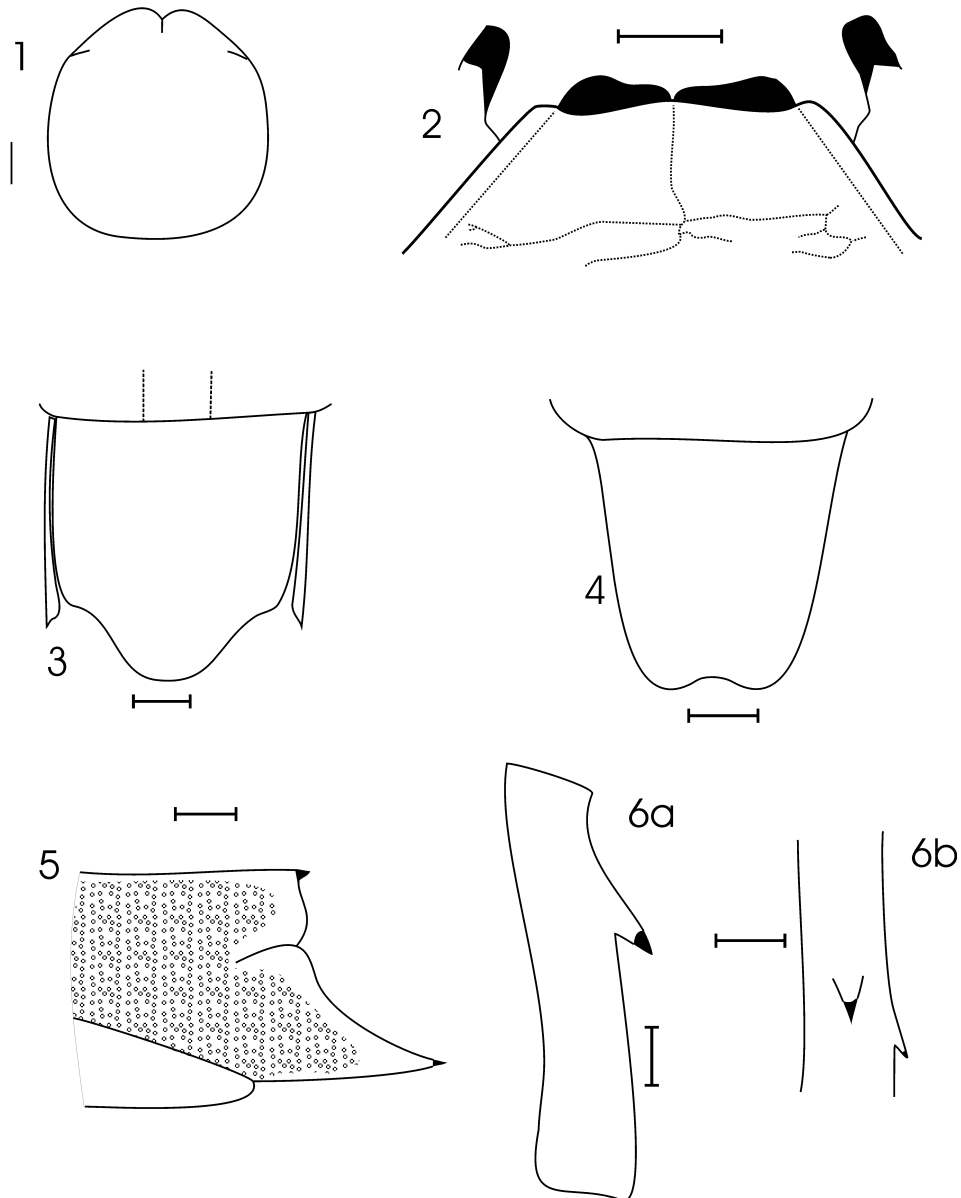
**Color:** dark brown. Head and first tergite reddish brown; last two tergites pale brown. Legs yellow, middle portion greenish gray.

**Cephalic plate:** with fine punctuations, without furrows or depressions (Fig. 1).

**Antennae:** with 17 antennomeres, the first three ones with some scattered strong bristles and without short hairs. Fourth antennomere with a few hairs on the ventral side. The other antennomeres with yellow hairs and some long scattered bristles.

**Forcipular coxosternum:** anterior margin straight or just a little convex, with light lateral depressions from which at each side originates an elongated transversal depression, which is directed towards the midline and almost reaches the transversal furrows. A longitudinal furrow joined to a branched transversal furrow. A small round depression at the

posterior border. Prefemoral process with strong internal appendix, whose apex forms a wide dorso-ventrally flattened lobe (Fig. 2).



**FIGURES 1-6.** *Dinocryptops miersii*, Neotype (IBSP 337), from Paranapiacaba (Alto da Serra), São Paulo, Brazil. 1. Cephalic plate; 2. forcipular coxosternum; 3. tergite XXIII; 4. sternite XXIII; 5. segment coxopleural XXIII; 6a. right anal leg, lateral view; 6b. right anal leg, ventral view. scale bars: 1mm

Dental plates formed by two long, narrow, chitinous lobes, more elevated on the sides than in the middle, but lacking typical teeth; anterior margin slightly granulated (Fig. 2).

**Tergites:** First tergite with anterior semicircular pit (the cephalic plate hides the pit sometimes). Paramedian sutures reaching from tergite III (or V) to XXII. Last tergite (XXIII) with a light depression in the posterior border and without furrows (Fig. 3). Sides of tergite VI to XX with a light depression. Lateral carinas reaching from tergite VI to XXI (or XXII). Lateral carinas of tergite VI and XXI (or XXII) noticeable only at their anterior border. Last tergite without carinas, presenting only a membranous line that separates tergite from coxopleura.

**Sternites:** with fine punctuations, without furrows or depressions. Last sternite with a simple median depression, posterior margin with median concavity (Fig. 4).

**Coxopleura:** Dorsal margin curved outward, its posterior corner ending at a strong, sclerotized point. Porous field almost reaching the lateral borders of the tergite (Fig. 5). Coxopleural appendices long, parallel and pointed.

**Legs:** Legs I to XVIII (or XIX) with two tibial spurs, XX and XXI with one, XXII and XXIII without tibial spurs. Legs I to XXI with one tarsal spur, XXII and XXIII without tarsal spur. Last two pair of legs (XXII and XXIII) long, with biarticulated tarsus. Prefemur of the right anal leg with a strong ventral spine and a smaller dorsolateral spine (left anal leg teratologically modified) (Fig. 6a, 6b).

Range of character variation in the examined Neotropical material. - Body length of adult specimens varies from 56 mm to 85 mm. Some specimens are pale brown, with head, first and last two tergites brownish red. Specimens from Paraná (Foz do Jordão) present color like neotype, but the last two legs with middle portion greenish gray. Other specimens greenish brown. Head, first and last two tergites brownish red. Legs yellow except for the last two (or three) pairs with middle portion of femur, tibia, and two tarsus grayish. Forcipular coxosternum like neotype, in all specimens there is a light roundish depression in the middle of coxosternum. This character is hard to see in alcohol-preserved specimens. Tergites and sternites like neotype, but the posterior margin of the last sternite can be straight (some specimens) or with a more or less distinct median concavity.

## Discussion

### *I. Neotype designation for D. miersii*

*Dinocryptops miersii* was described by Newport from an unknown locality in Brazil. Subsequent authors also mentioned *D. miersii* from Brazil, however they failed to provide detailed localities (Gervais, 1847; Meinert, 1886). The first citation of *D. miersii* outside Brazil was for Santa Lucia, Smaller Antilles, by Pocock (1893). He compared the five specimens collected in Santa Lucia with specimens of *D. miersii* deposited in the British Museum, and with Newport's type material. Among the specimens of *D. miersii* deposited in the British Museum, two were collected in Brazil; one, without precise locality, was

labelled by Newport himself (probably his type), and a second was from Rio de Janeiro. However, the type material is lost (Janet Beccaloni, personal communication).

The exact type locality of *D. miersii* is not known, as it was not indicated at the original description, nor in the label of the type (?) specimen examined by Pocock (1893). A hint about the Brazilian state where the type was collected is provided by information on the life of its collector. The botanist John Miers spent seven years (1831 to 1838) in Brazil. He collected mainly in Morro do Corcovado and in Botafogo, both locality in Rio de Janeiro city, and in the Serra dos Órgãos, close to Teresópolis city (Urban, 1906). Therefore the original type was probably collected in Rio de Janeiro State.

The occurrence of *D. miersii* in the state of Rio de Janeiro, however, is not well supported by the specimens available in collections. Of the 70 specimens of Scolopocryptopinae from the State of Rio de Janeiro I have examined, 54 were *Scolopocryptops melanostomus* (Newport, 1845) and 15 were *Scolopocryptops ferrugineus* (Linné, 1762). I found only one specimen of *D. miersii* from Rio de Janeiro state, collected in Parque Nacional de Itatiaia and deposited at MZSP. This specimen is poorly preserved and not suitable for description. Therefore, I selected as neotype for *D. miersii* the specimen from Paranapiacaba, Santo André, São Paulo State, described above.



**FIGURE 7.** Neotropical Region, showing the distribution of *Dinocryptops miersii* (open circle).

## 2. Synonymical remarks

*Dinocryptops miersii puruensis* was described by Bücherl (1941) from the State of Amazonas, northern Brazil. It was raised to species level by Bücherl (1974). Bücherl's type series consisted of 6 specimens, of which 5 were deposited in MNRJ and 1 in IBSP. The subspecies' holotype received the number MNRJ 27, the paratypes numbers MNRJ 24, MNRJ 49, and IBSP 293 (Bücherl, 1974). However, Chagas-Jr (2000) erroneously considered the holotype as being MNRJ 49, and cited paratypes MNRJ 27 and IBSP 293 as lost. Paratype MNRJ 24 was not mentioned. Recently, I found out that specimen MNRJ 27 is actually the holotype, and also located the paratypes MNRJ 49 and IBSP 293.

*Dinocryptops puruensis* is clearly a synonym of *D. miersii*. According to Bücherl (1941, 1974), seven characters should separate it from *D. miersii* (the character states of the latter, after Bücherl are given in parentheses): (1) absence of hair in the basal antennomeres (abundant hair); (2) presence of hairs 3-4 times longer than the common hairs on antennomeres IV to XVII (hairs just a little longer and covering just the apical half of antennae); (3) presence (absence) of transversal furrow in the forcipular coxosternum, as well as basal furrows; (4) presence (absence) of a short medium furrow in the tergites; (5) lateral carinas abbreviated in all tergites (only abbreviated in tergites XXI and XXII); (6) posterior margin of the last sternite convex (concave); (7) free portion of the coxopleural appendices beyond the posterior margin of sternite almost twice as long as the sternite (not so long).

Contrary to Bücherl's opinion, in both the type series of *D. puruensis* and typical *D. miersii* specimens (1) the first three (sometimes the first four) antennomeres of the antennae have no hairs; (2) hairs 3-4 times longer than common hairs cover antennomeres IV-XVII; (3) a transversal furrow is present (an additional longitudinal furrow may be present in both 'forms'); (4) the cited variation is only apparent, as the short median furrow is hardly visualized in alcohol-preserved specimens; (5) the lateral carinas are present from tergite VI or VII to XXII and the carinas of tergite VI, VII and XXII are only evident in the anterior margin of the tergite; (6) the posterior margin is straight or concave in the medium portion of the last sternite (additionally both 'forms' bear a smooth longitudinal depression in the sternite); (7) the free portion of the coxopleural appendices are as long or a little longer than the sternite. Therefore *D. puruensis* is a synonym of *D. miersii*.

As for *D. miersii guaraniticus*, most of the characters he mentioned by Coscarón (1955) were not noticed by me after examination of the holotype or were variable in the paratypes, making it impossible to separate this subspecies from the typical *D. miersii*. He affirmed that the tarsus of the legs I to XXI has only one article in *D. miersii guaraniticus*. After examination of the holotype and paratypes of *D. miersii guaraniticus*, I can add that the tarsus of the leg XXII of this taxon has also just one article. But, the tarsus of the legs I to XXII in the typical *D. miersii* is also composed by only one article. After Coscarón, in *D. miersii guaraniticus* the coxopleural appendices should be 1/3 longer than the sternite. However, both the type series of *D. miersii guaraniticus* and typical *D. miersii* have cox-

opleural appendices twice as long as the sternite. Again, he mentioned that in *D. miersii* the transversal furrow of coxosternum forcipular is not present, but it is present in all specimens I examined. Other characters, such as body length, hairs in basal antennomeres, and lateral carinas, present a large range of variation.

Based on the above comparisons, the *D. miersii guaraniticus* is here synonymized with *D. miersii*.

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### References

- Attems, C.G. von. (1930) Myriapoda 2. Scolopendromorpha. *Das Tierreich*, 54, 1-308.
- Brölemann, H.W. (1909) Os myriapodos do Brasil. in: Catálogos da fauna brasileira. *Revista do Museu Paulista*, 2, 1-87.
- Bücherl, W. (1939) Os quilópodos do Brasil. *Memórias do Instituto Butantan, São Paulo*, 13, 49-363.
- Bücherl, W. (1941) Quilópodos novos da coleção do Museu Nacional do Rio de Janeiro. *Memórias do Instituto Butantan, São Paulo*, 15, 119-146.
- Bücherl, W. (1974) Die Scolopendromorpha der neotropischen Region, *Symposia of the Zoological Society of London*, 32, 99-133.
- Chagas-Jr, A. (2000) A catalogue of the type specimens of Scolopendromorpha in the Brazilian myriapodological collections (Chilopoda, Arthropoda). in: Wytwer, J. & Golovatch, S. (Eds), *Progress in Studies on Myriapoda and Onychophora. Fragmenta Faunistica*, 43(suppl), 259-271.
- Chamberlin, R.V. (1914). The Stanford expedition to Brazil, 1911, Jhon C. Branner, Director. The Chilopoda of Brazil. *Bulletin of the Museum of Comparative Zoology*, 58(3), 151-221.
- Coscarón, S. (1955) Los quilópodos escolopendromorfos del Museo de la Plata. *Revista del Museo de la Universidad de La Plata*, 6, 359-418.
- Coscarón, S. (1959) Distribución de los escolopendromorfos argentinos y su ubicación en las áreas zoogeográficas. *Notas do Museo de la Universidad de La Plata*, 19, 352-369.
- Crabill-Jr, R.E. (1953) Concerning a new genus, *Dinocryptops*, and the nomenclatorial status of *Otocryptops* and *Scolopocryptops* (Chilopoda: Scolopendromorpha: Cryptopidae). *Entomological News*, 64, 96.

- Crabill-Jr, R.E. (1960) A new American genus of cryptopid centipede, with an annotated key to the scolopendromorph genera from America north of Mexico. *Proceedings of the United States National Museum*, 111, 1-15.
- Gervais, P. (1847) Myriapodes. in: Histoire Naturelle des Insectes Aptères, M. le Baron Walckenaer & Gervais, P., eds. Paris. 4, 1-623.
- Haase, E. (1887) Die Indo-Australischen Myriapoden. I. Chilopoden. *Abhandlungen und Berichte des Königlichen Zoologischen und Anthropologischen Ethnographischen Museums zu Dresden*, 5, 1-117.
- Kraepelin, K. (1903) Revision der Scolopendriden, *Mitteilungen aus dem Naturhistorischen Museum in Hamburg*, 20, 1-276.
- Lucas, H.L. (1849) "Scolopocryptops". in: Dictionnaire Universel d'Histoire Naturelle, D'Orbigny, C., ed., 11, 443-444.
- Meinert, F. (1886) Myriapoda musei cantabrigensis, Mass. Part I. Chilopoda. *Proceedings of the American Philosophical Society*, 23, 161-232.
- Newport, G. (1845) Monograph of the Class Myriapoda, Order Chilopoda. *Transaction of the Linnean Society, London*, 19, 349-439.
- Pocock, R. I. (1893) Contributions to our knowledge of the arthropod fauna of the West Indies. Part II. Chilopoda. *Zoological Journal of the Linnean Society, London*, 24, 454-473.
- Pocock, R.I. (1895) Class Chilopoda. in: Chilopoda and Diplopoda. *Biologica Centrali-Americana*. 1, 1-40.
- Schileyko, A. & Minelli, A. (1998) On the genus *Newportia* Gervais, 1847 (Chilopoda: Scolopendromorpha: Newportiidae). *Arthropoda Selecta*, 7(4), 265-299.
- Shelley, R.M. (1997) The Holoartic centipede subfamily Plutoniuminae (Chilopoda: Scolopendromorpha: Cryptoptidae) (*nomen correctum ex* subfamily Plutoniinae Bollman, 1893). *Brimleyana*, 24, 51-113.
- Shelley, R.M. (2000) Occurrence of the centipede, *Dinocryptops miersii* (Newport) (Scolopendromorpha: Scolopocryptopidae), in the Trinidad and Tobago, *Caribbean Journal of Science*, 36, 155-156.
- Shelley, R.M. (2002) A synopsis of the North American centipedes of the Scolopendromorpha (Chilopoda), *Memoirs of the Virginia Museum of the Natural History, Martinsville*, 5, 1-108.
- Urban, I. (1906) Vitae itinerariaeque collectorum botanicorum, notae collaboratorum biographicae, florum brasiliensis ratio edendichronologica, systema, index familiarum. in: Martius, C. F. P. de, Eichler, A. G. & Urban, I. (eds). *Flora Brasiliensis*, 1(1), 1-267.