

Fig. 36. *Sylviocarcinus australis* (holotype, SMF 4886), dorsal and ventral aspect.

1969 *Sylviocarcinus pictus pictus*, — BOTT, Abh. senckenb. naturf. Ges., 518: 31, pl. 21 fig. 53 [part. of text and pl. 21 fig. 53; nec pl. 12 fig. 22 = *S. pictus*.]

1990 *Sylviocarcinus pictus pictus*, — ZWINCK, Fauna de Crustáceos: 103.

1992 *Sylviocarcinus pictus*, — RODRIGUEZ, Faune tropicale, 31: 76 [part.: specimens from Paraguay].

Holotype: ♀ (SMF 4886), Paraguay, Rio Paraguay, near Puerto Max, 9. III. 1905, leg. L. DESARTS.

Paratypes: Brazil: Estado do Mato Grosso: 2 ♀ (MNRJ MD-810), Rio Manso, mun. Chapada dos Guimarães, 11.–13.VII.1983, leg. W. ZWINCK et al.; 9 ♀ 5 ♂ (MNRJ MD-804), Rio Cuiabá, Acorizal, 22.VII.1983, leg. W. ZWINCK et al.; 1 ♀ 2 ♂ (MZUSP 6301), Porto Espiridião, 25.XII.1976, leg. P. VANZOLINI; 7 ♀ 10 ♂ (MZUSP 2561), São Luís de Cáceres, XI.1917, leg. E. GARBE; 1 ♀ (SMF 18712), Rio Jaurú, 40 km W of Cáceres, 6.IX.1980, leg. J. VOELKER; 3 ♀ 1 ♂ (INPA-CR 362), 1 ♀ 1 ♂ (MZUSP 9104), Transpantaneira road, Km 59, Poconé, 23.VI.1985, leg. V. A. ARAÚJO; 2 ♂ (MZUSP 9505), idem, 27.VI.1985, leg. V. A. ARAÚJO; 6 ♂ 11 ♀ (MNRJ MD-1244), Córrego Boca Rica, Quatro Marcos, 29.XI.1984, leg. W. ZWINCK. — Estado do Mato

Grosso do Sul: 1 ♂ 4 ♀ (MNRJ MD-1387), Rio Miranda, Salobra, 22.–25.I.1955, leg. L. TRAVASSOS e colab. — Paraguay: 1 ♂ 1 ♀ (SMF 18711), 3 ♂ 1 ♀ (ZMH K-3627), Rio Paraguay, near Puerto Max, 9. III. 1905, leg. L. DESARTS.

Material: Brazil: Estado de Rondônia: 5 ♂ 4 ♀ (MNRJ MD-1239), Rio São Domingos ou Romari, tributary of Rio Jarú, rod. BR-470, Km 45, Ouro Preto do Oeste, leg. A. D. CERATTI. — Estado do Mato Grosso: 1 ♀, dry (NHMW 1475), Rio Paraguay; 2 ♂ (MNRJ MD-809), Rio Manso, Distr. Praia Rica, Chapada dos Guimarães, 11.–13.VII.1983, leg. W. ZWINCK e colab.; 1 ♂ 2 ♀ (MNRJ MD-1235), Rio Vermelho, Mun. Rio Branco, 28.XI.1984, leg. W. ZWINCK; 1 ♂ 1 ♀ (MNRJ MD-1237), Córrego do Ribeirão, Distr. Porto Estrela, Barra do Bugres, 4.XII.1984, leg. W. ZWINCK; 1 ♀ (MNRJ MD-803), Rio Cuiabá, Acorizal, 22.VII.1983, leg. W. ZWINCK et al.; 1 ♂ (MNRJ MD-802), Ribeirão Baús, estrada Baús-Guia, between Acorizal and Cuiabá, 27.VII.1983, leg. W. ZWINCK e colab.; 1 ♂ (MNRJ MD-811), 3 ♂ 3 ♀ (MNRJ MD-812), Rio Taquará, Cuiabá, 27.VII.1983, leg. W. ZWINCK e colab.; 1 ♂ (MNRJ MD-808), 1 ♂ 1 ♀ (MNRJ MD-807), Rio dos Peixes, Cuiabá, 25.VII.1983, leg. W. ZWINCK e colab.; 1 ♀ with young (MNRJ MD-1230), 1 ♀ (MNRJ MD-1238), 2 ♂ 1 ♀ (MNRJ MD-1240), 1 ♀ with young (MNRJ MD-1242), Córrego

Boca Rica, Quatro Marcos, 29.XI.1984, leg. W. ZWINK; 1 ♂ (MZUSP 9666), Dom Aquino, VI.1987, leg. DALA; 1 ♀ (MNRJ MD-1232), Córrego afluente do Rio Jaurú, Porto Esperidião, 25.XI.1984, leg. W. ZWINK; 2 ♀ (SMF 9423), Cáceres, I.IX.1980, leg. J. VOELKER; 1 ♀ (MNRJ MD-1233), Córrego Sangradourozinho, Cáceres, 3.XII.1984, leg. W. ZWINK; 8 ♂ 5 ♀ (MNRJ MD-1243), Branch of Rio Paraguay, Km 3 da BR-174, Street from Porto Esperidião to Cáceres, 1.XII.1984, leg. W. ZWINK; 1 ♂ 1 ♀ (NNHM D-37344), Cáceres, XI.1917, leg. E. GARBE; 1 ♂ (INPA-CR 361), Rod. Transpantaneira, Km 59, 7.II.1986, leg. V.A. ARAÚJO & C. MAGALHÃES. — Estado do Mato Grosso do Sul: 1 ♂ (MNRJ MD-1255), Rio Coxim, Com. Rondon; 4 ♂ 2 ♀ (MZUSP 9888), Rio Miranda, Base de Pesquisas do Pantanal da UFMS, 4.VIII.1989, leg. A. C. MARINI; 1 ♂ (MNRJ MD-1096), Rio Miranda, Corumbá, 14.IX.1987, leg. L. REIS; 1 ♂ (MZUSP 7051), Miranda, 8.-12.XI.1981, Eq. DCB/UFSCar; 2 ♀ (MZUSP 9947), Morro do Azeite, Miranda, Bodoquena, 24.XI.1989, leg. V. GARRUTI; 1 ♀ (NHML 1892.4.19.1), Rio Paraguay, near Corumbá, I.1892, leg. S. MOORE; 3 ♂ 2 ♀ (MNRJ MD-801), Rio Urubeba, tributary of Rio Nioaque, Nioaque, 10.-19.XI.1983, leg. W. ZWINK.

Paraguay: 1 ♀, dry (USNM 2470), leg. PAGE; 1 ♀ (NHML 1985-250), 1929; 1 ♂ (ZMB 15543), 11.XI.1908, leg. ANISITS; 1 ♂ (NHML 1956.6.10.10), Rio Tapiracuay, Primavera, Alto Paraguay, leg. E. J. PHILLIPS; 2 ♂ (ZSM 1905-1), Rio Paraguay, between Puerto Sastre and Puerto Casado, leg. KRIEG; 1 ♂ 2 ♀ (MLP ex-116), Villarica.

Argentina: Prov. Misiones: 1 ♂ (MNHN BP-332), Banks of the Parana, Villa Lutecia, San Ignacio, 1910, leg. E. WAGNER; 1 ♀ (MNHN B-17668), idem, Ceyu-Cuare, 1910, leg. E. WAGNER; 1 ♂ (MCSNG), Candelaria, Spediz. BOVE.

No locality indication: 1 ♂ (NHMW 6657), 25.X.1958, leg. G. SPATS.

Diagnosis: Three to four spine-tipped anterolateral teeth behind the exorbital tooth of the carapace. Abdomen with segments III-VI fused. Subterminal spine-field of male plp 1 partly situated on a poorly developed subdistal lobe, median part of the subterminal spine field very poorly developed.

Description: Carapace smooth and glabrous, showing a pattern of small reddish dots or broader circular spots; postfrontal lobes visible as a single convex protuberance, H-shaped central groove (consisting of the posterior and lateral borders of the gastrical and the lateral borders of the cardiacal region) fairly well developed, in larger specimens the central part fades away. Frontal margin smooth, slightly concave, there is some variability concerning the depth of the median cleft. Exorbital tooth slender and spine-tipped, anterolateral borders with three and four teeth behind it. The number of the anterolateral teeth is evidently variable, as the holotype has three on both sides while the female paratype from the same locality (SMF 18711) has four. In other samples the variability is demonstrated more strongly: the male paratype (MZUSP 4785) has four teeth on the left and three plus an inconspicuous knob on the right side, the same being even more evident in another female paratype (SMF 9423). Suborbital borders with at least two slender spines, one of which is always situated at the inner corner. Anterolateral corner of the buccal cavity with two strongly developed spines.

Merus of third maxilliped triangular, fronto-external corner with a curved tooth, being more or less acute, outer border of this tooth separated by a furrow from the remaining plate. Ischium slender, with a longitudinal furrow near to its inner border. Exopodite with a well developed flagellum.

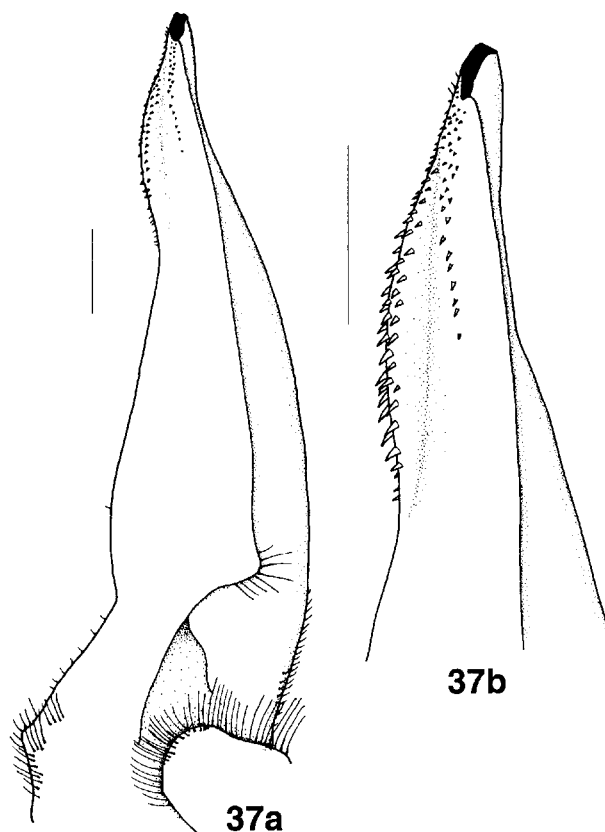


Fig. 37. *Sylviocarcinus australis* (holotype, SMF 4886), right male plp 1, ventro-mesial aspect. — a) Total limb; b) distal end. — Scale 1 mm.

First pereiopod markedly heterochelous in both sexes, the right chela being larger than the left one. Merus triangular in cross-section; anterior border in smaller specimens with a very acute and curved spine at its middle, otherwise smooth, this spine fades away in larger animals; posterior border smooth and with a subterminal acute spine, which becomes a little smaller in larger specimens; lower border sometimes with an acute median spine and a supplementary granule, this character being extremely variable as shown by specimens having the spine on one side only. Carpus smooth, inner corner with a long and acute spine. Palm smooth, in some cases (e.g. in the holotype) the one of the smaller cheliped bears a terminal spine. Dentition of the fingers saw-shaped with alternating large and small teeth, in larger specimens the larger cheliped shows a cleft between the fingers, which, however, remains quite shallow.

Second to fifth pereiopods smooth. Propodus of second leg with a broadly longitudinal hairtuft on its lower border, and two slender and parallel ones on the upper; dactylus with three such slender longitudinal tufts, one at its lower and two at its upper border. In the following two legs the tufts on the propodi are much less developed and disappear in some cases; the corresponding dactyli have the hair tufts basically as described for the second pereiopod, but usually less developed. In the fifth pereiopod the propodus and dactylus are flattened and their contour is broadened by

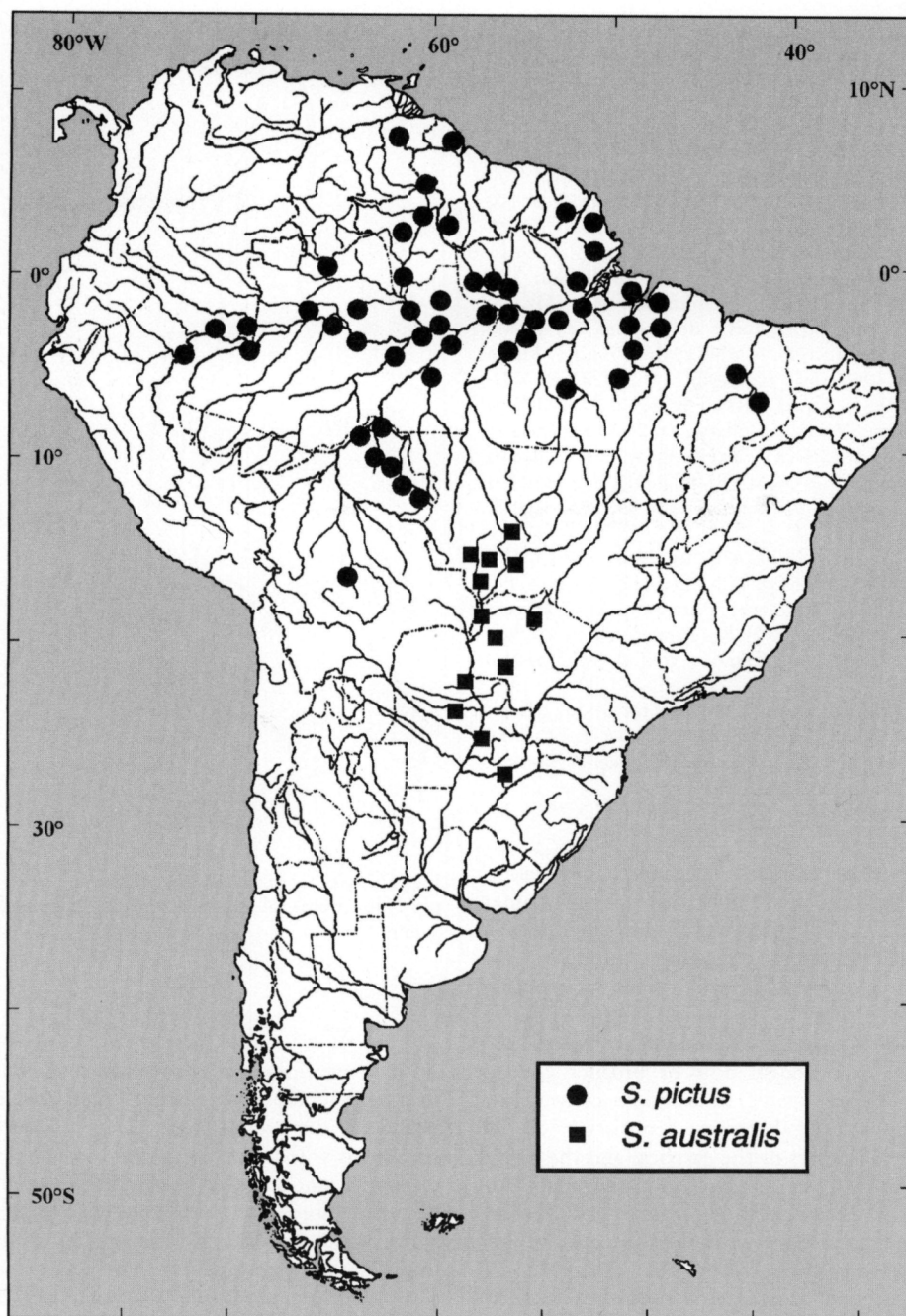


Fig. 38. Distribution map of *Sylviocarcinus australis* and *S. pictus*.

hair rows more strongly developed on the lower than on the upper borders, thus these limbs can be called natatorial.

Frontal part of proepistome (interantennular septum) broadly rounded, its surface smooth. The surface of the epistome is also smooth; anterior border of the buccal cavity with a distinct and m-shaped crest, the middle part of the "m" being bifid.

Sternal plate relatively long and narrow, totally covered by the abdomen at its base. Furrows between somites IV/V and VI/VII nearly reaching midline, the ones between somites V/VI and VII/VIII very short, ending halfway

between the beginning of the sterno-abdominal cavity and the midline; median line only present in somites VII–VIII.

Abdomen with segments III–VI fused, area of IVth segment with a pair of strong knobs in large males, in smaller ones these structures are faint or absent.

Male plp 1 with a poorly developed subdistal lobe. Subterminal spine-fields arranged in two well delimited longitudinal patches of which the lateral one is strongly developed and situated on the subdistal lobe, while the median one is very indistinct. Suture begins on the ventro-

mesial side and is displaced towards the dorsal side near to the basal level of the subdistal lobe, it is torched back again near the tip where it meets the terminally situated distal opening.

Measurements: 34.3 : 30.8 : 19.8 : 13.5 (holotype ♂)

Type locality: N-Paraguay, Rio Paraguay near Porto Max.

Distribution: Rio Paraguay-system of Brazil and Paraguay, probably also neighbouring parts of the Rio Paraná in Argentina.

Remarks: We are separating the present new species from *S. pictus* because of the marked and constant differences in the male plp 1 of the two species. In true *S. pictus*, the subdistal lobe is much more evident and the median patch of the subterminal spine fields is much better developed when compared with the new species *S. australis*. In this connection it is important to note, that the figure of the pleopod published by BOTT (1969: pl. 21 fig. 53) does not correspond to *S. pictus* as he states in the explanation to pl. 21, but to the present new species. The original photographs and the notes of BOTT were re-examined. The specimen figured on fig. 53 was collected from the Rio Paraguay (between Pto. Sastre and Pto. Casado in Paraguay), and was part of the "Zoologische Staatssammlung" in München. BOTT figured the true *S. pictus* on pl. 21 fig. 54, under the name *S. pictus pardalinus*. We agree with PRETZMANN (1983), that this subspecies is not separable from *S. pictus* proper, as the only difference between the two forms is the very variable number of anterolateral teeth.

By this action *S. pictus* is a species apparently confined to the Amazon basin, while the southern forms belong to *S. australis*. Both species are closely related and indistinguishable if adult males are not available. In young specimens of *S. pictus* the subdistal lobe is reduced, giving the pleopod a slender shape. Also the distal opening gets more or less long and slender, but there seems to be some variability in this character. In this respect there is also a great similarity with *Zilchiopsis oronensis* and *Z. collastinensis* and we have treated the distinguishing characters under the latter species. In fact the external morphology cannot be used to separate *Z. collastinensis*, *Z. oronensis*, *S. pictus*, and *S. australis*. This means, that females at present are not identifiable further than to genus.

Etymology: The name of this species is derived from its southern distribution.

Sylviocarcinus pictus (H. MILNE-EDWARDS 1853)

(Figs. 38–48)

- 1853 *Dilocarcinus pictus* H. MILNE-EDWARDS, Ann. Sci. nat., (3)20: 216.
- ? 1856 *Dilocarcinus pardalinus* GERSTÄCKER, Arch. Naturgesch., 22(1): 148.
- 1968 *Holthuisia picta rionegrensis* PRETZMANN, Entom. Nachrbl., 15(7–8): 74.
- 1969 *Sylviocarcinus pictus pictus*, — BOTT, Abh. senckenb. naturf. Ges., 518: 31, pl. 12 fig. 22a-b. [part. of text and pl. 12 figs. 22a-b; nec pl. 21 fig. 53 = *S. australis*.]
- 1969 *Sylviocarcinus pictus pardalinus*, — BOTT, Abh. senckenb. naturf. Ges., 518: 32, pl. 13 fig. 23a-b, pl. 21 fig. 54.
- 1969 *Sylviocarcinus devillei*, — BOTT, Abh. senckenb. naturf. Ges., 518: 28. [part.: 2 ♂ SMF 4334.]
- 1970 *Trichodactylus (Valdivia) pardalinus*, — DEL SOLAR, BLAN-CAS & MAYTA, Catal. Crust. Peru: 31.
- 1970 *Trichodactylus (Valdivia) pictus*, — DEL SOLAR, BLAN-CAS & MAYTA, Catal. Crust. Peru: 31.
- 1970 *Trichodactylus (Valdivia) pardalinus*, — FONSECA, Infme Inst. Mar Peru, 35: 51. [part.: nec Paraguay and Argentina.]
- 1972 *Sylviocarcinus pictus*, — SMALLEY & RODRIGUEZ, Tulane Stud. Zool. Bot., 17: 48, fig. 8.
- 1977 *Holthuisia pardalina*, — PRETZMANN, Anz. österr. Akad. Wiss. math.-naturw. Kl., 1977(7): 88.
- 1977 *Sylviocarcinus pictus pictus*, — MANNING & HOBBS, Biota acuát. Sudamerica austral: 159. [part.: nec Argentina, Paraguay.]
- 1978 *Holthuisia pardalina*, — PRETZMANN & RADDA, Anz. österr. Akad. Wiss. math.-naturw. Kl., 1978 (2): 590.
- 1978 *Sylviocarcinus pardalinus*, — BONAVENTURA et. al., Comp. Biochem. Physiol., 62A: 252.
- 1981 *Sylviocarcinus pictus*, — RODRIGUEZ, Aquat. Biota trop. South America, 1: 48. [part.: nec Paraguay River basin.]
- 1981 *Sylviocarcinus pardalinus*, — RODRIGUEZ, Aquat. Biota trop. South America, 1: 48.
- 1983 *Holthuisia picta picta*, — PRETZMANN, Ann. naturhist. Mus. Wien, 84(B): 321, pl. 1 figs. 1–2, pl. 2 figs. 3–5.
- 1985 *Sylviocarcinus pictus*, — CAMPOS, Caldasia, 14(67): 270.
- 1988 *Sylviocarcinus pictus*, — GOULDING, CARVALHO & FERREIRA, Rio Negro, rich life in poor water: 67.
- 1992 *Sylviocarcinus pictus*, — RODRIGUEZ, Faune tropicale, 31: 76, figs 4J, 5D, 7E, 9F, 13C, 27A–H [part.: material except specimens from Paraguay].
- 1992 *Sylviocarcinus* sp., — RODRIGUEZ, Faune tropicale, 31: 84, figs 4L, 7D, 9E, 13C, 26G–K [part.: 1 ♂ from ZMH K27047].
- Lectotype: ♂ (MNHN 4043), Peru: Loreto, Haute Amazone XII.1846, leg. F. DE CASTELNAU & E. DEVILLE.
- Paralectotype: 1 ♀ (MNHN 4392), data as lectotype.
- Material: Venezuela: Estado de Bolivar: 1 ♂ 1 ♀ (FMNH 3648), Tumeremo, Rio Cuyumi basin, 5.VIII.1995, B. B. CHERNOFF & A. MACHADO.
- Guyana: 1 ♂ (NHMW 6663), Rupununi river, Melville, 23.II.1913, leg. J. HASEMAN; 1 ♀ (NHMW 6652), idem, 24.II.1913, leg. J. HASEMAN; 1 ♀ (NHMW 6654), idem, 26.II.1913, leg. J. HASEMAN; 1 ♂ (NHML 1985-264), Rupununi river, S. of Guiana, leg. J. McCONNELL; 1 ♂ (NHML 1969.10.5.1), idem, IX.1957, leg. R. McCONNELL; 1 ♂ (NHML 1965.5.7:13), idem, Dadanawa crossing, 24.IV.1961, leg. R. McCONNELL.
- French Guyana: 1 ♂ 5 ♀ (MNHN B-20594), 1900, leg. F. GEAY; 1 ♀ (NHML 1926.10.6.1), Ipovein creek, 30.VIII.1925; 1 ♀ (MNHN B-17667), river Camopi, 1900, leg. F. GEAY.
- Brazil: [?] 1 ♀, dry (ZMB 372); 1 ♀ (47.0:41.4), holotype of *Dilocarcinus pardalinus* GERSTÄCKER (ZMB 2123); 1 ♂ (SMF 2715), leg. H. SIOLI; 1 ♀ (NHMW 6659), leg. ROSENBERG; 1 ♀ (ZSM 1093-1); 5 ♀ (IRSNB), Amazonian Region; 1 ♂ 1 ♀ (SMF 4343), Igarapé das 3 casas, Tabacorana, 10.XI.1941, leg. H. SIOLI. — Estado do Amapá: 1 ♂ 1 ♀ (MNHN B-17669), Haut Carsevenne [= Rio Calçoene], 1898, leg. F. GEAY; 1 ♀ (MZUSP 2403), Ferreira Gomes, VIII.1955, leg. F. NOVAES; 3 ♂ 2 ♀ (INPA-CR 517), Rio Jari, 19-26.VI.1987, leg. M. JEGU & J. ZUANON. — Estado de Roraima: 1 ♂ (FZB 1798), Rio Branco, 13.XII.1987, leg. M. C. MANSUR & E. BUCKUP; 2 ♂ 1 ♀ (MZUSP 2739), Rio Surumu, X.1966, leg. M. ALVARENGA; 2 ♂ (MZUSP 2420), Surumu, leg. ALVARENGA; 1 ♀ (AMNH 11434), Rio Surumu, Frechal, 1929, leg. TATE & CARTER; 1 ♂ (MZUSP 3595), Rio Branco, Boa Vista, 9.II.1969, leg. T. ROBERTS; 3 ♂ (INPA-CR 455), Rio Mucajá, 2.X.1986, leg. E. FERREIRA. — Estado do Amazonas: 1 ♂ (SMF 4707), Rio Marauá, leg. E. J. FITTKAU; 1 ♀ (SMF 4305), Rio Irapirapi, Marauá, 1963, leg. E. J. FITTKAU; 2 ♀ (SMF 2699), Rio Negro, Ponta Arara, X.1960, leg. H. SIOLI; 1 ♂ 2 ♀ (MZUSP 6303), Rio Negro, Cantagalo, 28.I.1972, EPA; 3 ♂ 3 ♀ (INPA-CR 147), Rio Pitinga, tributary of Rio Uatumã, 30.I.1985, leg. M. JEGU; 1 ♀ (MNRJ MD-1095), Rio Uatumã, Pres. Figueiredo,