

Fig. 8. *Goyazana castelnaui* (SMF 22263), dorsal and ventral aspect. — Scale 20 mm.

Afonso, 11.VII.1951; 1 ♂ 9 ♀ (MZUSP 930), Joazeiro, XI.1914, E. GARBE; 1 ♀ (USNM 48313), idem; 1 ♂ (MNRJ MD-1245), Joazeiro, 8.IV.1942, MOOJEN & BAILY; 1 ♂ (MNRJ MD-1147), lago de Sobradinho, Pedra Branca, 27.II.1984, Cia. Desenv. e Ação Regional; 1 ♂ (MZUSP 2296), Santa Rita de Cássia, 25.III.-14.IV.1958, E. DANTE; 1 ♀ (MZUSP 6332), Guanambi, VIII.1981, F. GIANOTTI FILHO. — Estado do Mato Grosso: 3 ♂ 3 ♀ (SMF 4397), Zentral-Brasilien, Mato Grosso, Quellgebiet des Xingu, Lagoz bei Camajura, 10.X.1965, BRINCKMANN; 1 ♀ (MZUSP 2388), Barra do Tapirapé, 8.I.1966, B. MALKIN; 5 ♂ 7 ♀ (MZUSP 1797), idem, 28.VII.1963, B. MALKIN; 1 ♂ (MZUSP 2306), idem, 8.VIII.1962, B. MALKIN; 6 ♂ 9 ♀ (MZUSP 1805), idem, I.1962, B. MALKIN; 3 ♂ 8 ♀ (MZUSP 2262), lagoa Ipava, Pq. Nac. Xingu, 4-10.II.1965, P. VANZOLINI; 1 ♂ 1 ♀ (SMF 22262), idem; 1 ♂ 3 ♀ (MZUSP 6376), Rio Toatoari, Pq. Nac. do Xingu, 27.X.1973,

G. R. KLOSS; 7 ♂, poor cond. (MZUSP 2316), confluência Xingu-Culuene, VI.1947, CARVALHO; 2 ♂ 1 ♀ (MNRJ MD-805), córrego da Lage [Rio Paraguay basin], Chapada dos Guimarães, 13.VII.1983, W. ZWINK; 1 ♂ (MNRJ MD-806), córrego Vermelho, Chapada dos Guimarães, 11.VII.1983, W. ZWINK. — Estado do Mato Grosso do Sul: 3 ♂ 1 ♀ (MZUSP 6318), Rio Sucuriú, Três Lagoas. — Estado de São Paulo: 2 ♂ 1 ♀ (MZUSP 276), Itapura, 1904, E. GARBE; 1 ♂ (MZUSP 1795), São José do Rio Preto, 8.IX.1963, C. COSTA; 1 ♂ 1 ♀ (MZUSP 2314), idem, 4.V.1963, L. VIZOTTO; 1 ♂ 2 ♀ 15 juv. (MZUSP 1796), idem, 18.II.1964, L. VIZOTTO; 1 ♀ (MZUSP 2305), idem, 2.IX.1963, L. VIZOTTO; 1 ♂ 1 ♀ (MZUSP 2289), idem, 8.IX.1964, L. VIZOTTO; 2 ♀ (MZUSP 2284), idem, 8.I.1965, L. VIZOTTO; 1 ♀ (MZUSP 1798), idem, 1962, L. VIZOTTO; 1 ♀, broken (MZUSP 2285), idem, L. VIZOTTO; 1 ♂ 3 ♀ (MZUSP 2287), 1 ♂ 1 ♀ (NNHM D-37346),

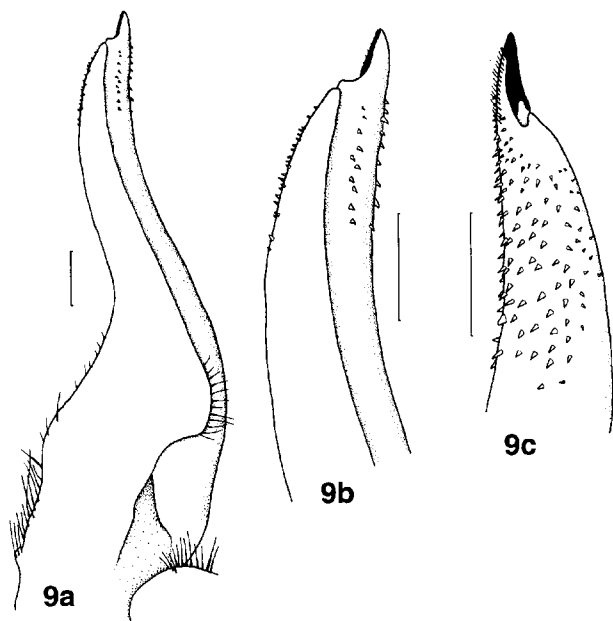


Fig. 9. *Goyazana castelnaui* (MZUSP 6331), right male plp 1; scales 1 mm. — a) Whole limb, mesial aspect; b) distal part, mesial aspect; c) distal part, lateral aspect.

1 ♂ 2 ♀ (MZUSP 2292), 1 ♂ 1 ♀ (SMF 22263), idem, 7.I.1965, L. VIZOTTO; 4 ♂ 4 ♀ (MZUSP 2419), idem, 9.VIII.1960; L. VIZOTTO; 8 ♂ 5 ♀ (MZUSP 2387), idem, 20.IV.1963, L. VIZOTTO; 2 ♂ (MZUSP 2266), córrego Bebedouro, Alfredo Castilho, 1965, H. BRITSKI; 2 ♂ (MZUSP 2310), Rio da Fartura, mun. Borboleta, 4.XII.1965, L. VIZOTTO; 1 ♂ (MZUSP 2324), córrego Jacaré, José Bonifácio, 24.X.1965, C. COSTA; 1 ♀ (MZUSP 1801), Rio Fartura, Nova Itapirema, II.1964, L. VIZOTTO; 1 ♀ (MZUSP 1651), Nova Itapirema, 1951; 4 ♂ (MZUSP 2313), Rio Barra Mansa, Sales, 13.VIII.1965, L. VIZOTTO; 1 ♂ 1 ♀ and youngs (ZSM 1088-1), laguna near Fundão, 32 km upstream Porto Tibiriçá, II.1938, SCHINDLER; 1 ♀ (MZUSP 2293), Rio Jacaré, Boa Esperança do Sul, 20.VI.1965, K. LENKO; 1 ♀ (MZUSP 1794), Boa Esperança do Sul, 27.I.1964, K. LENKO; 1 ♀ (MZUSP 2283), Rio da Onça, Barrinha, XI.1965; 4 ♂ 4 ♀ (MZUSP 2286), Rio Turvo, 24.IV.1964, L. VIZOTTO; 7 ♂ (MZUSP 2408), 1 ♂ 1 ♀ (INPA-CR 512), Rio Turvo, Lagoa, 5.V.1966, L. VIZOTTO; 7 ♂ (MZUSP 2407), Piscina Redonda, Lagoa, 5.V.1966, L. VIZOTTO; 1 ♂ (MZUSP 2261), Rio Turvo, 30.X.1964, L. VIZOTTO; 1 ♀ (MZUSP 2265), Rio Barra Mansa, Tietê, 20.II.1965, L. VIZOTTO.

Diagnosis: Five to seven (usually six) anterolateral teeth behind the exorbital tooth of carapace, sometimes fading away in larger specimens. All abdominal segments free (sometimes, segments III–VI can be fused in larger females); male abdomen subtriangular, with straight to concave lateral margins. Male plp 1 slightly S-shaped; marginal suture on the mesial surface, displaced towards the lateral surface very near to the apex; spine fields weakly developed.

Measurements: 19.2 : 16.2 : ? : ? (lectotype ♂).

Type locality: Brazil, Estado de Goiás, Salinas [see note on *Sylviocarcinus devillei*, in MAGALHÃES & TÜRKAY, 1996b].

Distribution: Central, southeast, northeast and north Brazil, occurring in the Amazon, São Francisco, upper Paraguay and upper Paraná river basins.

Remarks: RATHBUN (1906: 62) pointed out that one male syntype of this species was *Dilocarcinus spinifer* [= *D. septemdentatus* (HERBST 1783)]. BOTT (1969) considered the two males and the female as *G. castelnaui*. However, the examination of the syntypes by one of us (C. M.) showed that the smallest male (MNHN 3866), which is now in bad condition, in fact belongs to *D. septemdentatus* due to the shape of the abdomen and from what was left of the gonopod structure.

This species has a wide occurrence throughout central Brazil. Its distribution suggests that it predominates in plateau rivers and is not typical for lowlands. In the Amazon basin it occurs in the upper Xingu river and in the Araguaia/Tocantins rivers basins, being apparently absent in the rest of the basin. Also in the area of the Paraguay river its records are restricted to some headwaters of the Cuiabá river, a tributary of the Paraguay river, located in a high plain area called “Chapada dos Guimarães”. It also occurs in the basins of the São Francisco river, upper Paraná river and coastal basins in the State of Maranhão (Parnaíba river) and Sergipe (Vasa Barris river).

Goyazana rotundicauda n. sp.

(Figs. 7, 10, 11)

Holotype: ♂ (MZUSP 7007), Brazil: Estado do Amazonas, Igarapé Manduaçu, in the Paraná Iupia, NW of Fonte Boa, 8.–9.X.1968, EPA.

Material: Peru: Dept. de Loreto: 1 ♂ (FMNH 3627) 7 ♂ (FMNH 3673) 2 ♂ (INPA-CR 571), Nauta, Santa Elena, Rio Samiria, 180 m alt., 24.XI.1956, leg. C. KALINOWSKI. — Ecuador: Dept. Pastaza: 1 ♂ (FMNH 3667), Ashuara village on Rio Macuma, ca. 10 km from Rio Morona, 300 m alt. (02°45'S 77°30'W), 5.–17.VII.1971, leg. B. MALKIN.

Diagnosis: Outline of male abdomen broadly rounded, margins convex, telson relatively broader and shorter as in *G. castelnaui*. Distal part of male plp 1 clearly curved, subterminal spine-fields strong, well developed.

Description: The carapace is roughly elliptical, strongly convex longitudinally but almost horizontal transversally; it is glabrous. The regions are not marked off, the H-shaped sulcus is inconspicuous. The postfrontal lobes are barely visible, marked only by very low oblique prominences with an open V-shape. The carapace, between the front and the postfrontal lobes, is markedly inclined downwards. The frontal margin is distinctly bilobed, although the central concavity is rather shallow. The exorbital angle is armed with a somewhat low, blunt tooth. There are six closely-spaced sharp teeth on the anterolateral borders of the carapace. The distance between the exorbital tooth and the first anterolateral tooth is a little greater than the distances between each one of the anterolateral teeth. The lower margin of the orbit has five (right orbit) or six (left orbit) pointed to rounded teeth decreasing in size from the innermost; this margin is carinate from the outermost tuberculiform tooth to the exorbital angle. The anterolateral corner of the buccal cavity has five blunt teeth, the median being very low. The regions between the subhepatic and pterygostomial ones are almost devoid of hairs.

The third maxilliped has a trapezoidal merus, whose outer margin is slightly convex and showing a low, blunt tooth-like projection at the distal outer corner. The inner



Fig. 10. *Goyazana rotundicauda* n. sp. (holotype, MZUSP 7007), dorsal and ventral aspect.
— Scale 10 mm.

margin of the merus is rather long relative to the outer margin, being 0.45 times as long as the latter. The inner margin of the ischium is somewhat convex.

The first pereiopods are unequal in size, the right cheliped being longer and stronger than the left one. A row of rather long hairs is present, beginning at the inner border of the ischium to about the middle of the lower inner border of the merus; at this point, a stout spine is located. The lower outer border of the merus is smooth and rounded; the upper border bears some short hairs proximally and a subdistal blunt spine. The inner surface of the merus has a row of short hairs running, near its lower inner border, from the proximal margin to near the distal margin. The distal projection of the lower outer border of the merus is provided with a blunt spine on the

inner border. The palm is smooth, in the minor chela it has a minute conical distal spine on the upper surface. The fingers of both chelae have tuberculiform teeth; in the minor chela, these teeth are somewhat coalescent. The fingers have a small gap between each other, this gap is a little greater in the major chela.

The upper border of the propodus of the pereiopods 2 to 5 shows two inconspicuous parallel rows of minute sparse hairs. These rows are more evident in the upper border of the dactyl, where the hairs are denser. The propodus of pereiopod 2 has slightly oblique rows of rather long hairs on its distal third, these rows are less developed in pereiopods 3 and 4; in pereiopod 5, there is only a single row of hairs. The lower border of the dactyl of the pereiopods 2 to 5 exhibits a large and dense row of hairs.

In the sternal plate, the furrow corresponding to the endosternites IV/V reaches the midline. The median line is present in the somites V to VIII.

All abdominal segments are free; the first segment is partially concealed by the posterior margin of the carapace, only its median part is visible. Two knobs are visible in the third and fourth segments. The abdomen is broad. The lateral margins are clearly convex, almost continuous with the lateral margins of the telson, which, however, are slightly concave; tip of the telson is rounded off.

The male's plp 1 is roughly S-shaped, bearing an almost 90° discontinuity midway on its lateral border, so that the lateroproximal border is distinctly bulged. Several setae are present along and near this border, on the ventro-mesial surface, the most proximal setae being longer. The distal half is incurved, cylindrical and tapering moderately. The subdistal lobes are not distinct. The marginal suture is on the mesial surface, but it is slightly displaced to the lateral surface near the tip. The distal opening is obliquely directed to the ventro-lateral surface. The spine field is poorly developed on the mesial surface, but it is quite well developed on the lateral and dorsal surfaces. There are no apical setae near the tip.

Measurements: 26.8: 20.6: 13.0: 9.1 (holotype ♂).

Distribution: This species is to date known from its type locality, situated between 2°–3° S and 66°–67° W as well as from the Amazonas lowlands of Peru and Ecuador.

Remarks: Although described from a few specimens, *G. rotundicauda* n. sp. exhibits some peculiar features which characterize it as a valid species, and is distinguished from *G. castelnaui* by the following characters: a broader abdomen with convex margins, and a relatively broader and shorter telson. In comparison *G. castelnaui* has a narrow abdomen with slightly concave margins, and a relatively narrower and longer telson. The gonopod of the latter is more slender and less curved, it does not have a discontinuity on its lateral border so that this border shows a

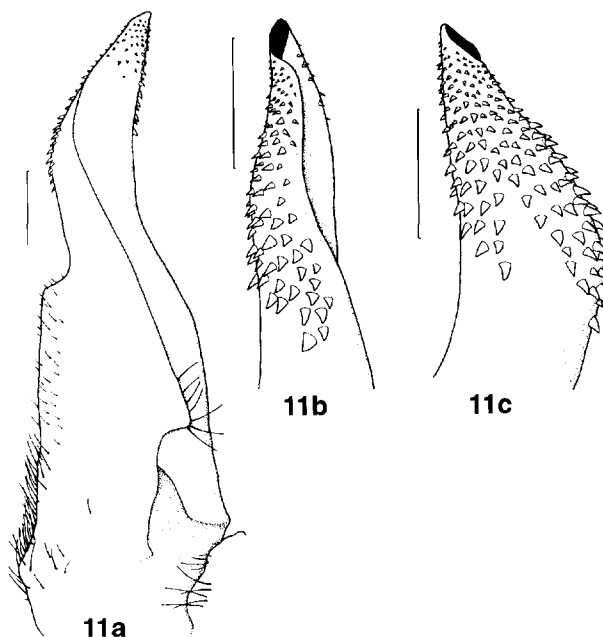


Fig. 11. *Goyazana rotundicauda* n. sp. (holotype, MZUSP 7007), right male plp 1; scales 1 mm. — a) Whole limb, mesial aspect; b) distal part, lateral aspect; c) distal part, dorso-lateral aspect.

gentle, uniform S-shape. The distal part of the gonopod is distinctly more rolled up in *G. castelnaui* than in *G. rotundicauda* n. sp., the distal opening being subterminal in the former, which bears a pointed projection on the dorso-apical border. In addition, the spine field is less developed in *G. castelnaui*.

Etymology: The specific name refers to the round contour of the abdomen.

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