

***Anphira guianensis* sp. nov. (Isopoda, Cymothoidae)
from the gills of *Acnodon oligacanthus* Eigenmann
(Pisces, Serrasalmidae) of French Guiana¹**

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ABSTRACT. *Anphira guianensis* sp. nov. (Isopoda, Cymothoidae) is described from the branchial cavity of a freshwater fish, *Acnodon oligacanthus* Eigenmann, 1903 from French Guiana. The new species differs from the other known species of the genus in a number of important respects. Adult females are less convex than those of the other two known species and the mouth points downward. The coxal plates are largest posteriorly, unlike those of the other species. The antennule is much stouter and longer than the antenna whereas in the other species these appendages are subequal. Additionally, the dactyls of the new species are much longer.

KEY WORDS. Cymothoidae, Isopod parasite, fish parasite, Brazil

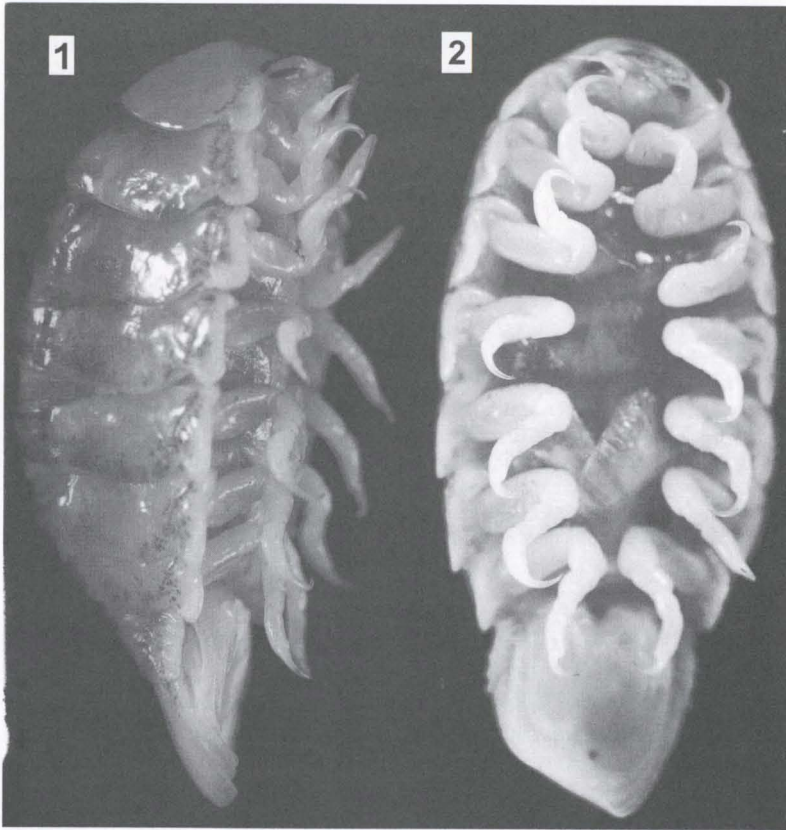
TRILLES (1991) listed 334 species of cymothoids in 42 genera parasitizing fishes worldwide. THATCHER (2000) reported that 45 of these occur in South America. In Brazil, some 30 species are known including both marine and freshwater forms. The genus *Anphira* was proposed by THATCHER (1993) for a species called *A. branchialis* from the upper part of the branchial chamber of piranhas, Serrasalmidae. Later, the same author described a second species, *A. xinguensis* Thatcher, 1995, from another serrasalmid fish, *Ossubtus xinguense* Jégu, 1992, taken from the Xingu River of Amazonian Brazil. The present paper describes an additional species of *Anphira* from a serrasalmid fish of French Guiana. This would be the first report of this genus in that country.

MATERIAL AND METHODS

The Cymothoidae were removed from the branchial chambers of their hosts and preserved in 70% alcohol. Mouthparts and other appendages were removed with dissecting needles and cleared in pure phenol for study. Permanent preparations were made of some appendages utilizing the phenol-balsam method described in THATCHER (1991). Photographs were taken with a digital camera at 5000 pixels and drawings were made with the aid of a camera lucida. Measurements are in micrometers (μm) unless designated as millimeters (mm).

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Figs 1-2. *Anphira guianensis* sp. nov., female: (1) lateral view; (2) ventral view. Scale = 2 mm.

RESULTS

Anphira guianensis sp. nov.

Figs 1-24

Host: *Acnodon oligacanthus* Eigenmann, 1903, Serrasalminidae.

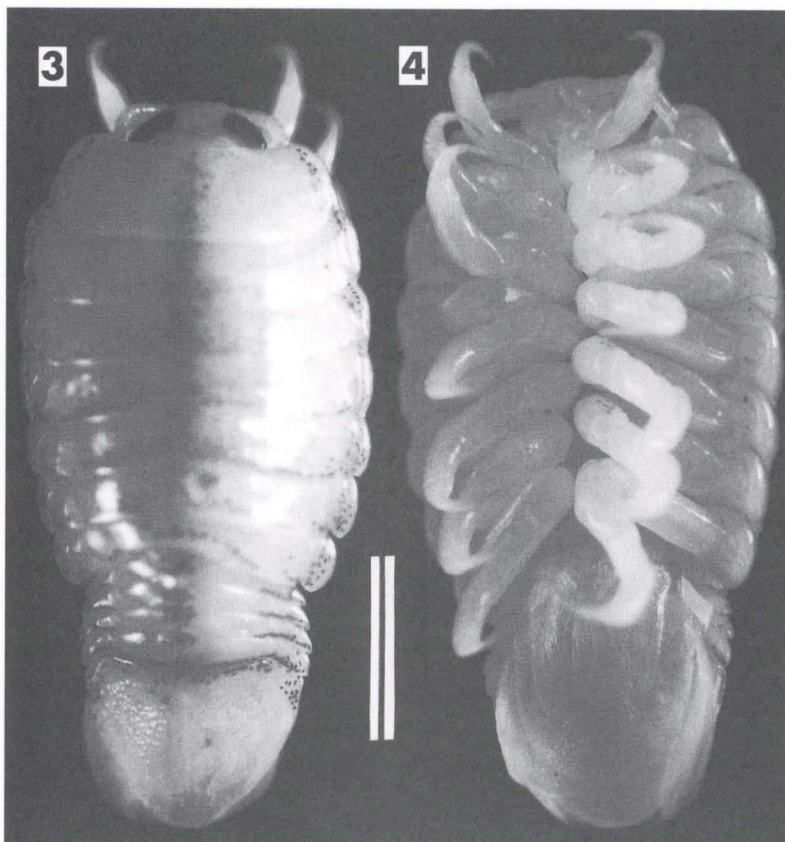
Site: branchial chambers.

Locality: Maroni River, French Guiana.

Intensity: 1-2 individuals per host fish.

Type material: Holotype female, Allotype male, 4 Paratype females and 2 Paratype males in the Crustacean Collection of the Instituto Nacional de Pesquisas da Amazônia, Manaus, Amazonas, Brazil (INPA 890-893).

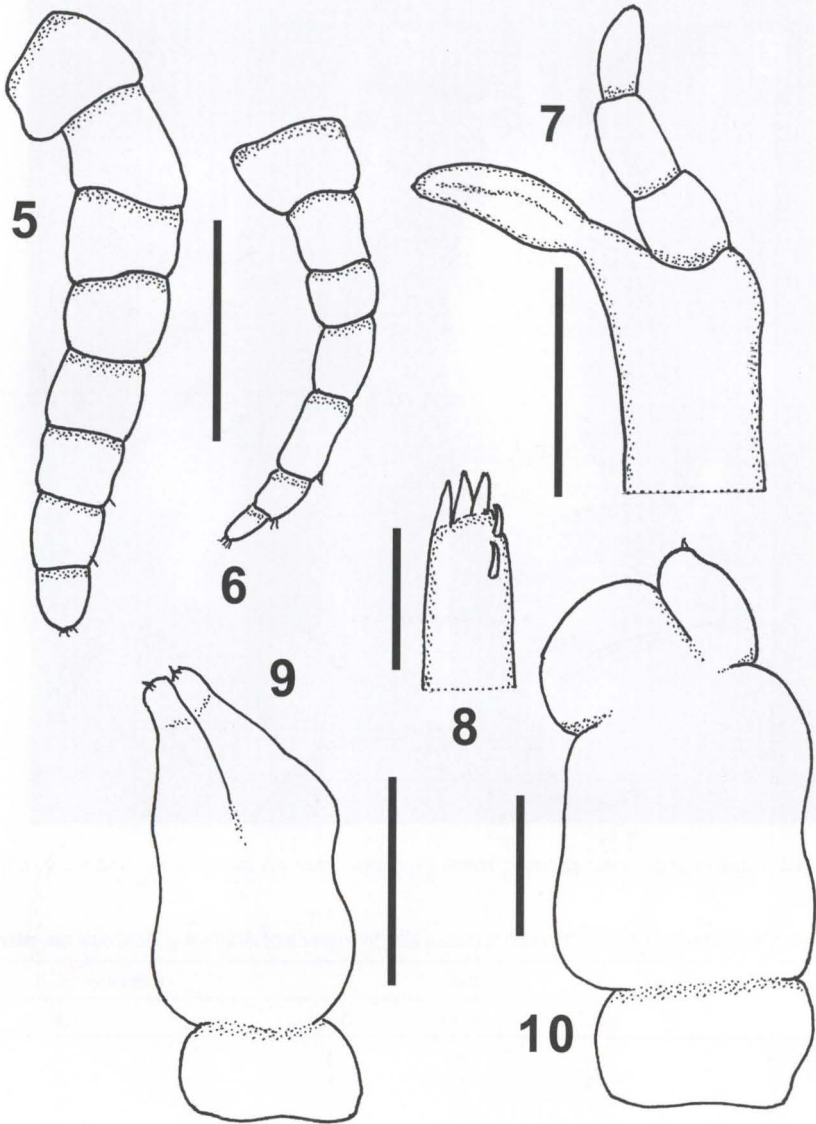
Description (based on seven females and five males studied and measured; measurements in table I). Female (Figs 1-2): body 2 to 2.5 times longer than wide; nearly as high as wide; extensive dark brown pigmentation dorsally, white to cream laterally and ventrally. Cephalon immersed in pereonite 1, depressed downward,



Figs 3-4. *Anphira guianensis* sp. nov., male: (3) dorsal view; (4) ventral view. Scale = 2 mm.

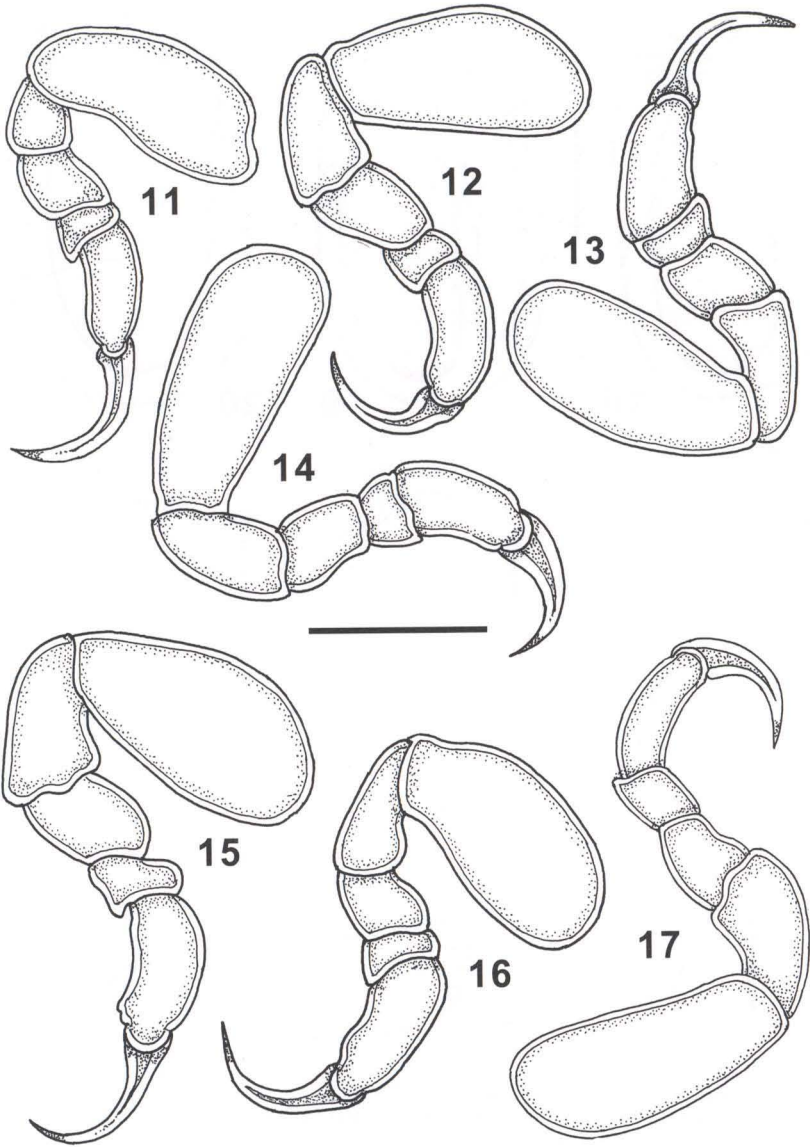
Table I. Measurements (mm) of seven females and five males of *Anphira guianensis* sp. nov.

	Body			Pleotelson	
	Length	Width	Depth	Length	Width
Females	20	9	9	7	6
	15	6	6	3	4
	14	6	5	3	3
	14	6	4	4	4
	12	5	4	2	3
	12	6	5	3	3
	12	6	5	2	3
Males	8	4	3	2	2
	8	3	3	3	2
	7	4	3	2	1
	7	5	2	2	2
	7	3	2	2	2



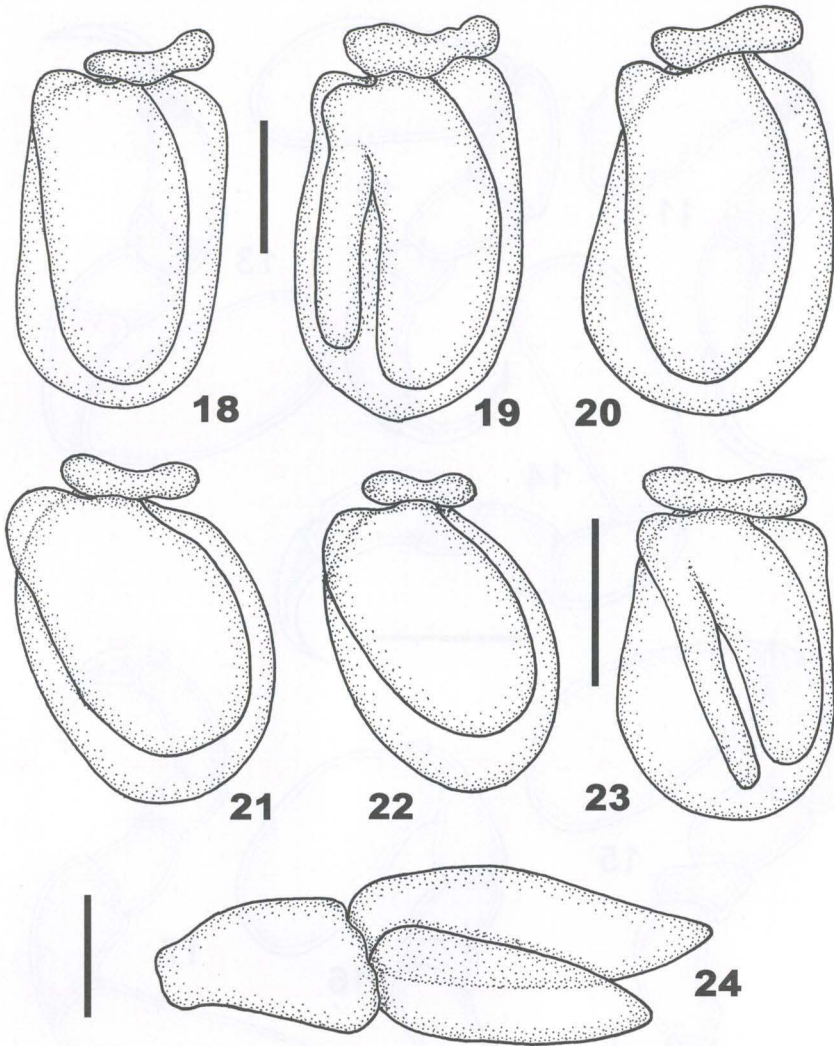
Figs 5-10. *Amphira guianensis* sp. nov., female: (5) antennule, (6) antenna. Scale for 5-6 = 1 mm; (7) mandible and palp; (8) maxillule; (9) maxilla; (10) maxilliped. Scale for 8 = 25 μ m, others = 500 μ m.

mouth ventral, eyes prominent. Antennule stout, (Fig. 5) of 8 articles. Antenna (Fig. 6) slender and shorter, of 7 articles. Mouthparts (Figs 7-10): mandible flattened, lacking incisor; mandibular palp subequal in length to mandible; maxillule with 3 larger spines terminally and 2 smaller spines subterminally; maxilla bilobed with a



Figs 11-17. *Anphira guianensis* sp. nov., female: (11) pereopod 1; (12) pereopod 2; (13) pereopod 3; (14) pereopod 4; (15) pereopod 5; (16) pereopod 6; (17) pereopod 7. Scale = 1 mm.

recurved terminal spine on each lobe; maxilliped with palp bearing 1 or 2 spines terminally. Pereon moderately convex, highest at level of pereonite 3; pereonite 1 twice the length of 2-4; pereonites 5-7 become progressively shorter. Coxal plates free on all pereonites, become longer posteriorly. Pereopods (Figs 11-17) relatively



Figs 18-24. *Anphira guianensis* sp. nov. 18-22, female pleopods: (18) pleopod 1; (19) pleopod 2; (20) pleopod 1; (21) pleopod 4; (22) pleopod 5; (23) male pleopod 2; (24) female uropod. Scale for 24 = 500 μ m, other two scales = 1 mm.

long with elongate dactyls. Pleon immersed in pereonite 7; pleonites produced laterally; pleopods (Figs 18-22) simple, bilaminar, with appendix masculinum on second. Pleotelson simple, about as wide as long, not inflated dorsally. Uropod (Fig. 24) with both rami acute, exopod slightly longer than endopod.

Male (Figs 3, 4 and 23): Body smaller than that of female; 1.4-2.7 times longer than wide; less convex than female. Cephalon immersed in pereonite 1; eyes large; frons bluntly rounded; mouth ventral. Other characters similar to those of female.

DISCUSSION

Anphira guianensis sp. nov. differs from the other two known species of the genus in the following respects. The coxal plates are larger posteriorly whereas the reverse is true in *A. branchialis* and in *A. xinguensis* they are subequal in size. The pereon is less convex in the new species and the mouth is ventral. The antennule of the new species is stouter and longer than the antenna while in the other two species these appendages are subequal in size. The dactyls of the new form are considerably longer than those of the other species.

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