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SOBRE CULTIVO DE PECES NATIVOS 2022**

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**The spermatozoa ultrastructure of the giant Amazon
pirarucu *Arapaima gigas*
(Schinz, 1822)**

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In this study we provide a first complete ultrastructure description of the spermatozoa from pirarucu *A. gigas* collected *in vivo*. To do so, adult male broodstocks of *A. gigas* held at Embrapa Fisheries and Aquaculture (Palmas-TO, Brazil) were handled for sperm collection. Milt samples were then collected after stripping male left side and stored in cryovials. In laboratory, samples were centrifugated and the supernatant pipetted off. Then, remaining pellet was fixed with 3% glutaraldehyde solution for scanning electron microscopy (SEM) and transmission electron microscopy (TEM) processing and analyses. Such analyses were carried out at the Laboratory of Electron Microscopy of the FMRP/USP (Ribeirão Preto-SP). Photo documentation was carried out with JEOL microscopes. The results obtained showed the spermatozoa of *A. gigas* is very similar with previous descriptions available for its sister-species *Heterotis niloticus*. SEM analyses showed a spherical nucleus and the presence of two flagella. In TEM, was observed that the nucleous is round and electron-dense (dark) with two shallow nuclear fossae each one with a centriole. There is no acrosome in *A. gigas* spermatozoa. A short intermediate piece could also be observed and described. It is composed of a cytoplasm full with mitochondria and arranged between the base of the spermatozoon head and the flagellae. Each flagellar axis is perpendicular to the nucleus and show axoneme arranged in nine doublets of peripheric microtubules and a central pair (9 + 2). Side fins are present

rounding the flagellae. To the best of our knowledge, this is the first record the collection of milt in live *A. gigas* and first ultrastructure description of its spermatozoa, revealing novel basic data on the reproductive biology of the species.

Key-words: Osteoglossidae, pirarucu, reproduction, milt.

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