

## DISENTANGLING THE *Phalloceros harpagos* SPECIES COMPLEX (POECILIIDAE)

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### RESUMO

The genus *Phalloceros* currently has 21 valid species that occur in streams and wetlands in southeastern South America. The hypothesis that *Phalloceros harpagos* constitutes a species complex was invoked in the original description, which established this taxon with a much wider geographic distribution than the congeners. The species *Phalloceros harpagos* was described based on specimens from the upper La Plata River basin and coastal drainages between the Itabapoana River, in the Brazilian State of Espírito Santo, and the Araranguá River, in the south of the State of Santa Catarina. The polyphyletic nature of this morphotype has been corroborated in a genomic study where specimens identified as *P. harpagos* have been assigned to four species and at least three independent evolutionary lineages. Our study aims to investigate the species diversity of *Phalloceros*, with an emphasis on the geographic regions associated with the occurrence of *Phalloceros harpagos*. Through the integration of morphological traits and mitochondrial sequencing data, we characterized the *P. harpagos* from the type-locality and recognized a new species that is being formally described. Also, some populations traditionally identified as *P. harpagos* have been recognized as variations of *P. enneaktinos* and *P. titthos*. Notably, one of these undescribed species includes spotted specimens bred for decades in Europe.

**Palavras-chave:** Upper Paraná, DNA Barcoding, Integrative Taxonomy.

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