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**A systematic revision of the genus *Archocentrus* (Perciformes: Cichlidae),
with the description of two new genera and six new species**

JUAN J. SCHMITTER-SOTO



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Abstract

The cichlid genus *Archocentrus* has been considered one of the most promising (i.e., possibly natural) genera resurrected to receive some of the species formerly included in *Cichlasoma*. Evidence is presented to justify generic recognition of *Archocentrus*, as well as eight other closely related genera (*Caquetaia*, *Hypsophrys*, *Parachromis*, *Amphilophus*, *Archocentrus*, *Cryptoheros*, *Amatitlania*, and *Rocio*). Of these, *Amatitlania* (type species, *A. nigrofasciata*) and *Rocio* (type species, *R. octofasciata*) are described as new. The present revision treats all nominal species ever assigned to *Archocentrus*, as well as species that have been included in or near the same clade as *Archocentrus centrarchus* (type species of the genus) in available phylogenetic analyses. Geographical variation in morphology of the more widespread species was examined, which has resulted in the description of six new species (*Cryptoheros chetumalensis*, *Amatitlania coatepeque*, *A. kanna*, *A. siquia*, *Rocio gemmata*, and *R. ocotal*) with a seventh resurrected from synonymy (*Cryptoheros cutteri*). *Archocentrus* includes the type species (*Ar. centrarchus*), plus *Ar. spinosissimus* and *Ar. multispinosus*. *Cryptoheros* is restricted to the species complexes of *Cr. spilurus* (= subgenus *Cryptoheros*, including also *Cr. chetumalensis* and *Cr. cutteri*) and *Cr. septemfasciatus* (= *Bussingius* n. subgen., including also *Cryptoheros altoflavus*, *Cr. nanoluteus*, *Cr. myrmae*, and *Cr. sajica*); *Cryptoheros panamensis* is placed in *Panamius* n. subgen. *Herotilapia* is synonymized with *Archocentrus*, and *Neetroplus* is synonymized with *Hypsophrys*, which now includes the type species *H. nicaraguensis* and *H. nematopus*. Lectotypes are designated for *Amatitlania nigrofasciata*, *Archocentrus spinosissimus*, *Cryptoheros septemfasciatus*, *Cr. spilurus*, and *Rocio octofasciata*. *Cichlasoma immaculatum* is considered to be a synonym of *Archocentrus spilurus*, not of *Ar. spinosissimus*.

Key words: taxonomy, cichlids, Middle America

Resumen

Archocentrus (Cichlidae) se ha considerado uno de los géneros más prometedores (es decir, posiblemente natural) resucitado para recibir algunas de las especies antes asignadas a *Cichlasoma*. Se presenta evidencia que justifica el reconocimiento a nivel de género de *Archocentrus*, así como otros ocho géneros cercanamente relacionados (*Caquetaia*, *Hypsophrys*, *Parachromis*, *Amphilophus*, *Archocentrus*, *Cryptoheros*, *Amatitlania* y *Rocio*). De éstos, *Amatitlania* (especie tipo, *A. nigrofasciata*) y *Rocio* (especie tipo, *R. octofasciata*) se describen como nuevos. La presente revisión trata con todas las especies nominales alguna vez asignadas al género, así como las especies que han sido incluidas dentro o cerca del mismo clado que *Archocentrus centrarchus* (especie tipo del género) en los análisis filogenéticos disponibles. Se examinó la variación geográfica en morfología de las especies de distribución más amplia, lo cual resultó en la descripción de seis especies nuevas (*Cryptoheros chetumalensis*, *Amatitlania coatepeque*, *A. kanna*, *A. siquia*, *Rocio gemmata* y *R. ocotal*) y una séptima rescatada de la sinonimia (*Cryptoheros cutteri*). *Archocentrus* incluye a la especie tipo (*Ar. centrarchus*), junto con *Ar. spinosissimus* y *Ar. multispinosus*. *Cryptoheros* se restringe a los complejos de *Cr. spilurus* (= subgénero *Cryptoheros*, incluyendo también a *Cr. chetumalensis* y *Cr. cutteri*) y de *Cr. septemfasciatus* (= *Bussingius* n. subgen., incluyendo también a *Cr. altoflavus*, *Cr. nanoluteus*, *Cr. myrmae* y *Cr. sajica*); *Cr. panamensis* se coloca en *Panamius* n. subgen. *Herotilapia* se sinonimiza con *Archocentrus*, y *Neetroplus* se sinonimiza con *Hypsophrys*, el cual ahora incluye a la especie tipo *H. nicaraguensis* y a *H. nematopus*. Se designan lectotipos para *Amatitlania nigrofasciata*, *Archocentrus spinosissimus*, *Cryptoheros septemfasciatus*, *Cr. spilurus* y *Rocio octofasciata*. *Cichlasoma immaculatum* se considera sinónimo de *Ar. spilurus*, no de *Ar. spinosissimus*.

The arrangement of the American cichlids into genera is a puzzle of great difficulty.

—Hubbs, 1936: 254

Introduction

The cichlid fish genus *Archocentrus* was originally proposed as a subgenus of *Heros* Heckel by Gill (in Gill & Bransford 1877), and later treated as an informal “section” of *Cichlasoma* Swainson in Regan’s (1905) revision of the genus. The generic status of *Cichlasoma* sensu Regan (1905), encompassing more than 100 species, has been in a state of uncertainty since Kullander’s (1983) restriction of *Cichlasoma* sensu stricto to 12 South American species. Of the many remaining groups of species formerly referred to *Cichlasoma*, those