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## *Aphyosemion pamaense*, a new killifish species (Cyprinodontiformes: Nothobranchiidae) from Cameroon

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### Abstract

*Aphyosemion pamaense* **sp. nov.** is described from the Pama River, a small tributary of the Nyong, in the surroundings of Pama, Cameroon. It belongs to the subgenus *Chromaphyosemion* Radda, 1971 and is distinguished from its relatives by a unique/diagnostic combination of characters: orange unpaired fins, an anal fin without spots, an orange throat and purple to blue-grey flanks. The new species is also genetically differentiated from all the other *Chromaphyosemion* species as revealed by mtDNA (cytochrome *b*) analysis and characterised by a unique karyotype showing tentative sex chromosomes with  $2n=35$  chromosomes in males versus  $2n=36$  in females.

**Key words:** systematics, taxonomy, molecular phylogeny, karyotype, sex-chromosomes

### Résumé

*Aphyosemion pamaense* **sp. nov.** est décrit de la rivière Pama, petit affluent du Nyong, des environs du village de Pama au Cameroun. La nouvelle espèce appartient au sous-genre *Chromaphyosemion*, Radda, 1971 et se distingue des espèces du groupe par une combinaison de caractères: des nageoires impaires orange, une nageoire anale sans ponctuation, une gorge orange et des flancs bleu-gris à violet. La nouvelle espèce est également génétiquement différenciée des autres *Chromaphyosemion* comme le montre l'étude de l'ADN mitochondrial (cytochrome *b*) et caractérisée par un caryotype original avec des chromosomes sexuels et un nombre différent de chromosomes selon les sexes:  $2n=35$  pour les males et  $2n=36$  pour les femelles.

### Introduction

Nothobranchiid fishes of the genus *Aphyosemion* Myers, 1924 inhabit small rivers and freshwater streams in tropical and equatorial Africa from Togo to the Democratic Republic of the Congo (Huber, 2006). This genus is composed of more than 90 species that can be grouped in different monophyletic clusters (Collier, 2006). One of these clusters, long recognized as “bivittatum group” (Scheel, 1966, 1968), is now described as the subgenus *Chromaphyosemion*; Radda, 1971. These fishes can easily be distinguished from all other *Aphyosemion* species by several characters, including the presence of two dark lateral-bands in both sexes (*vs.* one or none) and the ability of males to change their coloration rapidly depending on stress or their hierarchical status (*vs.* less conspicuous changes in *Aphyosemion*). These characteristics led some authors to consider *Chromaphyosemion* as a genus (Legros *et al.*, 2005; Sonnenberg, 2000, 2007a,b; Völker, 2006). Agnèse *et al.* (2006) and Collier (2006) demonstrated that *Chromaphyosemion* is a monophyletic group but still considered it as a subgenus of *Aphyosemion* until a complete taxonomic revision of the genus is done. The subgenus *Chromaphyosemion* is distributed from Togo to Gabon (Huber, 2006) but most of its diversity (12 of 18 valid species) is found in Cameroon.