Notes on the annual killifish species Nothobranchius rachovii (Cyprinodontiformes; Nothobranchiidae) with the description of two new species

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Abstract

Two new species of the East African annual killifish genus Nothobranchius, N. krysanovi and N. pienaari, occurring on the coastal plains of Mozambique and in the Republic of South Africa, are described. Both are members of a clade, herein termed as N. rachovii species group, within the subgenus Nothobranchius. The species N. rachovii is rediagnosed on the basis of cytology, mtDNA analyses, morphology and male colouration. Both new species, N. krysanovi and N. pienaari, can be distinguished from the other species of the group by male colouration, morphology, cytology and mtDNA sequences. Based on mtDNA analyses the subgenus Zononothobranchius is reviewed and presently regarded as containing only one species.

Key words: chromosome number, new species, Nothobranchius krysanovi, Nothobranchius pienaari, Mozambique, Republic of South Africa, Zononothobranchius

Introduction

Nothobranchius is the most species rich and geographically widespread genus of seasonal nothobranchiid killifishes in Africa (Wildekamp 2004). To date, seven described Nothobranchius species are known from southern and central Mozambique and the northeastern Republic of South Africa, of which only four are currently regarded as valid: N. kadleci Reichard, 2010, N. furzeri Jubb, 1971, N. orthonotus (Peters, 1844) and N.rachovii Ahl, 1926. Two others, N. kunhtae Ahl, 1926 and N. mayeri Ahl, 1935 are presently regarded as synonyms of N. orthonotus (Wildekamp, 2004). The status of another one, N. mkuziensis (Fowler, 1934) is unclear and needs further study.

Nothobranchius rachovii was described after syntypes originating from a commercial ornamental fish import from Beira, Portuguese East Africa, now Mozambique, that came to Germany in 1925 (Ahl, 1926). A comprehensive historical review of collections of N. rachovii, and populations that were regarded as N. rachovii or N. aff. rachovii, has been presented in Watters et al. (2009).

Since its introduction, N. rachovii has been a popular aquarium fish. During the Second World War it disappeared from the aquarium hobby. As a result of its reintroduction in Germany by Roloff, who collected specimens near Beira in 1958 (Roloff, 1959), an aquarium fish population was again established. Subsequent collections of N. rachovii from Mozambique confirmed the presence of the typical (“blue”) morph of N. rachovii being restricted to the Beira area and the south side of the mouth of the Zambezi River (Rosenstock, 1992; Watters et al., 2009). A lower Shire River population recently discovered in western Mozambique (Kearney and Jordaan, pers. comm.) was not available for this study and will be reported upon later.

In 1968 Pienaar collected Nothobranchius from a seasonal pool at Pumbe Picket in the Kruger National Park (K.N.P.) in the northeastern Republic of South Africa (Pienaar, 1968). These specimens differed from the