



Freshwater planarians (Platyhelminthes, Tricladida) from the Palearctic section of the African continent: new records, with the description of a new species

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Abstract

On the basis of extensive surveys, an update is provided on the diversity, taxonomy, anatomy, and geographic distribution of five species of North African freshwater planarians, including the description of one new species. The new species *Dugesia tubqalis* Harrath & Sluys, sp. nov. is mainly characterized by the following features: an elongated penis surrounded with two penial folds at its base, the dorsal one bigger than the ventral; an atrium divided into a male and common atrium by a kind of non-muscular ridge; a terminal expansion of the ejaculatory duct just before it opens at the tip of the penis papilla. The record of *Dugesia sicula* represents the first fully documented record of a naturally sexual, diploid ($2n=18$) population in North Africa. The first finding of *Polycelis nigra* on the African continent is documented. The genus *Polycelis* is recorded here with two species, *Polycelis nigra* and *Polycelis felina*. We also noted the presence of *Schmidtea polychroa*, which is widespread in Europe and introduced in North America.

Key words: Tricladida, *Dugesia tubqalis*, *Dugesia sicula*, *Polycelis felina*, *Polycelis nigra*, *Schmidtea polychroa*, North Africa.

Introduction

From the Palearctic section of the African continent, i.e. the part north of the Sahara, the following genera of freshwater planarians have been reported: *Polycelis* Ehrenberg, 1831, *Crenobia* Kenk, 1930, *Acromyadenium* De Beauchamp, 1931, *Dendrocoelum* Örsted, 1844, *Schmidtea* Ball, 1974 (cf. De Beauchamp 1932; Marcus 1955 and references therein; Gourbault 1972; Harrath *et al.* 2004; Sluys 2007; Harrath *et al.* in press). However, the frequently cited record of *Crenobia alpina* (Dana, 1766) for Algeria by Lauterborn (1921) was based on a *lapsus calami*, as pointed out in a footnote in Thienemann (1938, p. 652; see also Dahm 1958, p. 106). According to Thienemann (1938) Lauterborn only found *Polycelis felina* (Dalyell, 1844) and *Dugesia gonocephala* (Dugès, 1830) in Algeria but reported the finding of *P. felina*, and, incorrectly, also of *C. alpina*. Unfortunately, some of the localities on which the older records for the occurrence of freshwater planarians were based now can only be accessed with great difficulty or no longer at all because of the impact of human activities, such as the construction of reservoirs and dams on springs.

More recent studies on freshwater planarians from this region reported on *Dugesia subtentaculata* (Draparnaud, 1804), *D. sicula* Lepori, 1948, *D. maghrebiana* Stocchino *et al.*, 2009, *Schmidtea mediterranea* Benazzi *et al.*, 1975, and three new species of *Dendrocoelum* (cf. De Vries 1988; Charni *et al.* 2003; Harrath *et al.* 2004; Sluys *et al.* 2007; Stocchino *et al.* 2009; Harrath *et al.* 2011).