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On *Amphibolocypris arida* sp.nov. (Crustacea, Ostracoda), from rock pools in Botswana (southern Africa)

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Abstract

The ostracod fauna of southern Africa remains ill-known, in spite of the fact that the temporary pools of this zoogeographical region hold degrees of endemicity comparable only to those of the ancient lakes of East Africa. The present contribution describes a new species of the cypridid genus *Amphibolocypris*, *A. arida* sp.nov., and announces the existence of at least two further new species from the same area. The genus, up to now presumed monospecific, might constitute an extensive radiation across southern Africa. Unusually large species-specific differences in hemipenis outline morphology appear to indicate that speciation occurred through sexual, rather than through natural selection. The occurrence of the claw-like subapical seta on the walking limb in at least four genera could be a case of convergent evolution, at least in one, maybe even in two cases between species of different genera and even subfamilies.

Key words: phylogeny, taxonomy, temporary pools, sexual selection, convergent evolution, western Cape

Introduction

Martens *et al.* (2008) estimated that there are about 2000 described species in c 200 genera of extant non-marine ostracods world-wide. However, the ostracod fauna of southern Africa remains relatively ill-known, this in spite of more than a century of taxonomic research (for overviews, see Sars 1924, Martens 1984, 2001). Martens (2001) retained about 150 described species in southern Africa (region as defined by Day *et al.* 2001), but the current limited coverage of this region implies that many more as yet undescribed species await description or discovery. Since the 2001 review, several other new species and genera have been described (e.g. Martens 2007, Savatenalinton & Martens 2009) and some presumed extinct taxa were found again, notably *Liocypris grandis* (by Martens 2003, Matzke-Karasz & Martens 2005) and *Afrocypris barnardi* (by Matzke-Karasz & Martens 2007). These giant ostracods are confined to temporary (rock-) pools, habitats already noted by Martens (1998) to harbour a rich and largely endemic ostracod fauna. With regard to levels of generic endemicity, these pools in the (mainly western) part of southern Africa are comparable only to those of the ancient lakes in East Africa (Tanganyika, Malawi) (Martens 1998).

Here, we describe a new species of the subfamily Isocypridinae. *Amphibolocypris arida* sp.nov. is only the second representative described from the genus. The present description is based on material from a wider survey, comparing the biodiversity in rock pools in three separate geographical areas: southern Africa (Jocque *et al.* 2006), Western Australia (Jocque *et al.* 2007a) and Utah (USA) (Jocque *et al.* 2007b).

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