Zootaxa 3334: 29–41 (2012)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

Sasala nolani gen. n., sp. n. (Digenea: Aporocotylidae) from the body-cavity of the guineafowl puffer fish *Arothron meleagris* (Lacepède) (Tetraodontiformes: Tetraodontidae) from off Moorea, French Polynesia

RODNEY A. BRAY[1], THOMAS H. CRIBB[2] & D. TIMOTHY J. LITTLEWOOD[1]

[1]*Department of Zoology, Natural History Museum, Cromwell Road, London SW7 5BD, UK.*
E-mail: rab@nhm.ac.uk; t.littlewood@nhm.ac.uk
[2]*School of Biological Sciences, The University of Queensland, The University of Queensland, Brisbane, Queensland 4072, Australia.*
E-mail: t.cribb@uq.edu.au

Abstract

The aporocotylid new genus and species *Sasala nolani* is described from the body-cavity of the guineafowl puffer fish *Arothron meleagris* from off Moorea, French Polynesia. *Sasala* is distinguished by the combination of having an auxiliary seminal vesicle, a tiny oral sucker, the single inter- and post-caecal testis, the post-ovarian uterus and the relatively short posterior caeca. *Sasala nolani* ssrDNA and lsrDNA sequences have been used to infer its phylogenetic relationships with some other aporocotylids, showing a particularly close relationship with '*Paradeontocylix*' *sinensis*. A short comment on the accumulation of eggs in the host gut wall is included, suggesting that the eggs remain in the gut wall after the adult worm infection is passed.

Key words: Trematoda, Schistosomatoidea, molecular phylogeny, pathology

Introduction

The fish blood fluke family Aporocotylidae Odhner, 1912 (until recently sometimes referred to as the Sanguinicolidae von Graff, 1907) (see Bullard *et al.* 2009) has become the centre of increased study in recent years. It is now known to be widespread and species-rich, with a high proportion of the known species having been described in this century (Cribb & Bray 2011). Smith (2002) reviewed the family, including 20 genera. Since that date 11 new genera have been erected (see below). In this article we describe a new species of fish blood fluke, erecting a new genus to accommodate it.

Material and methods

Digeneans collected from freshly-killed fish were fixed by being pipetted into recently boiled saline and immediately preserved in formalin or 70% ethanol. Whole-mounts were stained with Mayer's paracarmine, cleared in beechwood creosote and mounted in Canada balsam. Measurements were made through a drawing tube on an Olympus BH–2 microscope, using a Digicad Plus digitising tablet and Carl Zeiss KS100 software adapted by Imaging Associates, and are quoted in micrometres, with the range and the mean in parentheses. The following abbreviations are used: BMNH, the British Museum (Natural History) Collection at the Natural History Museum, London, UK; MNHN, Muséum National d'Histoire Naturelle, Paris; QM, Queensland Museum Collection, Brisbane, Australia.

Olson *et al*. (2003) first published the complete small subunit ribosomal RNA gene (ssrDNA; GenBank AY157184) and partial (D1–D3) large subunit ribosomal RNA gene (lsrDNA; GenBank AY157174) sequences of this species and gave full details of the molecular techniques used, in a study considering the interrelationships of

Accepted by N. Dronen: 3 Feb. 2012; published: 5 Jun. 2012