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## Family Rhopaliidae Looss, 1899

Valentin V. Radev

*Bulgarian Academy of Sciences*, vradev@bas.bg

Scott Lyell Gardner

*University of Nebraska - Lincoln*, slg@unl.edu

Ivan Kanev

*University of Nebraska Medical Center*, ikanev@unmc.edu

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# 9

## Family Rhopaliidae Looss, 1899

V. RADEV,<sup>1</sup> S.L. GARDNER<sup>2</sup> & I. KANEV<sup>2</sup>

<sup>1</sup>*Institute of Experimental Pathology and Parasitology, Bulgarian Academy of Sciences, Bl. 25, Sofia 1113, Bulgaria;* <sup>2</sup>*Harold W. Manter Laboratory of Parasitology, University of Nebraska, Lincoln, NE 68588-0514, USA*

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### Introduction

Members of the family Rhopaliidae Looss, 1899 include digenetic trematodes that are parasites of marsupials in the Nearctic and Neotropical regions. These forms are characterized by having two anteriorly directed proboscides armed with spines and situated bilaterally relative to the oral sucker. The family was first established by Looss (1899) as the Rhopaliadac. Braun (1901b) incorrectly spelled the subfamily name as Rhopaliadinae. These trematodes were further studied and redescribed by Führmann (1928) and Bresslau (1932), while Pratt (1902) appears to have been the first to consider the group to be related to the echinostomes. Viana (1924) emended the spelling of the family name to Rhopaliidae, which Skrjabin (1948c) considered a synonym of the Rhopaliadac. The spelling Rhopaliasidae was used by Yamaguti (1958). Travassos *et al.* (1969) established the subfamily Rhopaliasinae, and Yamaguti (1971) synonymized the Rhopaliasidae with the Rhopaliidae.

The name *Rhopalias* was established by Stiles & Hassall (1898) to replace *Rhopalophorus* Diesing, 1850, which was pre-occupied by *Ropalophorus* Westwood, 1840 (Hymenoptera), with *Distomum coronatum* Rudolphi, 1819 as the type-species. *Rhopalophorus* is synonymous with *Rhopalias* Stiles & Hassall, 1898.

Lutz (1895) used the name *Rhopalocephalus*, without citing a taxon authority, in conjunction with the species names *R. coronatus* (Rudolphi, 1819) and *R. horridus* (Diesing, 1850). Stiles & Hassall (1898) did not mention *Rhopalocephalus* and, presumably, were unaware of it. It does not appear to have been used by other authors. Although *Rhopalocephalus* is the older name, *Rhopalias* is well established in the literature and we intend to petition the ICZN to declare *Rhopalocephalus* a *nomen oblitum*.

The primary distinguishing morphological character of *Rhopalias* is the possession of a pair of proboscides, armed with chitinous spines, which can be invaginated into a muscular pouch (Figs 9.2–9.4). The pouches open to the exterior on each side of the oral sucker. They are about 0.3 mm long, with protrusor and retractor muscle fibres. The number and arrangement of spines

on the proboscides are diagnostic at species level. Among the species, the proboscides range from fairly short (< 0.26 mm) with 7–8 spines, in *R. baculifer* Braun, 1900, medium in length (< 0.32 mm) with many spines, in *R. horridus* (Diesing, 1850), or medium with ten spines in a dorsal and a ventral group of five spines each, in *R. macracanthus* Chandler, 1932 or, finally, very long (< 1.3 mm) with ten spines each in *R. coronatus* (Rudolphi, 1819).

### Family Rhopaliidae Looss, 1899

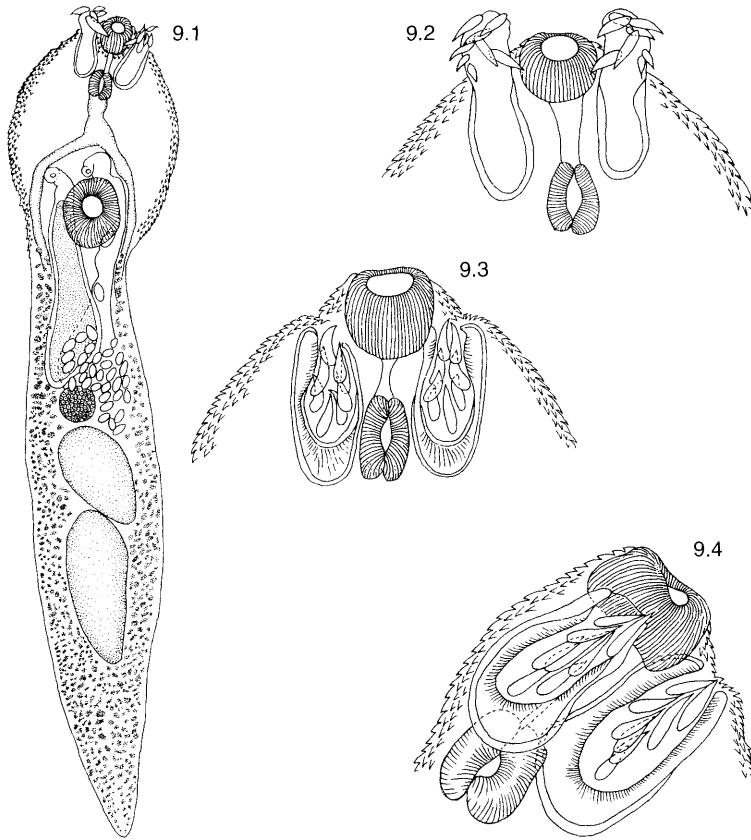
(Syns Rhopaliadae Looss, 1899; Rhopaliadinae Braun, 1901;  
Rhopaliasidae Yamaguti, 1958; Rhopaliasinae Travassos, Freitas & Kohn, 1969)

**Diagnosis:** Body elongate with rounded forebody and pointed hindbody, ventrally concave. Bilaterally symmetrical invaginable proboscides, armed with spines, one on either side of oral sucker. Anterior third of body armed with small, evenly arranged spines, becoming more sparse posteriorly. Oral sucker subterminal, oval. Prepharynx well developed. Pharynx bulbous, muscular. Oesophagus usually short. Caeca simple, end blindly near posterior extremity. Ventral sucker median, between first and second thirds of body or immediately posterior to intestinal bifurcation. Testes two, oval, elliptical or feebly lobed, median, tandem in middle third of body. Cirrus-sac well developed, claviform, curved, extending beyond posterior margin of ventral sucker, with well-developed internal seminal vesicle surrounded by numerous prostatic gland-cells. Genital pore median, postbifurcal, pre-acetabular. Ovary elliptical to oval, pretesticular, median. Mehlis' gland between ovary and anterior testis. Laurer's canal not described. Canalicular seminal receptacle present. Uterus short, with small descending limb, coiled between anterior testis and ventral sucker. Eggs oval to elliptical, unembryonated. Vitelline follicles in lateral fields in posterior two-thirds of body; anterior limit between ventral sucker and ovary, usually confluent posterior to testes. Excretory vesicle elongate, usually large; pore dorso-subterminal. In intestine of marsupials (Marsupialia: Didelphimorphia) and occasionally other omnivorous mammals and birds; Neotropical and southern Nearctic regions. Type- and only genus *Rhopalias* Stiles & Hassall, 1898.

### Genus *Rhopalias* Stiles & Hassall, 1898 (Figs 9.1–9.4)

(Syns *Rhopalophorus* Diesing, 1850, pre-occupied; *Rhopalocephalus* Lutz, 1895)

**Diagnosis:** With characters of family. Type-species *R. coronatus* (Rudolphi, 1819) Stiles & Hassall, 1898.



**Figs 9.1–9.4.** *Rhopalias macracanthus* Chandler, 1932. 9.1. Entire specimen. HWML 22422. 9.2. Protruded proboscides. HWML 22423. 9.3. Invaginated proboscides, dorsoventral view. HWML 0844. 9.4. Invaginated proboscides, lateral view. HWML 22423. All original.