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Stingray *Potamotrygon magdalenae* Dumeri

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***Paravitellotrema overstreeti* sp. n. (Digenea: Hemiuridae)
from the Colombian Freshwater Stingray
Potamotrygon magdalenae Dumeril¹**

DANIEL R. BROOKS,² MONTE A. MAYES,³ AND THOMAS B. THORSON⁴

ABSTRACT: *Paravitellotrema overstreeti* from the freshwater stingray *Potamotrygon magdalenae* in northern Colombia most closely resembles *P. thorsoni* by possessing a muscular sinus organ and sinus sac as well as exhibiting a saccate rather than elongate prostatic vesicle. It differs by possessing lobate rather than spherical vitellaria, a smaller sinus organ and sinus sac, elongate rather than diamond-shaped prostatic cells enclosed in a delicate membrane rather than free in the parenchyma, and a metraterm joining the hermaphroditic duct immediately anterior to the prostatic vesicle rather than at the base of the sinus organ.

Digeneans of the family Hemiuridae Lühe, 1901, subfamily Halipeginae Ejsmont, 1931 parasitize marine, brackish, and freshwater fishes, amphibians, and occasionally snakes. Twelve of 39 (30.7%) specimens of the freshwater stingray *Potamotrygon magdalenae* Dumeril collected in "cienagas" of the Rio Magdalena in northern Colombia during the summers of 1975 and 1976 hosted one to 13 specimens of a new species of halipegine. This is the first report of an halipegine occurring as an apparently normal constituent of any elasmobranch's helminthofauna.

The digeneans were removed from hosts, flattened with minimal coverslip pressure, fixed with warm AFA, and stored in 70% ethanol. They were stained with Mayer's or Van Cleave's hematoxylin and mounted in Histoclad for study as whole mounts. Measurements are in micrometers unless otherwise stated; figures were drawn with the aid of a drawing tube.

***Paravitellotrema overstreeti* sp. n.
(Figs. 1-3)**

DESCRIPTION (based on 25 specimens): Body elongate, subcylindrical, lacking ecsoma, 1.60-2.38 mm long by 0.56-0.74 mm wide at acetabulum. Preoral lobe present. Oral sucker 174-228 long by 216-264 wide, subterminal. Acetabulum 300-438 long by 325-444 wide. Forebody 38-43% (40%) of total body length. Ratio of oral sucker width to acetabular width 1:1.48-1.57 (1:1.53). Prepharynx lacking. Pharynx 72-114 long by 78-108 wide. Ratio of oral sucker width to pharyngeal width 1:0.34-0.38 (1:0.36). Esophagus lacking; saccate crop present at cecal bifurcation. Cecal bifurcation 28-33% (30%) of total body length from anterior end; ceca extending near posterior end of body.

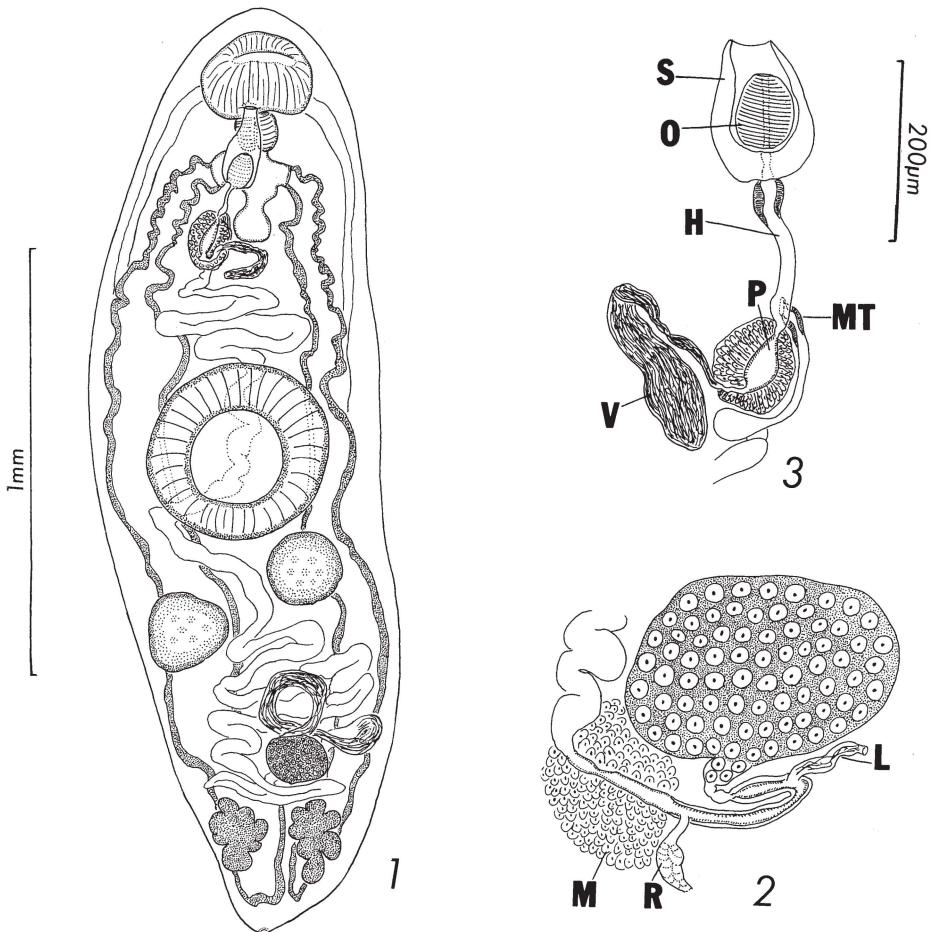
Testes in anterior half of hindbody, spherical to subspherical, diagonal, intercecal or ventral to ceca. Left testis 156-180 long by 150-204 wide; right testis 150-186 long by 150-192 wide. Posttesticular space 28-32% (30%) of total body length.

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Figures 1-3. *Paravittellotrema overstreei*. 1. Ventral view of holotype. 2. Female ducts. 3. Terminal genitalia. Abbreviations: L = Laurer's canal; M = Mehlis' gland; MT = metraterm; H = hermaphroditic duct; O = sinus organ; P = prostatic vesicle; R = vitelline receptacle; S = sinus sac; V = seminal vesicle.

Seminal vesicle preacetabular, elongate to C- or U-shaped, 144-247 long. Narrow tubular anterior portion of seminal vesicle entering saccate prostatic vesicle 58-100 long by 29-102 wide; prostatic vesicle surrounded by elongate prostatic cells enclosed in delicate membrane; limits of membrane 102-157 long by 78-137 wide. Prostatic vesicle joining tubular hermaphroditic duct emptying into muscular protrusible sinus organ 44-96 long by 41-87 wide at widest point when not protruded. Sinus organ surrounded by thick-walled sinus sac 90-200 long by 80-176 wide. Genital pore ventral to posterior part of oral sucker, 9-12% (10%) of total body length from anterior end.

Ovary posttesticular, 11-16% (12%) of total body length from posterior end, spherical to subspherical, 96-144 long by 96-150 wide. Uterine seminal receptacle present. Mehlis' gland and Laurer's canal postovarian. Laurer's canal a simple tube opening dorsally. Vitellaria compact, paired, deeply to shallowly lobate, ventral to ceca, immediately postovarian. Left vitellarium 90-210 long by 90-126 wide; right vitellarium 120-204 long by 90-150 wide. Uterus looping in intercecal

space from posterior margin of ovary to near level of prostatic vesicle; terminating in short muscular metraterm entering hermaphroditic duct immediately anterior to prostatic vesicle. Eggs with single polar filament, 44–46 (45) long by 20–23 (21) wide excluding filament; polar filament 2–3 times longer than egg.

Excretory pore terminal; vesicle Y-shaped with arms uniting dorsal to pharynx.

HOST: *Potamotrygon magdalenae* Dumeril, Colombian freshwater stingray.

SITE OF INFECTION: Stomach.

LOCALITIES: Ciénaga Jobo, Rio Magdalena, vic. San Cristóbal, Bolívar, Colombia (type); Ciénaga de Rabon, Rio Magdalena, vic. San Cristóbal, Bolívar, Colombia.

HOLOTYPE: USNM Helm. Coll. No. 74730.

PARATYPES: USNM Helm. Coll. No. 74731.

ETYMOLOGY: The species is named in honor of Dr. Robin M. Overstreet, Gulf Coast Research Laboratory, in recognition of his contributions to helminth taxonomy and ecology.

Remarks

Watson (1976) proposed the genus *Paravitellotrema* for two species parasitizing Nicaraguan freshwater fishes which resembled *Vitellotrema* Guberlet, 1928 by having the seminal vesicle and prostatic vesicle free in the parenchyma but which differed in possessing a sinus sac and in lacking the swollen terminal portion of the uterus unique to *Vitellotrema*. *Paravitellotrema overstreeti* most closely resembles *P. thorsoni* Watson, 1976 by possessing a protrusible sinus organ and saccate rather than elongate prostatic vesicle. It differs by having lobate rather than smooth vitellaria, a smaller sinus organ and sinus sac, elongate rather than diamond-shaped prostatic cells which are enclosed in a delicate membrane rather than free in the parenchyma, and a metraterm joining the hermaphroditic duct immediately anterior to the prostatic vesicle rather than at the base of the sinus organ. *Paravitellotrema astyanactis* Watson, 1976, the only other member of the genus, lacks both sinus organ and saccate prostatic vesicle, characteristics which Manter (1969, 1970) and Watson (1976) did not consider of generic importance.

Acknowledgments

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