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Research Note

Digenean Parasites in the White-Backed Stilt *Himantopus melanurus* Vieillot, 1817 (Recurvirostridae) from the Argentine Coast

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ABSTRACT: Four species of digeneans were recovered from 1 specimen of *Himantopus melanurus* (Aves: Recurvirostridae) from Bahía Blanca estuary, Argentina. Digeneans were assigned to *Psilochasmus oxyurus* (Psilostomidae), *Pygidiopsis crassus* (Heterophyidae), *Ascocotyle* (*Ascocotyle*) *felippei* (Heterophyidae), and *Levinseniella cruzi* (Microphallidae). *Psilochasmus oxyurus* and *A.* (*A.*) *felippei* have been reported from other species of hosts, mostly from South America, but this is the southernmost report for these species. *Levinseniella cruzi* has been reported from *H. melanurus* from Mar Chiquita lagoon, to the north of Bahía Blanca estuary. This is the first report of *P. crassus* parasitizing a natural host.

KEY WORDS: trematode, Psilostomidae, Heterophyidae, Microphallidae, *Psilochasmus oxyurus*, *Pygidiopsis crassus*, *Ascocotyle* (*Ascocotyle*) *felippei*, *Levinseniella cruzi*, Aves, shorebirds, Bahía Blanca estuary.

The white-backed stilt *Himantopus melanurus* (Aves: Charadriiformes: Recurvirostridae) is one of the most abundant resident birds in the estuary of Bahía Blanca, Argentina, where it reaches densities up to 160 individuals/km^2 during winter (Delhey and Petracci, 2004). *Himantopus melanurus* has been reported as a definitive host for *Levinseniella cruzi* Travassos, 1920 (Digenea: Microphallidae); *Microphallus simillimus* Travassos, 1920 (Digenea: Microphallidae); and *Profilicollis chasmagnathi* (Holcman-Spector, Mañe-Garzon, and Dei-Cas, 1977) (Acantocephala: Filicollidae) in Mar Chiquita lagoon, Buenos Aires Province, Argentina (Martorelli, 1988, 1989, 1991).

A single moribund white-backed stilt was collected from Bahía Blanca estuary (38°49′S; 62°06′W), Buenos Aires Province, Argentina, in March 2008; killed; and frozen until necropsy. The gastrointestinal tract was divided into the following sections: oral cavity, crop, proventriculus, gizzard, small intestine (subdivided in four equal-length sections for convenience in prospecting: I, II, III, and IV), paired ceca, large intestine, and cloaca. Helminths recovered were fixed and preserved in 10% formalin, stained in Van Cleave's hematoxylin or carmine, and mounted in Canada balsam. Measurements are presented in millimeters. Voucher specimens of parasites have been deposited in the Museo de La Plata Helminth Collection, Argentina, and accession numbers follow species names in parentheses. The protected status of most of this estuary and the ban on hunting of seabirds and shorebirds in the area preclude the acquisition of further specimens of white-backed stilts.

Four species of digeneans were recovered: *Psilochasmus oxyurus* (Creplin, 1835) Lühe, 1909 (5984); *Pygidiopsis crassus* Ostrowski de Núñez, 1995 (5983); *Ascocotyle* (*Ascocotyle*) *felippei* Travassos, 1928 (5985); and *Levinseniella cruzi* Travassos, 1920 (5986).

Psilochasmus oxyurus is cosmopolitan and widespread. In Brazil, it has been reported from the white-cheeked pintail *Anas bahamensis* Linnaeus, 1758 (Travassos, 1921); and from the greylag goose *Anser anser* Linnaeus, 1758 (Fernandes et al., 2007). In Argentina, it has been reported from the brown-hooded gull *Larus maculipennis* Lichtenstein, 1823 (Labriola and Suriano, 2001); and Szidat (1957) experimentally described the life cycle by using chickens *Gallus gallus* Linnaeus, 1758, as definitive host. This is the first report of *P. oxyurus* in *H. melanurus*. We recovered the specimens ($N = 2$) from section II of small intestine. Some measurements of *P. oxyurus* from our study are smaller than those described by Fernandes et al. (2007), whose measurements were based on 8 specimens (body size [2.643–3.286 × 0.893–0.929 vs. 5.17–7.65 × 1.92–2.25], oral sucker [0.243–0.336 × 0.214–0.286 vs. 0.430–0.520 × 0.350–0.450], pharynx [0.157–0.164 × 0.129–0.164 vs. 0.300–0.370 × 0.170–0.320], and

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ventral sucker [0.357–0.364 × 0.371–0.386 vs. 0.660–0.860 × 0.640–0.780]). We think that these differences are due to great intraspecific variability among the species hosts or to the youth of our specimens.

Pygidiopsis crassus was described from chicks and mice *Mus musculus* Linnaeus, 1758 experimentally infected by Ostrowski de Núñez (1995), who described its life cycle but did not know its natural definitive host. Dronen et al. (2004) reassigned *P. crassus* to *Caiguiria* as *Caiguiria crassa* for having vitelline follicles reaching the level of the acetabulum anteriorly not extensively surpassing the testes posteriorly into the post testicular space. However, Pearson (2008) synonymized the genus *Caiguiria* Nasir and Díaz, 1971 to *Pygidiopsis* Looss, 1907. *Pygidiopsis crassus* from Bahía Blanca estuary ($N = 6$) was found in section I of the small intestine. Measurements of *P. crassus* from our study agree with those reported by Ostrowski de Núñez (1995), with the exception of a wider pharynx (0.040–0.047 vs. 0.029–0.040). This is the first report of a natural definitive host of *P. crassus*.

Ascocotyle (*Ascocotyle*) *felippei* was first described by Travassos (1928) from the least-bittern *Ixobrychus exilis* Gmelin, 1789 in Rio de Janeiro (Brazil). Subsequently, it has been reported from many fish-eating birds (Ardeidae, Phalacrocoracidae, and Accipitridae) in America. Santos et al. (2007) redescribed the species, considering *Ascocotyle* (*Ascocotyle*) *tenuicollis* Price, 1935 and *Ascocotyle* (*Ascocotyle*) *puertoricensis* Price, 1932 as synonyms of *A.* (*A.*) *felippei*. Boero et al. (1972) described this species in *Spheniscus magellanicus* from an unreported locality in Argentina, but Santos et al. (2007) reported this finding as doubtful. Ostrowski de Núñez (1976) described the cercaria of *A.* (*A.*) *tenuicollis* in Argentina. In our study, it ($N = 7$) was recovered in paired ceca of *H. melanurus*. Some measurements of *A.* (*A.*) *felippei* of our study differ from that redescribed by Santos et al. (2007) (external circumoral spines [0.010–0.013 vs. 0.016–0.021], internal circumoral spines [0.007–0.010 vs. 0.014–0.018], and testes length [0.023–0.025 vs. 0.029–0.069]). Except for spines length and testes length, all other measurements agree with those reported by Scholz et al. (1997) for *A.* (*A.*) *tenuicollis*, now considered as a synonym of *A.* (*A.*) *felippei*. Ostrowski de Núñez (2001) described *A.* (*A.*) *secunda* and *A.* (*A.*) *tertia* based on adults obtained experimentally from chicks; both of them have a gonotyl with papillae containing refractive bodies and thus differ from *A.* (*A.*) *felippei* recovered in *H. melanurus* in Bahía Blanca estuary, the latter of which has a gonotyl without refractive bodies.

Levinseniella cruzi was first described by Travassos (1920) in the white-cheeked pintail *Anas bahamensis* Linnaeus, 1758 in Brazil. It was subsequently reported in the white-tufted grebe *Rollandia rolland chilensis* Lesson, 1828; in the white-backed stilt *Himantopus melanurus* Vieillot, 1817; in the southern lapwing *Vanellus chilensis* Wagler, 1827; and in the Olrog's gull *Larus atlanticus* Olrog, 1958 from Argentina (Martorelli, 1988; Martorelli and Ivanov, 1996; La Sala et al., 2009). Measurements of *Levinseniella cruzi* ($N = 8$), found in paired ceca and large intestine, from our study agree with those reported by Martorelli (1988) for this species.

These are the southernmost reports of *P. oxyurus*, *A.* (*A.*) *felippei*, and *L. cruzi* and the first report of *P. crassus* from a naturally infected host.

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