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Some Parasitic Helminths from the American Oystercatcher, *Haematopus palliatus* Temminck, from the Texas Gulf Coast and the Common Pied Oystercatcher, *H. ostralegus* Linnaeus, from New Zealand, including *Dildotaenia latovarium* n. gen. and n. sp. (Cestoda: Hymenolepididae)  
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# SOME PARASITIC HELMINTHS FROM THE AMERICAN OYSTERCATCHER, *HAEMATOPUS PALLIATUS* TEMMINCK, FROM THE TEXAS GULF COAST AND THE COMMON PIED OYSTERCATCHER, *H. OSTRALEGUS* LINNAEUS, FROM NEW ZEALAND, INCLUDING *DILDOTAENIA LATOVARIIUM* N. GEN. AND N. SP. (CESTODA: HYMENOLEPIDIDAE)

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**ABSTRACT:** *Acanthoparyphium spinulosum* (Digenea) and *Dildotaenia latovarium* n. gen. and n. sp. (Eucestoda) were recovered from an American oystercatcher, *Haematopus palliatus*, Galveston, Texas. This is the first report of *A. spinulosum* from the American oystercatcher. *Dildotaenia latovarium* was also recovered from common pied oystercatcher, *H. ostralegus*, from New Zealand. The new genus can be distinguished from all other hymenolepid genera that have a copulatory stylet in lacking a cirrus. The type species is characterized by the exaggerated width of its ovary. Of the other species of hymenolepids with 8 rostellar hooks from birds, *Dildotaenia latovarium* most closely resembles *Retinometra venusta*, but *R. venusta* has an armed cirrus and its testes are arranged in a line rather than in a triangle as in *D. latovarium*.

The American oystercatcher, *Haematopus palliatus* Temminck, ranges from the middle east coast of North America south to Chile and Argentina. It is a resident along the Texas gulf coast but occurs in relatively small numbers. The common pied oystercatcher, *H. ostralegus* Linnaeus, is found throughout most of the Old World, as well as the South Pacific.

The helminth fauna of members of the genus *Haematopus* is poorly known. Of the 8 extant species of oystercatcher there are reports of parasitic helminths from only *H. ostralegus* and *H. bachmani* Audubon (Table I). Most reports of helminths from oystercatchers have been from the common pied oystercatcher, *Haematopus ostralegus* from Europe and Russia. The purpose of this study is to provide additional information on the helminth fauna of oystercatchers.

## MATERIALS AND METHODS

Trematodes and cestodes were recovered from a moribund male *H. palliatus* found in the Galveston, Texas area on 5 June 1979. Cestodes of the same species were also found in *H. ostralegus* from Avon-Heathcote Estuary and the mouth of the Ashley River, New Zealand in 1979 and 1980. Specimens were fixed in AFA

under slight coverslip pressure, stained in Semichon's carmine, and mounted in Permout or Canada balsam. Some specimens were histologically sectioned by conventional paraffin technique. Figures were drawn with the aid of a camera lucida. Measurements are from whole mounts of adults and are given in  $\mu\text{m}$ , the mean followed by the range in parentheses, unless otherwise indicated.

## RESULTS

An American oystercatcher from Texas harbored *Acanthoparyphium spinulosum* Johnston, 1917 (Digenea: Echinostomatidae), and an undescribed species of hymenolepidid cestode, representing a new genus. The common pied oystercatchers from New Zealand were infected with the same species of tapeworm as found in the American oystercatcher from Texas.

## DESCRIPTION

### *Dildotaenia* n. gen.

(Figs. 1–7)

**Diagnosis:** Hymenolepididae, Hymenolepidinae. Dorsoventrally flattened, becoming gradually wider toward gravid segments. All segments wider than long, craspedote. Scolex (Figs. 1–3) with retractable rostellar bearing 8 nitidoid (Fig. 4) hooks. Suckers simple, unarmed. Neck present, narrower than scolex. One set of protandrous male and female reproductive systems per segment. Genital pores unilateral. Three testes in triangle, 1 poral, 2 aporal (Figs. 5, 6). Genital ducts pass between osmoregulatory canals. Cirrus pouch oval, medial to osmoregulatory canals, containing small seminal vesicle. Cirrus absent. Long convoluted stylet originates within cirrus pouch and extends through a very thin sheath to genital atrium where it emerges

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TABLE I. *Cestodes and trematodes previously reported from members of the genus Haematopus.*

<i>Haematopus bachmani</i> (black oystercatcher)	
Cestode:	
1. <i>Hymenolepis alaskensis</i>	Deblock and Rausch, 1967
Trematode:	
1. <i>Maritrema gratosum</i>	Deblock and Rausch, 1972
<i>Haematopus ostralegus</i> (common pied oystercatcher)	
Cestodes:	
1. <i>Fimbriaria fasciolaris</i>	Jogis, 1963; Belopol'skaià, 1971
2. <i>Haploparaxis crassirostris</i>	van den Broek and Jensen, 1964
3. <i>Hymenolepis abortiva</i>	Jogis, 1963
4. <i>Hymenolepis aploparaksoides</i>	Deblock, 1964
5. <i>Hymenolepis clandestina</i>	Threlfall, 1963
6. <i>Hymenolepis rectacantha</i>	Jogis, 1963; Threlfall, 1963; Deblock and Tran Van Ky, 1965
7. <i>Tschertkovilepis brachycephala</i>	Creplin, 1829
Trematodes:	
1. <i>Gymnophalloides oedemia</i>	James, 1964
2. <i>Gymnophallus choledochus</i>	Loos-Frank, 1968
3. <i>Himasthla leptosoma</i>	Threlfall, 1963
4. <i>Microphallus claviformis</i>	Deblock and Tran Van Ky, 1966
5. <i>Microphallus similis</i>	Deblock and Tran Van Ky, 1966
6. <i>Paramonostomum chabaudi</i>	van Strydonck, 1965a
7. <i>Parvatrema affine</i>	James, 1964; Belopol'skaià, 1966
8. <i>Parvatrema homoeotectum</i>	James, 1964
9. <i>Psilostomum brevicolle</i>	Threlfall, 1963; van Strydonck, 1965b; Belopol'skaià, 1966; Loos-Frank, 1968

through a small unarmed, nipple-like projection of the atrium wall (Fig. 7). Accessory sacs absent. External seminal vesicle present. Ovary median (Fig. 6), much wider than long. Vitellarium compact, postovarian. Vagina opens into genital atrium posterior to stylet pore. Seminal receptacle present, persistent. Uterus appears as bilobed sac, becoming irregular sac when filled with eggs. Parasites of Charadriiformes.

#### Taxonomic summary

*Type species: Dildotaenia latovarium* n. sp.

*Etymology:* Genus named after "dildo" (from Italian, dilletto), referring to the surrogate cirrus in the genital atrium.

#### *Dildotaenia latovarium* n. sp.

(Figs. 1-7)

*Description* (based on 10 adult specimens): With characteristics of the genus. Strobila craspedote, apolytic, 10,000 (6,600-15,000) long, composed of 95-160 proglottids. Scolex 170 (150-195) wide by 309 (262-338) long. Suckers well developed, 88 (78-102) wide. Everted rostellum 168 (135-188) long with 8 hooks, each 56 (53-58) long, arranged in a circle. Immature proglottids wider than long, mature proglottids 810 (465-1,356) wide by 164 (97-233) long. Ovary 461 (385-670) wide by 44 (32-60) long. Vitellarium 128 (100-165) wide by 59 (48-72) long. Cirrus sac ovoid, transverse, 71 (61-86) wide by 123 (92-138) long. External seminal vesicle 53 (36-78) wide by 304 (244-500) long. Fully developed eggs not observed.

#### Taxonomic summary

*Type host: Haematopus palliatus.*

*Site of infection:* Small intestine.

*Locality:* Galveston, Texas; South Island, New Zealand.

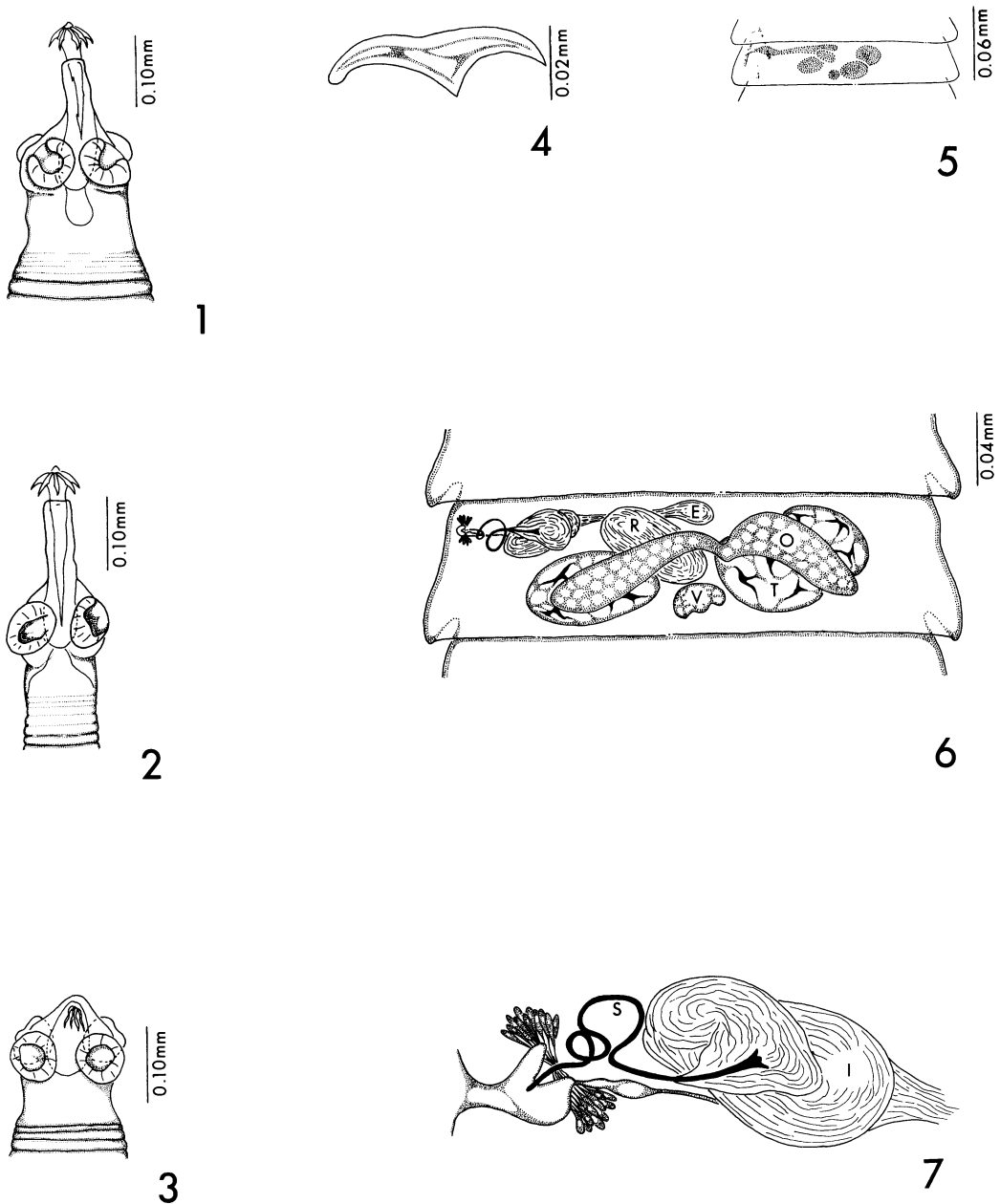
*Holotype:* USNM Helm. Coll. No. 80271.

*Paratypes:* USNM Helm. Coll. Nos. 80272 and 80273; Texas A&M Cooperative Wildlife Regional Coll. No. 78A-38, Department of Wildlife and Fisheries Sciences, Texas A&M University.

*Etymology:* The species name refers to its large, laterally elongated ovary.

#### DISCUSSION

*Dildotaenia* n. gen. differs from all other hymenolepidid genera that have copulatory stylets in lacking a cirrus. Serial sections of the genital atrium clearly show the nipple-like projection in the genital atrium to be continuous with the atrial wall, not in any way attached to or extending from the cirrus pouch. As this structure serves as a cirrus substitute, we propose to call it the dildo. The new species superficially resembles members of the genus *Retinometra*. The only species of *Retinometra* so far described from charadriiform birds is *R. deblocki* (Schmidt and Neiland, 1968) Schmidt, 1986. It differs from *D. latovarium* in having a rostellum armed with 10 hooks that are 100-102 long. *Dildotaenia latovarium* can be distinguished from other species of hymenolepids with 8 rostellar hooks by the exaggerated width of its ovary (385-675). Of described species of hymenolepids with 8 rostellar



FIGURES 1-7. *Dildotaenia latovarium* n. gen. and n. sp. from *Haematopus palliatus* and *H. ostralegus*. 1. Scolex partially retracted. 2. Scolex fully extended. 3. Scolex fully retracted. 4. Hook from rostellum. 5. Immature proglottid. 6. Mature proglottid. E = external seminal vesicle, R = seminal receptacle, O = ovary, T = testis, V = vitellarium. 7. Enlarged view of the genital atrium and internal seminal vesicle regions. S = copulatory spicule, I = internal seminal vesicle.

hooks, *D. latovarium* most closely resembles *Retinometra venusta* (Rosseter, 1897) Railliet and Henry, 1909, which is unlike *D. latovarium* in the following characters: it has an armed cirrus,

the blade of its rostellar hooks is longer than the base, and its testes are arranged in a line rather than in a triangle.

*Acanthoparyphium spinulosum* has a cosmo-

politan distribution and was originally described from a plover in Sydney, Australia (Johnston, 1917). It has also been reported from black-bellied plover, *Squatarola squatarola*, in Japan (Yamaguti, 1934), and in the United States adults have been reported from black-bellied plover and American avocet, *Recurvirostra americana*, in California (Martin and Adams, 1961). Metacercariae of *A. spinulosum* have been reported from oyster, *Crassostrea virginica*, along the Texas gulf coast by Little et al. (1966). The present study is the first report of *A. spinulosum* from American oystercatcher.

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We thank the Texas Parks and Wildlife Department without whose cooperation this study would not have been possible.

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