Proterogynotaenia texanum sp. n. (Cestoidea: Progynotaeniidae) from the Black-bellied Plover, Pluvialis squatarola

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ABSTRACT: Proterogynotaenia texanum sp. n. is described from the black-bellied plover, Pluvialis squatarola (Linnaeus) from the Texas Gulf coast. It is similar in proglottid number to P. branchiuterina Belopol'skaya, 1973, P. daugi Sandeman, 1959, P. flaccida (Meggitt, 1928) Baer, 1940, P. polytestis Belopol'skaya, 1973, and P. variabilis Belopol'skaya, 1953. Proterogynotaenia texanum differs from these primarily in posterior hook size. The posterior hooks are 18 μm long in P. texanum compared to 13-14 μm long in P. branchiuterina, P. daugi, and P. polytestis, and 8 μm long in P. flaccida and P. variabilis. There are also differences in testes number and cirrus pouch size.

The black-bellied plover, Pluvialis squatarola (Linnaeus), a migratory wading bird, is found in Texas primarily from August to December. From November 1978 to November 1980, five plovers were collected on the Intercoastal Waterway in Galveston County, Texas. Specimens of Cestoidia representing a species of Proterogynotaenia Fuhrmann, 1911 were found in three of the plovers. Species of Proterogynotaenia have been recovered from black-bellied plovers by Belopol'skaya (1953, 1973).

Live cestodes were taken from the intestine and heat fixed with AFA under slight coverslip pressure. Whole mounts were stained with Semichon's carmine and mounted in Kleermount. Unless otherwise indicated, measurements are in micrometers, the mean followed by the range in parentheses. All figures were drawn with the aid of a drawing tube. Types deposited in National Parasite Collection, USDA, Beltsville, Maryland.

Proterogynotaenia texanum sp. n. (Figs. 1-6)


HOST: Pluvialis squatarola (L.).
LOCATION: Intestine.
LOCALITY: Galveston, Texas.
PREVALENCE: Found in three of five plovers examined.

WORM BURDEN: Two to four per host.


ETYMOLOGY: Species name refers to the type locality.

REMARKS: The genus Proterogynotaenia is represented by seven previously described species: P. rouxi Fuhrmann, 1911, P. flaccida (Meggitt, 1928) Baer, 1940, P. neoarctica Webster, 1951, P. variabilis Belopol'skaya, 1953, P. daugi Sandeman, 1959, P. branchiuterina Belopol'skaya, 1973, and P. polytestis Belopol'skaya, 1973. On the basis of proglottid number, P. texanum is closest to P. flaccida from the avocet; P. varia-
Albin, P. branchiuterina, and P. polytestis from black-bellied plover; and P. daugi from greater golden plover.

The primary difference appears in the hook size. Proterogynotaenia texanum and the five similar species have large hooks of approximately the same size, 30–40 μm long. The small hooks, however, of P. texanum are 18 μm long, whereas those of the other species are reported to be 13–14 μm in P. branchiuterina, P. daugi, and P. polytestis, or 8 μm in P. flaccida and P. variabilis.

The validity of using hook sizes as the primary differentiating characteristic could be questioned, particularly in view of P. variabilis. Bełopol'skaya (1953) in the description of P. variabilis gives a broad range of both hook numbers and sizes. It is questionable, though, as to its validity. The description is based upon only two complete specimens, with the hooks being either 34–35 μm or 8 μm. The variability of the hook number and size is based on 50 scoleces from another bird from a different geographic region. The only reason given for assigning these 50 scoleces to the species is that 56% of them had the same number of hooks as the original two complete specimens. Because no complete strobilae were found with the 50 scoleces, validity of this assignment to P. variabilis can be questioned.

Testes number and cirrus pouch size also vary.
with these species. *Proterogynotaenia texanum* has 16 poral and 19 aporal testes. *Proterogynotaenia daugi* and *P. flaccida* are very similar, both with 14 poral and 16 aporal testes. *Proterogynotaenia variabilis* has 7 poral and 11–12 aporal testes. The cirrus pouch of *P. texanum* is 400 μm by 122 μm. That of *P. daugi* is reported as 230–280 μm by 90–120 μm. The description of *P. flaccida* states only that the cirrus pouch is large and extends past the midline of the proglottid. The other three similar species have differing testes numbers and cirrus pouch measurements.

The genus *Proterogynotaenia* is very similar to the genus *Paraprogynotaenia* Rysavy, 1966. The only difference is the number of rows of rostellar hooks, with *Paraprogynotaenia* possessing a single row of hooks. *Proterogynotaenia texanum* possesses two rows of hooks, but the second row of small hooks is easily lost in the process of collecting, fixing, and mounting. In the *P. texanum* specimens collected, only one retained both rows of hooks.

**Acknowledgments**

The author thanks the Texas Parks and Wildlife Department without whose cooperation this study would not have been possible. Thanks are also given to Dr. Harold Underwood and Dr. Norman Dronen for technical assistance.

**Literature Cited**
