



## Observations on the *Parorchis acanthus* complex (Philophthalmidae: Parorchhiinae) with the description of three new species of *Parorchis* Nicoll, 1907 and the replacement of the preoccupied junior homonym *Paratrema* Dronen & Badley, 1979 with *Stenomesotrema* nomen novum

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### Abstract

A brief history of the genus *Parorchis* Nicoll, 1907 (Philophthalmidae: Parorchhiinae) is provided along with the description of 3 new species: *Parorchis catoptrophori* n. sp., distinguished by a bipartite pharynx with a larger, anterior, muscular primary pharynx, followed by a smaller posterior nonmuscular secondary part composed of 2 smaller posterior extensions; *Parorchis longivesiculus* n. sp., distinguished by an external seminal vesicle that overreaches the acetabulum posteriorly, extending into the hindbody to about midway between the testes and the acetabulum; and *Parorchis ralli* n. sp., distinguished by an external seminal vesicle, the posterior third of which is tubular and coiled. The preoccupied junior homonym *Paratrema* Dronen & Badley, 1979 (Parorchhiinae) is replaced by *Stenomesotrema nomen novum*, and a rediagnosis of the genus is given wherein *Stenomesotrema numenii* n. comb. is assigned as the type species in the genus, and *Stenomesotrema asiaticus* n. comb. is proposed as a second species in the genus. Species of *Parorchis* are divided into 2 basic body types. The first type contains those species with a barbell-like or hourglass body shape, a rudimentary head collar, symmetrical to tandem testes, 2 rows of corner spines on the head collar, a preequatorial acetabulum, and a forebody that is wider than the hindbody. The second body type, called the “*Parorchis* body type”, contains those species with a pyriform body shape, a well-developed head collar, symmetrical testes, a single continuous row of circumoral spines on the head collar, and an equatorial acetabulum. There appears to be 2 subtypes of the *Parorchis* body type: subtype 1 containing those species possessing smooth to slightly irregular testes (not deeply lobed) and an esophagus lacking diverticuli; and subtype 2 containing those species having irregular and deeply lobed testes and an esophagus possessing lateral diverticuli. A comparative analysis of museum-deposited specimens of *P. acanthus* revealed as many as 9 possible additional species of *Parorchis*. This suggests potential problems in using measurements of structures alone without differences in additional corroborating specific features to separate species of *Parorchis*. Along with measurements, the number and size of spines on the circumoral collar, the presence or absence of a prepharynx, an intertesticular space, and esophageal diverticula as well as the extent of the posttesticular space, the length of the metraterm, egg size and the ratios of the width of the oral sucker to the width of the acetabulum and the width of the pharynx to the width of the oral sucker appear useful in distinguishing species of *Parorchis*.

**Key words:** *Catoptrophorus semipalmatus*, Charadriiformes, clapper rail, Galveston, Gruiformes, laughing gull, *Larus atricilla*, *Paratrema*, Parorchhiinae, *Parorchis*, *Parorchis acanthus* complex, *Parorchis catoptrophori*, *Parorchis longivesiculus*, *Parorchis ralli*, Philophthalmidae, *Rallus longirostris*, *Stenomesotrema*, *Stenomesotrema asiaticus*, *Stenomesotrema numenii*, Texas, uterine seminal receptacle, U.S.A., willet