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Porrorchis hylae (Johnston, 1914) (Acanthocephala: Plagiorhynchidae: Porrorchinae) in *Lialis burtonis*, Gray 1835 (Sauria: Pygopodidae); A New Paratenic Host Record

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ABSTRACT: During necropsy of a Burton's snake lizard (*Lialis burtonis* Gray 1835) that was imported from Australia in January 1994, juvenile acanthocephalans were recovered from the mesentery and small bowel serosa which were identified as *Porrorchis hylae* (Johnston, 1914). This find represents a new paratenic host record for the species, and is recorded in a reptile native to Australia for the first time.

Key words: Acanthocephala, Plagiorhynchidae, Porrorchinae, *Porrorchis hylae*, juveniles, *Lialis burtonis*, new paratenic host record.

A Burton's snake lizard (*Lialis burtonis* Gray 1835) (Sauria: Pygopodidae) died shortly after its legal importation from Australia by a reputable herpetological dealer, was maintained frozen at approximately −20 C, and later acquired on 20 January 1994 for parasitological evaluation; the specimen was deposited in Carnegie Museum of Natural History, Section of Amphibians and Reptiles, Pittsburgh, Pennsylvania (USA), collection no. CM142,375. The site and date of origin were not available from the dealer. Eighteen juvenile acanthocephalans were recovered in May 1994 at the Division of Laboratory Animal Resources, University of Pittsburgh, from the mesentery and small bowel serosa; these were immersed in tap water to establish proboscis evagination. Acanthocephalans were preserved in AFA fixative, transferred to 70% ethyl alcohol, stained with 70% ethyl alcohol-carmine solution, gradiently dehydrated, cleared in xylene and mounted in Permount mounting media (Fisher Scientific, Fairlawn, New Jersey, USA). Subsequent to microscopic examination of mounted materials, specimens were identified as *Porrorchis hylae* (Johnston, 1914). Voucher specimens were deposited in the U.S. National Parasite Collection (Beltsville, Maryland, USA) USNPC No. 085452. Other specimens were placed in the authors collection (University of Pittsburgh, Division of Laboratory Animal Resources, Pittsburgh, Pennsylvania) collection numbers BRC00097-12 through BRC00097-27. Species assignment was based on morphological characteristics and measurements of everted specimens that were consistent with Johnston and Edmond's (1948) description of encysted forms (Fig. 1) and with the redescription of *P. hylae* given by Schmidt and Kuntz (1967) (Fig. 2). This finding is documentation of a new paratenic host record for *P. hylae*, being reported for the first time in a reptilian host endemic to Australia.

The genus *Porrorchis* is well known for its potential to use a variety of reptile and amphibian hosts as paratenics, with *P. hylae* being the most frequently documented species. Geographically, most paratenic hosts for *P. hylae* have been recorded in Taiwan, southeast Asia, and Australia. Schmidt and Kuntz (1967) list Asian paratenic hosts for *P. hylae* as *Gekko monarchus* (Duméril and Bibron, 1836); *Hemidactylus frenatus* (Duméril and Bibron, 1836); *Trimeresurus stejnegeri* Schmidt, 1927; *Psammodynastes pulverulentus* (Boie, 1827); *Japalura swinhonis* Guenther, 1864; *Zoacys dhumnades* (Cantor, 1929); *Rana limnocharis* Wiegmann, 1835; and *Rana tigrina rugulosa* Wiegmann, 1935. *Boiga trigonata* (Schneider, 1802) is listed as a paratenic host for the region by Gupta and Jain 1975). Australian paratenic hosts are documented as *Limnodynastes dorsalis* (Gray, 1841), *Pelodryas* (*Hyla*) *caerulea* (White, 1790), and *Litoria* (*Hyla*)

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FIGURE 1. Unstained everted juvenile *Porrorchis hylae* removed from mesentery of *Lialis burtonis*. Specimen preserved in 70% ethyl alcohol. Bar = 0.10 mm.

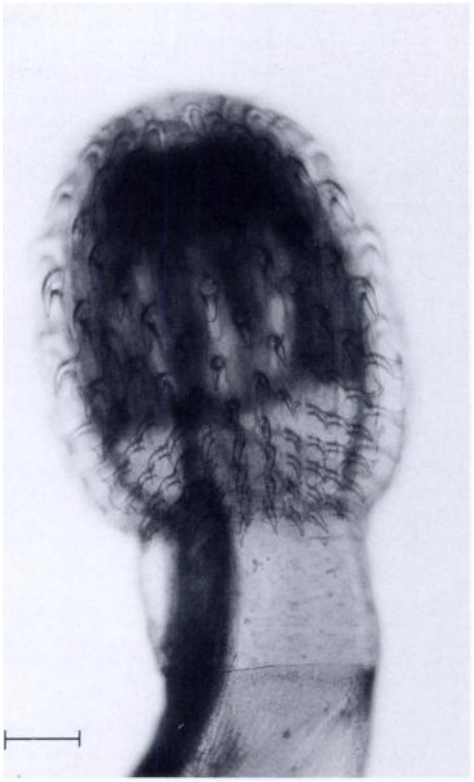


FIGURE 2. Everted proboscis with hook morphology, number, and arrangement, consistent with *Porrorchis hylae*. Bar = 0.180 mm.

aurea (Lesson, 1829) (Johnston, 1912; 1914; Johnston and Edmonds, 1948); and *Bufo marinus* (Linnaeus, 1758), *Litoria* (*Hyla*) spp., and *Limnodynastes* spp. by Edmonds (1989).

In addition to the previously listed Australian paratenic hosts, *P. hylae* has been documented as adults in the pheasant coucal, *Centropus phasianinus* (Latham, 1801), (Southwell and MacFie, 1925; Golvan and Brygoo, 1965); tawny frogmouth, *Podargus strigoides* (Latham, 1801), (Johnston and Edmonds, 1948; Golvan and Brygoo, 1965); and a subspecies of the striated heron, *Butorides striatus* by Schmidt and Kuntz (1967). Since the *L. burtonis* host was collected and exported from its native habitat prior to parasite evaluation, it is difficult to confirm that its infection with *P. hylae* juveniles occurred naturally in Australia. However, since *P. hylae* occurs as adults in Australian avian fauna and as cystacanths in extralimital reptilian hosts, it appears that *P. hylae* can utilize *L. burtonis* as a epizootiological reservoir for the geographical area.

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