POROCEPHALUS DOMINICANA n.sp. FROM THE DOMINICAN BOA (CONSTRICCTOR CONSTRICCTOR NEBULOSUS)

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Summary

A new pentastomid, Porocephalus dominicana, from the Dominican boa (Constrictor constrictor nebulosus) is described. It differs in most aspects of its gross morphology from the other described Porocephalus spp. but it is included within the genus because it possesses the key generic character, an accessory spine over the outer hook. The taxon should be subdivided at the generic level if postulated differences in life-cycles can be demonstrated experimentally.

Materials and methods

This study is based upon specimens recovered from the lungs of four Dominican boas (Constrictor constrictor nebulosus), imported from the wild during July 1975, which died in captivity at the Jersey Wildlife Preservation Trust. The snakes were autopsied on 16th December, 1976 and 1st, 9th and 11th October, 1977. Additional material, in the form of four adult females, originally recovered from a boa from Dominica (probably the same host species as above) was discovered in the pentastomid collection of the British Museum (Natural History), misidentified as Porocephalus clavatus. The scanning electron microscope preparations were prepared by the critical point drying process of Cohen, Marlow & Gardner (1968) after prolonged fixation in 70% alcohol.

Introduction

A recent review of the taxonomy and systematics of the pentastomid genus Porocephalus (Humboldt, 1811) recognized seven distinct species (Riley & Self, 1979). These are naturally divided into two groups, one from the Americas and the other from Africa, but there is little to relate the two since they differ in most aspects of their gross morphology and life-cycles. The principal diagnostic feature, a spinous extension of the cuticle projecting over the outer hook is, however, always present in both nymphs and adults.

This paper describes a new species of pentastomid which is placed within the genus only because it possesses this key generic character: two other important diagnostic characters, a swollen cephalothorax and terminal segment, are absent. The systematics of the taxon are reassessed.

Observations

Porocephalus dominicana n.sp. (Figs. 1 A–D, 2 A–E)

Specific description

Females

Gravid females (N = 9), 21–30 mm long (x̄ = 26) with 27 to 31 annuli (x̄ = 28). The cephalothorax, which is the same diameter as the abdomen, is flattened ventrally but rounded elsewhere and measures up to 2.9 mm in diameter (Fig. 1 A, B). The abdomen is uniformly wide...
Porocephalus dominicana n.sp. from Constrictor c. nebulosus

Immature females: (N = 3), 5–13 mm long with 28 to 29 annuli. BM(NH) Reg. No. 1979.1.10.27–35.

Males: mature males (N = 6), 7–12 mm long (x = 9.5) with 27 to 30 annuli (x = 28.5).

Body distinctly claviform being widest in the region of annuli three to four after which the abdomen tapers towards the conical terminal segment (Fig. 1C, D). The latter is small and the anus is subterminal and ventral (Fig. 4). Both the cephalothorax and anterior abdomen are flattened ventrally and rounded dorsally. Annuli are

over most of its length, but the posterior third tapers slightly (to about 2.4 mm) to a broadly conical terminal segment (Fig. 1A, B; 2C). The common opening of the anus and vagina is ventral and subterminal. Annuli are distinct, and lateral lines, which represent gaps between bundles of longitudinal muscles, are present.

The outer hooks are equipped with a small accessory spine which is more closely opposed to the hook and more lateral in position than in the other Porocephalus spp. (Fig. 3 A, B). The pear-shaped mouth is situated between the median hooks. The distribution of the sensory papillae is similar to that described earlier for other related species (Riley & Self, 1979) but the frontal papillae are relatively inconspicuous (Fig. 2 A, B).
