Research note

The first record of *Dracunculus mulbus* (Nematoda: Dracunculidae) in the Papuan olive python *Apodora papuana* (Ophidia: Boidae)

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Summary

A male specimen of *Dracunculus* (Nematoda: Dracunculidae), collected in 1973 from the lung of the Papuan olive python *Apodora papuana* (Peters et Doria) and now deposited in the helminthological collection of the Natural History Museum in London, is identified as *Dracunculus mulbus* Jones et Mulder, 2007, a species recently described from the water python *Liasis fuscus* Peters in northern Australia. *Apodora papuana* is a new host record for *D. mulbus* and Papua New Guinea is apparently a new geographical record.

Key words: parasitic nematode; *Dracunculus*; python; *Apodora*; Papua New Guinea

Introduction

In 2003, while preparing a monograph (Moravec, 2006) on dracunculoid and anguillicoloid nematodes, various lots of material of *Dracunculus* Reichard, 1759 deposited in the Parasitic Worms Collection of the Natural History Museum, London were examined. Among them, a single male identified by Prof. J.F.A. Sprent as *Dracunculus* sp., collected from the lung of the Papuan olive python *Apodora papuana* (Peters et Doria) (reported as *Liasis papuensis* [sic]) on 20 November 1973 (Reg. no. 1980.740), was studied.

Materials and Methods

This specimen, preserved in 80 % alcohol, has an accompanying label which gives the locality as “?Papua New Guinea”. Since the range of the Papuan olive python covers New Guinea and Indonesia (Uetz & Hallermann 2007), it is highly probable that the locality was actually Papua New Guinea. According to recent information acquired by one of us (DIG) from Prof. John Sprent, it is

highly probable that the specimen was collected during his visit to Papua New Guinea.

Results and Discussion

The specimen (Fig. 1) is 30.51 mm long, with a maximum width of 272 µm. Measurements of the oesophagus are as follows: entire length 10.15 mm; muscular oesophagus 245 µm long, 33 µm in maximum width; anterior bulbous part 313 µm long, 122 µm in maximum width; and posterior cylindrical part of the glandular oesophagus is 9.59 mm long, 163 µm in maximum width. The nerve-ring is 585 µm from the anterior extremity, but the excretory pore could not be located. Its cephalic end is dome-shaped but, as the anterior extremity could not be studied in apical view, the exact distribution of the cephalic papillae could not be determined. A weakly-sclerotised structure surrounds the anterior end of the oesophagus. The caudal end is spirally coiled. The genital papillae could be observed only in lateral view; however, the pre-anal papillae appear to form a group consisting of about five pairs of minute papillae, whereas four pairs of distinct postanal papillae are visible. This distribution resembles that of the genital papillae of some other *Dracunculus* spp. parasitising snakes. The slender spicules are subequal, with pointed distal tips, the right being 420 µm long and the left 369 µm long. The gubernaculum is weakly sclerotised and 90 µm long. The tail is conical, sharply pointed and 186 µm long.

Although this appeared to be the first record of *Dracunculus* from the Australian region and seemed to represent a new species, a new taxon has not been erected because only a single museum specimen was available and not all taxonomically important features could be studied. This specimen was reported (as *Dracunculus* sp.) as a parasite only of *Apodora papuana* in the host-parasite list of dracunculoid and anguillicoloid nematodes given by Moravec

Fig. 1. *Dracunculus mulbus* Jones and Mulder, 2007, male from *Apodora papuana*: A – Anterior end of body; B – Cephalic end, lateral view; C – Caudal end, lateral view. Scale bars: A, C – 200 µm; B – 50 µm.

(2006).

However, Jones and Mulder (2007) recently described a new species of *Dracunculus*, *D. mulbus* Jones et Mulder, 2007, from the tissues surrounding organs in the body-cavity of the water python *Liasis fuscus* Peters in the Northern Territory, Australia. Its morphology and measurements are very similar to those of the present specimen from *A. papuana*, and small differences are probably due to some inaccuracies in observations (some features, e.g., caudal papillae can be properly studied by SEM only). The males of *D. mulbus* are frequently located around the host's lung (Jones & Mulder, 2007) (the lung is the reported site of the specimen from *A. papuana*), and the hosts of both these nematodes belong to the same sub-family, the Pythoninae (Boidae). *Liasis fuscus* is distributed in both northern Australia and New Guinea (Uetz & Hallermann, 2007). Therefore, the specimen from *A. papuana* is considered to belong to *Dracunculus mulbus*. Consequently, *Apodora papuana* is a new host for this nematode species and Papua New Guinea is apparently a new geographical record.

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