



Two new species of habronematid nematodes (Nematoda: Spirurida: Habronematidae) in birds of prey from West Java, Indonesia with a key to species of *Torquatoides*

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Abstract

Two new species of habronematid nematodes are described from Gunung Ciremai National Park, West Java, Indonesia. *Procyrnea javaensis* n. sp., collected from the gizzard of the Collared Scops Owl, *Otus bakkamoena lempiji*, can be distinguished from *P. brevicaudata* as the left side of body lacks two longitudinal ridges, in having a ventral rather than a sinistral vulvar opening, and in the shape of the female tail. The new species differs from *P. ficheuri* in shape of the left spicule, and in having asymmetrical caudal alae; from *P. murrayi* in shape of the left spicule; from *P. ameerae* by having a longer left spicule, different spicule ratio and one median preanal papilla; from *P. dollfusi* and *P. aptera* in the spicule ratio and in having a shorter female tail, and from *P. haliasturi* in the spicule ratio and in having a post-equatorial versus pre-equatorial vulva. *Torquatoides noerdjitoi* n. sp. collected from the gizzard of Sunda Frogmouth, *Batrachostomus javensis javensis*, can be distinguished from *T. torquata*, *T. bengalensis*, and *T. crotophaga* in lacking lateral alae. The new species differs from *T. balanocephala* in numbers of cuticular plaques and precloacal papillae; from *T. singhi* in having longer bodies, numbers of precloacal papillae, longer spicules, and in the egg size; and from *T. trogoni* in the numbers of precloacal papillae, in the shapes of right spicule and gubernaculum.

Key words: nematode, *Procyrnea javaensis* n. sp., *Torquatoides noerdjitoi* n. sp., bird hosts, Indonesia, owl, frogmouth

Introduction

Habronematid nematodes are cosmopolitan parasites of birds, the majority of species occur under the lining of the gizzard (Zhang & Brooks, 2004). This paper presents descriptions of two undescribed species from two genera of Habronematidae reported for the first time from Indonesia. The bird hosts were collected from Ciremai Mountain, West Java during an ecological study by a research group organized by the Research Centre for Biology, Indonesian Institute of Sciences (LIPI) in 2006.

Materials and methods

Nematodes were collected from the gizzard of one Collared Scops Owl, *Otus bakkamoena lempiji* (Horsfield, 1821), and one Sunda Frogmouth, *Batrachostomus javensis javensis* (Horsfield, 1821). Nematodes were fixed and stored in 70% ethanol. For light microscopy, specimens were cleared in glycerine and mounted on microscope slides. Drawings were made with a drawing tube attached to an Olympus BH microscope. For scanning electron microscopy (SEM), specimens were post-fixed in glutaraldehyde, dehydrated through an ethanol series and freeze dried. The dried specimens were then coated with gold and examined with a JSM