

***Skrjabinodon heliocostai* sp.n. (Nematoda, Pharyngodonidae) parasitizing *Mabuya frenata* (Cope) (Lacertilia, Scincidae) in Brazil and the reallocation of *Skrjabinodon capacyupanquii* (Freitas, Vicente & Ibañez) in the genus *Thelandros* Wedl**

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ABSTRACT. The present report is related to an oxyurid nematode recovered from a reptilian host, *Mabuya frenata* (Cope, 1862) and the proposal of *Skrjabinodon heliocostai* sp.n., based mainly on findings referring to the lateral alae, position of excretory pore and vulvar apertures, cuticular spines of the tail and aspect of the eggs. The examination of types of *Skrjabinodon capacyupanquii* (Freitas, Vicente & Ibañez, 1968) from a Peruvian lizard, indicated the reallocation of this species in the genus *Thelandros* Wedl., 1862, as *T. capacyupanquii* comb.n., based on the diameter of the caudal appendage of males and position of the vulvar aperture. The new species described herein represents the first report of a species of the genus *Skrjabinodon* Inglis, 1968 in South America.

KEY WORDS. Nematodes, *Skrjabinodon*, new species, *Thelandros*, new combination, lizard, South America

Nematodes occurring in Brazilian reptiles were fully reported from 1861 to 1988 (VICENTE *et al.* 1993b) when several nematode species have been referred parasitizing lizards in Brazil. Nevertheless, only a couple of them are related to Scincidae hosts, namely *Mabuya mabuya mabouya* (Lacépède, 1788) and *M. maculata* (Gray, 1839). The present findings are related to the proposition of a new taxon and a new combination regarding nematode species from reptilian hosts in Brazil and Peru, respectively.

MATERIALS AND METHODS

Two-hundred and thirty-two lizards *Mabuya frenata* (Cope) were captured between 1993-1995. Worms were recovered in a 0.85% NaCl solution, fixed in hot 70°GL ethanol and were processed for study as described elsewhere (VICENTE *et al.* 1993a). The preparation of *en face* mounts, illustrations and photomicrographs

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were obtained as previously referred (PINTO & VICENTE 1995). Studied types of the Peruvian *Thelandros capacyupanqui* (Freitas, Vicente & Ibañez, 1968) are deposited in the Helminthological Collection of the Oswaldo Cruz Institute (CHIOC) no. 30,303 a-b (whole mounts). Measurements are in micrometers (μm) unless otherwise indicated and means are in parentheses. Classification of the nematodes and host is in accord to PETTER & QUENTIN (1976) and PETERS & DONOSO-BARROS (1970), respectively.

RESULTS

Eleven (4.7%) out of the necropsied specimens were parasitized by nematodes of the species proposed herein.

Oxyuroidea, Pharyngodonidae

Skrijabinodon heliocostai sp.n.

Figs 1-13

Description and measurements based on eight adult specimens, four males and four females (mounted *in toto*).

Males. Small, whitish nematodes 1.02-1.26 (1.14) mm long, 140-150 (145) wide with cylindrical body and tapered extremities in both sexes. Cuticle with transverse striations. Mouth circular, surrounded by three small lips, six papillae in the outer circle and an intermediate pair of amphids. Narrow lateral alae present. Length of esophagus 190-210 (200); esophageal bulb 54-57 (55) long, 46-61 (53) wide. Excretory pore located at 280 from the cephalic extremity. Nerve ring 79-90 (84) from anterior end. Tail, 190 long, smooth, conical with long terminal spike. Caudal alae absent. Three pairs of sessile caudal papillae; one pair precloacal, one pair postcloacal and the 3rd pair lies at the base of the terminal spike. Spicule and gubernaculum absent. Cloaca 210-240 (220) from posterior extremity.

Females. Body 2.19-8.40 (5.29) mm long, 140-160 (150) wide. Mouth as described for the males. Lateral alae absent. Length of esophagus 300-510 (400); esophageal bulb 57-90 (73) long, 55-100 (78) wide. Excretory pore at 190-280 (230) from cephalic extremity. Nerve ring 93-150 (120) from anterior end. Vulvar aperture in the esophageal region, opening immediately posterior to the excretory pore and at 200-300 (250) from anterior extremity. Vagina muscular, directed downward. Uteri opposed. Tail 140-390 (260) long, filiform, armed with cuticular spines from the anterior to the middle portion. Eggs 140 long, 54 wide, with an inconspicuous plug at each end and slightly flattened on one side. Anus 630-770 (480) from posterior extremity.

Taxonomic summary

Type host. *Mabuia frenata* (Cope, 1862); common names: skink, "lagartixa-roxa, briba, cinco, lagarto-cincida, camaleão".

Site of infection. Large intestine

Type locality. Valinhos, State of São Paulo, Brazil.

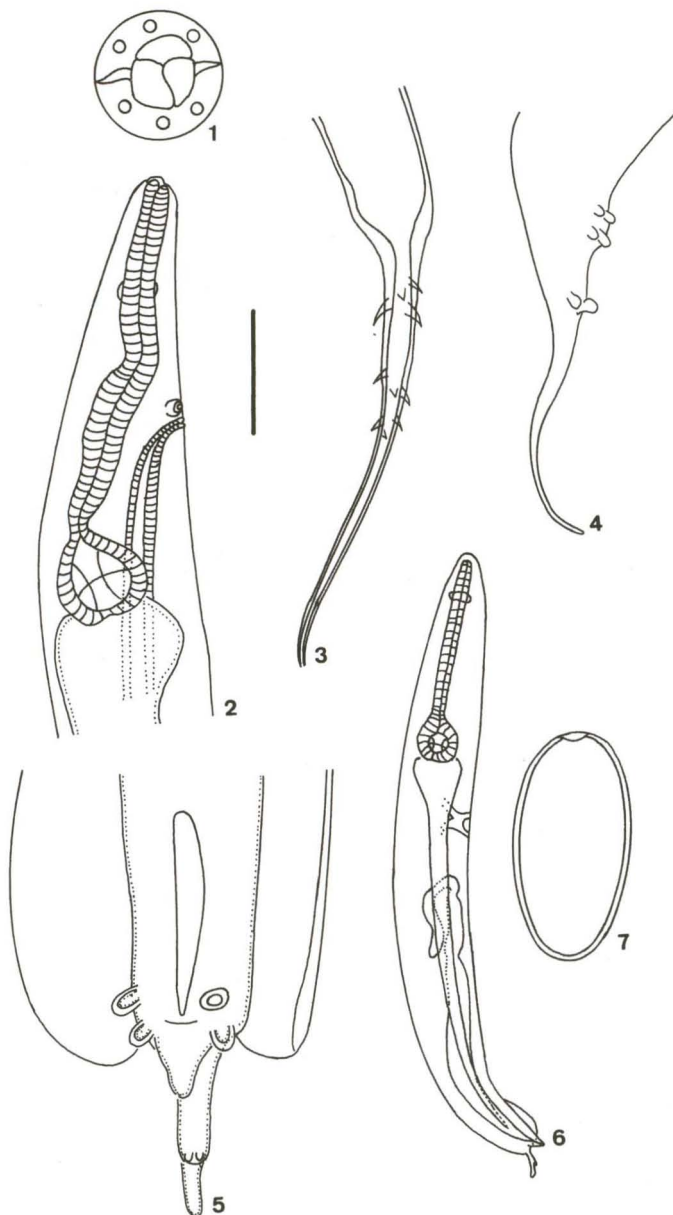
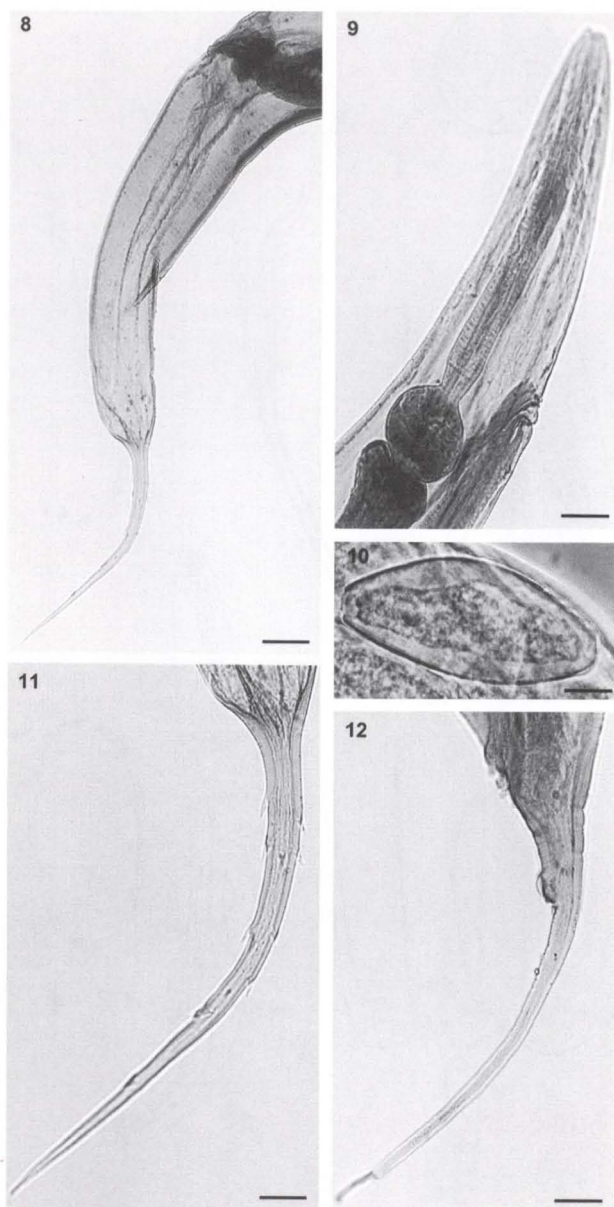


Fig. 1-7. (1-4) *Skrjabinodon heliocostai* sp.n.: (1) head of female, en face view; (2) anterior portion of female, lateral view; (3) tail of female, lateral view; (4) posterior portion of male, lateral view. (5-7) *Thelandros capacyupanquii* comb.n.: (5) posterior extremity of male, ventral view; (6) total, lateral view; (7) egg (after FREITAS *et al.* 1968). Bar common to all figures (= 50 in Fig. 1; 100 in Figs 2-4; 300 in Fig. 5 and 60 in Figs 6, 7).



Figs 8-12. *Skrjabinodon heliocostai* sp.n.. (8) Posterior portion of female, lateral view; (9) anterior portion of female, lateral view; (10) egg; (11) tail of female, lateral view; (12) posterior portion of male, lateral view. Bar common to all figures (=50 in figures 8, 9 and 20 in 10-12).

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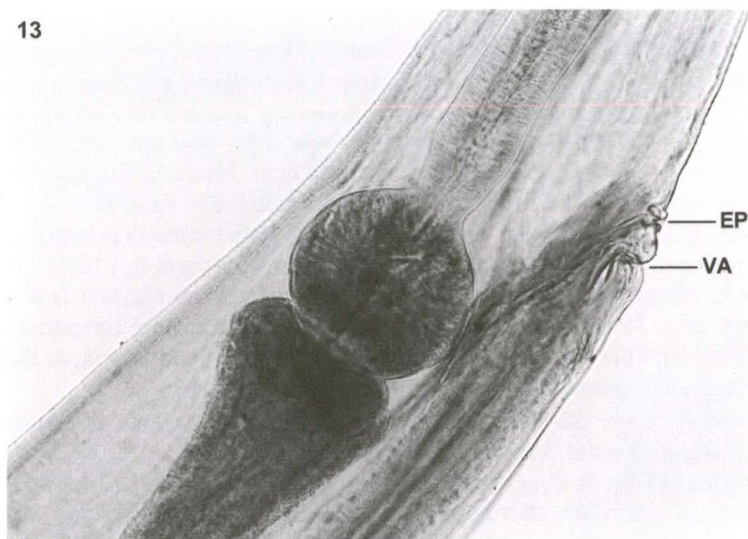


Fig. 13. *Skrjabinodon heliocostai* sp.n. excretory pore (EP) and vulvar aperture (VA), lateral view. Bar=20.

Specimens deposited. CHIOC no. 33,965 a (male holotype); 33,965 b (female allotype); 33,965 c-h (paratypes); 33,762 a-e (vouchers) – whole mounts; 33,839 (vouchers) – wet material.

Etymology. The specific name is after the late Brazilian helminthologist Dr. H lio Martins de Ara jo Costa

Remarks

In the genus *Skrjabinodon* Inglis, 1968 the species are grouped considering the presence or absence of spicules (BARUS & COY-OTERO 1974; MORAVEC & BARUS 1990). The spicule is absent in *S. apapillosus* (Koo, 1938) Inglis, 1968, *S. dossae* (Caballero, 1968), *S. leristae* Mawson, 1971, *S. megalocerca* (Skrjabin, 1916) Inglis, 1968, *S. ovocaudatus* Caballero, 1968, *S. pigmentatus* Markov & Bogdanov, 1961 and *S. smythi* Angel & Mawson, 1968 (BARUS & COY-OTERO 1974). MARKOV & BOGDANOV (1961) proposed *S. pigmentatus* from an Asian black-eyed lizard. Both males and females of this species possess lateral alae; ANGEL & MAWSON (1968) described *S. smythi* in Australia, stating that the lateral alae are present in both sexes, as well as referring to 7-9 more digitiform than spiny projections in the tail of females. CABALLERO (1968) erected *S. ovocaudatus* from specimens recovered in an African gekkonid lizard. The eggs of this species bear a long filamentous process in one of the poles. In the same paper, *S. dossae* was proposed in the genus *Parathelandros* Baylis, 1930. This species was included in *Skrjabinodon* by INGLIS (1968). *Skrjabinodon dossae* was distinguished, although in another genus, by the tail of the females, in which the terminal end presents a spiny filament, shorter than the conical portion of the tail (CABALLERO 1968). MAWSON (1971), in a report on an expedition to Pearson Island in Australia, referred

to *S. leristae*, proposed at that occasion. Males of this species present large spines in the tail. Data on other two species, namely *S. apapillosus* and *S. megalocerca*, refer to lateral alae in both sexes in *S. apapillosus* and in males of *S. megalocerca*. Concerning to the vulvar and excretory pore openings, they are posterior to the esophagus in both species (KOO 1938; SKRJABIN *et al.* 1960). In comparison with the species referred above, males of *Skrjabinodon heliocostai* **sp.n.** possess narrow lateral alae (absent in females), differing, therefore, from the much enlarged lateral alae in males of *S. megalocerca*. Moreover, the caudal process in females is long and spiny, compared to *S. smythi* and *S. dossae*, whereas in males it is smooth, compared to *S. leristae*; the eggs are devoid of polar filaments compared to *S. ovocaudatus* and the vulvar and excretory pore apertures open anterior to the end of esophagus, compared to *S. apapillosus* and *S. megalocerca*.

Among those *Skrjabinodon* species in which the spicule is present, *S. capacyupanquii* (Freitas, Vicente & Ibañez, 1968) is included. Although BARUS & COY-OTERO (1974), ROCA (1985), MORAVEC & BARUS (1990), had ratified this proposition, it is verified, after examining types of this species, described from the Peruvian lizard *Dicrodon holmbergi* Schmidt, 1957 (FREITAS *et al.* 1968) that males present a highly reduced diameter of the caudal appendage, inserted obliquely on the body and females present the vulvar aperture at about the middle of the body. Therefore, this species must be related, instead, to the genus *Thelandros* Wedl., 1862, as *T. capacyupanquii* **comb.n.** Moreover, when compared, the aspect of the eggs in females included in *Thelandros* differs from that observed in *Skrjabinodon*.

Considering these facts, the description of *S. heliocostai* **sp.n.** represents the first report of a species of the genus *Skrjabinodon* in South America.

ACKNOWLEDGEMENTS. To Dr. Charles R Bursey, Pennsylvania State University, USA, for the English translation of a Russian text, to Setor de Multimeios/IOC and to Heloisa Diniz, Laboratório de Produção e Processamento de Imagens/IOC for technical assistance regarding figures presented.

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