

**MEGALOBATRACHONEMA**  
**(CHABAUDGOLVANIA) ELONGATA**  
**(BAIRD, 1858) BAKER, 1986**  
**(NEMATODA: KATHLANIIDAE) IN**  
**AMBYSTOMA ANDERSONI KREBS**  
**AND BRANDON, 1984 FROM ZACAPU,**  
**MICHOACAN, MEXICO**

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ABSTRACT

Four of five *Ambystoma andersoni* Krebs and Brandon, 1984 endemic to Zacapu, Michoacán, Mexico were found infected with the nematode, *Megalobatrachonema (Chabaudgolvania) elongata* (Baird, 1858). This is the second report of this nematode in *A. andersoni* from this locality.

INTRODUCTION

The geographic distribution of *Megalobatrachonema (Chabaudgolvania) elongata* (Baird, 1858) Baker, 1986 (= *Leptodera elongata* Baird, 1858; *Spironoura elongata* (Baird, 1858) Walton, 1932; *Falcaustra elongata* (Baird, 1858) Freitas and Lent, 1941) has thus far been limited to ambystomatid salamanders of Mexico and the contiguous United States. This nematode was first described from *Ambystoma mexicanum* (Shaw, 1789) by Baird (1858) and assigned to *Leptodera* Dujardin, 1845. Later, Caballero and Bravo Hollis (1938) redescribed this species from *Ambystoma tigrinum* (Green, 1825) of Laguna Xochimilco, Mexico. Dyer and

Brandon (1973) pointed out, however, that in the absence of preserved host specimens, it is impossible to verify their actual identity. This difficulty arises because of inconsistency in older publications in applying the specific names *tigrinum* and *mexicanum* and because both species may occur sympatrically in parts of Mexico. Dyer and Brandon (1973) reported (*M. (C.) elongata* in several ambystomatids from Mexico. Subsequently, Dyer (1986) reported this nematode in *Ambystoma* sp. from Laguna Atexcac, Laguna Quecholac, and Laguna de la Mina Preciosa, Puebla, Mexico. The finding of this nematode in *A. tigrinum* from Utah by Fransden and Grundmann (1960) constitutes the only record of this parasite in a salamander host outside of Mexico. The present report is concerned with the detection of *M. (C.) elongata* in *Ambystoma andersoni* Krebs and Brandon (1984) endemic to Zacapu, Michoacán, Mexico.

## MATERIALS AND METHODS

Five *Ambystoma andersoni* obtained in the municipality of Zacapu, Michoacán, Mexico during July 1981 were examined for helminth parasites. Nematodes were killed and fixed in hot glycerin-alcohol (nine parts 70% ethanol and one part glycerin) and cleared for study in glycerin. Representative specimens were deposited in the United States National Museum Helminthological Collection.

## RESULTS AND DISCUSSION

Dyer and Brandon (1973) reported *M. (C.) elongata* in *Ambystoma lacustris* Taylor and Smith, 1945 from Laguna Zumpango, Mexico (USNM Helm. Coll., No. 72190), *Ambystoma* sp. from Zacapu, Michoacán, Mexico (USNM Helm. Coll., No. 72191), *Ambystoma tigrinum* (Green, 1825) (= *A. subsalsum* Taylor, 1943) from Laguna Alchichica, Puebla, Mexico (USNM Helm. Coll., No. 72192), Nopaltepec, Mexico (USNM Helm. Coll., No. 72193), *Rhyacosiredon altamirani* from La Marquesa, Mexico (USNM Helm. Coll., No. 72194) and *A. tigrinum* from Xochimilco, Mexico (specimens deposited, SIUC Helm. Coll., No. 52A.0 but inadvertently not reported).

Salamanders designated as *A. subsalsum* from a neotenic population of *Ambystoma* endemic to Laguna Alchichica were compared by Brandon et al. (1981) with the holotype of *A. subsalsum* and with *A. tigrinum* from several populations in Puebla, Tlaxcala, and Hidalgo. They concluded that the holotype is identifiable as *A. tigrinum* and is specifically different from the Laguna Alchichica neotenes designated as *A. taylori*. Thus, the salamander hosts of *M. (C.) elongata* taken at Laguna Alchichica are *A. taylori* nec *subsalsum* as reported by Dyer and Brandon (1973).

Salamanders designated by Dyer and Brandon (1973) as *Ambystoma* sp. from the municipality of Zacapu, Michoacán were later determined by Krebs and Brandon (1984) to be a new species, *Ambystoma andersoni*, thereby amending the report of Dyer and Brandon (1973).

The present finding constitutes the second report of *M. (C.) elongata* in *A. andersoni* from Zacapu, Michoacán. Measurements of two males and five females are as follows. Male: total length 19.2 to 22.1 mm; esophagus 2200 to 3100  $\mu$ m long; nerve ring 500 to 580  $\mu$ m and excretory pore 1780 to 1810  $\mu$ m long from anterior

extremity; spicules 590 to 608  $\mu\text{m}$  long; gubernaculum 142 to 153  $\mu\text{m}$  long; tail 640 to 710  $\mu\text{m}$  long. Female: total length 27.2 to 33.0 mm long; esophagus 2528 to 2883  $\mu\text{m}$  long; nerve ring 530 to 690  $\mu\text{m}$ , excretory pore 2252 to 2410  $\mu\text{m}$ , and vulva 18.0 to 23.6 mm long from anterior extremity; tail 1020 to 1264  $\mu\text{m}$  long. Representative specimens are deposited in the USNM Helm. Coll., No. 80408.

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