

Ophiotaenia ophiodes and Ophidascaris sp. in a Spotted Night Adder (Causus maculatus) from Cameroon, West Africa

Authors: Chris T. McAllister, Paul S. Freed, and Deborah A. Freed

Source: Journal of Wildlife Diseases, 28(4) : 641-642

Published By: Wildlife Disease Association

URL: <https://doi.org/10.7589/0090-3558-28.4.641>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

***Ophiotaenia ophioidex* and *Ophidascaris* sp. in a Spotted Night Adder (*Causus maculatus*) from Cameroon, West Africa**

Chris T. McAllister,¹ Paul S. Freed,² and Deborah A. Freed,³ ¹Renal-Metabolic Lab (151-G), Department of Veterans Affairs Medical Center, 4500 S. Lancaster Road, Dallas, Texas 75216, USA; ²Section of Herpetology, Houston Zoological Gardens, 1513 N. MacGregor, Houston, Texas 77030, USA; ³Section of Veterinary Services, Houston Zoological Gardens, 1513 N. MacGregor, Houston, Texas 77030, USA

ABSTRACT: A new host and geographic locality record is reported for a proteocephalid cestode (*Ophiotaenia ophioidex*) and an ascarid nematode (*Ophidascaris* sp.) recovered from a spotted night adder (*Causus maculatus*) from Cameroon, West Africa.

Key words: Cestoidea, *Ophiotaenia ophioidex*, Nematoda, *Ophidascaris* sp., *Causus maculatus*, Cameroon, night adder, Viperidae.

The spotted night adder, *Causus maculatus* is a medium-sized viperid snake that ranges from Senegal east to Chad and south through Zaire to Angola (Welch, 1982). Although a great deal of information is available on parasites of the related rhombic night adder (*C. rhombeatus*) (Daubney, 1923; Southwell and Adler, 1923; Southwell and Lake, 1939; Fantham and Porter, 1950; Mettrick, 1960, 1963; Schad, 1962; Sprent, 1985; Baker, 1987), nothing, to our knowledge, has been published on helminths of *C. maculatus*. We report new host and locality records for a cestode and nematode parasite of *C. maculatus* from Cameroon, West Africa.

Two *C. maculatus* were collected during March 1991 from the village of MUYUKA (4°10'N, 9°25'E) and imported into North America to be housed at the Houston Zoological Gardens, Houston, Texas (USA). As part of routine quarantine, both snakes were treated by stomach tube with 10 mg/kg Benzelmin® (Oxfendazole, Syntex Animal-Health Incorporated, West Des Moines, Iowa, USA) once each week for 5 wk. Parasites were collected from expelled feces, and stored in 70% ethanol. Tapeworms were stained with Semichon's acetocarmine, dehydrated in a series of ethanols, cleared in xylene, and mounted in damar (Meyer and Olsen, 1975). Nematodes were transferred to vials containing

glycerol and examined as temporary mounts. Identification of parasites were based on keys and morphological characters provided in Wardle and McLeod (1952), Mozgovoi (1968), Hartwich (1974), and Schmidt (1986). Parasites are deposited in the USNM Helminthological Collection (United States Department of Agriculture, Beltsville, Maryland, USA).

Following 1 wk of treatment, one of the snakes (subadult female, snout-vent length = 300 mm) passed feces containing helminths; the other snake was negative. Two kinds of helminths were recovered: proteocephalid cestodes (*Ophiotaenia ophioidex*, USNM 82212) and ascarid nematodes (*Ophidascaris* sp., USNM 82070). No additional helminths were expelled.

Specimens of *O. ophioidex* recovered in the present study possessed 110 to 128 (mean = 118.5) testes and 23 to 42 (mean = 32.5) uterine branches. These values accord well with those reported by Mettrick (1960). Mettrick (1960) originally described *O. ophioidex* from the lower intestine of *C. rhombeatus* from Zimbabwe. A colubrid snake, the three-lined grass snake (*Psammophylax tritaeniatus*) was also listed as a host (Mettrick, 1960, 1963). This is the first report of *O. ophioidex* from Cameroon; however, other ophiotaeniids have been reported previously, including *O. adiposa* and *O. amphiboluri* from puff adders (*Bitis arietans*) (Rudin, 1917; Hughes et al., 1941). In addition, *O. punica* and *O. theileri* are known from *C. rhombeatus* from Sierra Leone and central Africa (Southwell and Adler, 1923; Southwell and Lake, 1939; Mettrick, 1963).

Nematodes of the genus *Ophidascaris* infect a variety of snakes; *O. radiosus* in-

fecting *C. rhombeatus* in Africa (Baker, 1987). Unfortunately, only female *Ophiodascaris* were recovered from *C. maculatus* during the present study and specific identification was not possible. However, the nematodes possessed quadrangular lips not clearly divided into anterior and posterior regions and without deeply indented anterior margins, genital tubes confined to the posterior region of the body, and two uterine branches (Hartwich, 1974). Interestingly, *O. striata* was reported from a bushpig (*Potamochoerus porcus*) from Cameroon (Baker, 1987), but is probably a pseudoparasite that was just passing through the digestive tract; the true host may be a reptile.

We thank the Cameroonian authorities for issuance of collecting and export permits and D. Achu, J. Furman, and M. Sharp for assistance in collecting.

LITERATURE CITED

- BAKER, M. R. 1987. Synopsis of the Nematoda parasitic in amphibians and reptiles. Memorial University of Newfoundland Occasional Papers in Biology 11: 1-325.
- DAUBNEY, R. 1923. Note on the genus *Diaphanocephalus* (Nematoda: Strongylidae), parasitic in reptiles, with a description of three new species. Parasitology 15: 67-74.
- FANTHAM, H. B., AND A. PORTER. 1950. The endoparasites of certain South African snakes, together with some remarks on their structure and effects on their hosts. Proceedings of the Zoological Society of London 120: 599-647.
- HARTWICH, G. 1974. Keys to the genera of the Ascaridoidea. In CIH keys to the nematode parasites of vertebrates, No. 2, R. C. Anderson, A. G. Chabaud, and S. Willmott (eds.). Commonwealth Agricultural Bureaux, Bucks, England, pp. 1-15.
- HUGHES, R. C., J. R. BAKER, AND C. B. DAWSON. 1941. The tapeworms of reptiles. Part I. American Midland Naturalist 25: 454-468.
- METRICK, D. F. 1960. A new cestode, *Ophiotaenia ophioides* n. sp., from a night-adder, *Causus rhombeatus* (Licht.), in southern Rhodesia. Proceedings of the Helminthological Society of Washington 27: 275-278.
- . 1963. Some cestodes of reptiles and amphibians from the Rhodesias. Proceedings of the Zoological Society of London 141: 239-250.
- MEYER, M. C., AND O. W. OLSEN. 1975. Essentials of parasitology. 2nd ed. Wm. C. Brown Company, Dubuque, Iowa, 303 pp.
- MOZGOVOI, A. A. 1968. Ascarididata of animals and man and the diseases caused by them. In Principles of nematology, Vol. 2, Part 1, K. I. Skrjabin (ed.). M. Raveh (translator). Israel Program for Scientific Translations, Jerusalem, Israel, pp. 1-391.
- RUDIN, E. 1917. Die Ichthyotaenien der Reptilien. Revue Suisse de Zoologie 25: 179-381.
- SCHAD, G. A. 1962. Studies on the genus *Kalicephalus* (Nematoda: Diaphanocephalidae) II. A taxonomic revision of the genus *Kalicephalus* Molin, 1861. Canadian Journal of Zoology 40: 1035-1165.
- SCHMIDT, G. D. 1986. Handbook of tapeworm identification. CRC Press, Incorporated, Boca Raton, Florida, 675 pp.
- SOUTHWELL, T., AND S. ADLER. 1923. A note on *Ophiotaenia punica* (Cholodovski, 1908), La Rue, 1911. Annals of Tropical Medicine and Parasitology 17: 333-335.
- , AND F. LAKE. 1939. On a collection of Cestoda from the Belgian Congo. Annals of Tropical Medicine and Parasitology 33: 63-90, 107-123.
- SPRENT, J. F. A. 1985. Ascaridoid nematodes from amphibians and reptiles: *Orneoascaris*. Annales de Parasitologie Humaine et Comparée 60: 33-55.
- WARDLE, R. A., AND J. A. MCLEOD. 1952. The zoology of tapeworms. University of Minnesota Press, Minneapolis, Minnesota, 780 pp.
- WELCH, K. R. G. 1982. Herpetology of Africa. Robert E. Krieger Publishing Company, Malabar, Florida, 293 pp.

Received for publication 3 February 1992.