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ELAPIDAE***Naja nivea* Linnaeus, 1758****Cape Cobra****ENDOPARASITES**

Naja nivea occurs through the western half of the Republic of South Africa north to southern Namibia and adjacent Botswana (Branch 1998). To our knowledge, there is one valid report of helminths of *N. nivea*: *Xenopharynx sola* (Digenea); *Oochoristica rostellata*, *Ophiotaenia* sp. (Cestoda) and *Rhabdias fuscovenosa* (Nematoda) (Fantham & Porter, 1950). Both Yamaguti (1959) and Schmidt (1986) list *Ophiotaenia marenzelleri* as a parasite of *N. nivea*, however, we believe this to be a misreading of Fantham and Porter (*op. cit.*) whose statement was “*Ophiotaenia* near, if not identical with, *O. marenzelleri* La Rue”. The purpose of this note is to reassess and add to the helminth list of *N. nivea*.

The coelomic cavity of one male *N. nivea* (SVL = 1386 mm) collected in Namibia, Karas Region, 89 km ENE Koes, (25.9500°S, 19.1166°E, datum:WGS84, elev. 965 m) during October 1972 and deposited in the herpetology collection of the Natural History Museum of Los Angeles County (LACM 77347) was opened and visually examined. One nematode measuring 57 mm in length with 0.96 mm as greatest diameter was found. It was cleared in glycerol on a glass slide, cover-slipped, studied under a compound microscope and identified as a male *Hexametra quadricornis*. It was deposited in the United States National Parasite Collection, Beltsville, Maryland, USA as USNPC (102693).

Hexametra quadricornis is widely distributed in colubrid, elapid and viperid snakes of the old world (Sprent 1978). Small mammals serve as intermediate hosts (Anderson, 2000). *Hexametra quadricornis* in *N. nivea* is a new host record.

We would assess the host list of *N. nivea* as follows: *Xenopharynx sola* (Digenea); *Oochoristica* sp. (Cestoda), *Ophiotaenia* sp. (Cestoda); *Hexametra quadricornis* (Nematoda); *Rhabdias fuscovenosa* (Nematoda). We consider *Oochoristica rostellata* to be a parasite of Palearctic colubrid snakes and *Ophiotaenia marenzelleri* to be a parasite of the Nearctic crotalid, *Agkistrodon piscivorous* only. The specimens of Fantham & Porter (*op. cit.*) need to be reassessed for assignment elsewhere.

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Submitted by:

Stephen R. GOLDBERG, Department of Biology, Whittier College, Whittier, California 90608 U.S.A E-mail: sgoldberg@whittier.edu; & **Charles R. BURSEY**, Department of Biology, Pennsylvania State University, Shenango Campus. Sharon, Pennsylvania 16146 U.S.A E-mail: cxb13@psu.edu.

VIPERIDAE

Bitis arietans arietans (Merrem, 1820)

Puff Adder

WINTER MATING ACTIVITY

Sexually active male snakes of many species detect receptive females by following pheromonal trails laid by the female on the substrate over which she moves (Shine 2003). Observations of males trailing females can thus be used as an indication that both sexes are sexually active at the time, and a peak in such activity reveals any seasonality in mating activity. Most snakes reproduce seasonally (Shine 2003). This may be in response to variation in several factors including food availability, survival rates, thermoregulatory constraints and costs of reproduction (Bonnet 1999; Shine 2003), and so seasonality of mating can vary from one geographic location to the next within the range of a particular species (Smith et al. 2009). In fact, timing of mating within a population may even respond to temporal fluctuations in energy availability (Madsen & Shine 2000; Bonnet et al. 2001) and may thus be labile, to a degree, from one year to the next.

Variability in mating times may lead to a mismatch in the timing of mating, ovulation and sperm production (Smith et al. 2009). This mismatch is generally resolved by sperm storage, which allows decoupling timing of mating from ovulation and sperm production. Sperm storage may occur in the ductus deferens of the males before mating, or in the oviducts of females after mating, where it may remain viable for several years (Seigel & Ford 1987). Thus mating may potentially occur at any time of the year, as long as environmental temperatures are not limiting and that both sexes respond