

## SCIENTIFIC NOTE

### Myiasis by Screw Worm *Cochliomyia hominivorax* (Coquerel) (Diptera: Calliphoridae) in a Wild Maned Wolf *Chrysocyon brachyurus* (Mammalia: Canidae), in Brasília, Brazil

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#### Abstract

In April 2009, a wild maned wolf, *Chrysocyon brachyurus*, was captured in an area of cerrado in Brasília, DF, Brazil, with screw worm maggots in external wounds. Fifty larvae were bred in the laboratory and eight adults of *Cochliomyia hominivorax* (Coquerel) emerged 10 days after pupation. This is the first report of a myiasis by *C. hominivorax* in a free-living maned wolf in Brazil.

According to Zumpt (1965), myiasis is an “infestation of live humans and other vertebrates caused by dipterous larvae that feed on the host’s dead or living tissue, liquid body-substances, or ingested food”. There are two ways to classify myiasis according to the kind of parasitic relationship with their hosts: obligatory or facultative (Zumpt 1965). The obligatory parasites comprise those species of flies whose larvae only develop in or on the body of living vertebrates, e.g., Oestridae (*Oestrus ovis* L.); Hypodermatidae, Cuterebridae and Calliphoridae (*Cochliomyia hominivorax* Coquerel); Muscidae (*Philornis* spp.), and Gasterophilidae (Guimarães & Papavero 1999), while the facultative parasites develop in decomposing organic matter, and may occasionally develop in necrotic tissues of living animals, e.g., some species in the families Calliphoridae, Sarcophagidae and Muscidae (Zumpt 1965, Guimarães & Papavero 1999).

*Cochliomyia hominivorax* (Coquerel) is the fly that most frequently causes obligatory myiasis in the Americas. It is

widespread in the Neartic and Neotropical regions and has been found in many parts of the Brazilian territory (Guimarães & Papavero 1999, Wyss 2000). Recently, *C. hominivorax* was eradicated from the United States and most Central American countries by utilizing the sterile insect male technique (Wyss 2000), but it still represents an economic and health problem in South America (Madeira *et al* 1998). *Cochliomyia hominivorax* is also a problem for captive animals in Brazilian zoos (Fowler & Cubas 2001).

Several infectious and parasitic diseases have been diagnosed in both the wild and captive maned wolf *Chrysocyon brachyurus*. Among the major parasites reported are the ectoparasites *Ctenocephalides felis* (Bouché), *Rhipicephalus sanguineus* (Latreille) (Gilioli & Silva 2000), *Amblyomma* spp. and *Rhipicephalus (Boophilus) microplus* (Canestrini) (Labruna *et al* 2005).

An adult male maned wolf was captured in the vicinity of Brasília, Distrito Federal, Brazil (15°48'25.63"S /

47°58'33.56"W), and taken to the veterinary hospital of the Zoológico de Brasília for treatment on April 6<sup>th</sup>, 2009. The animal was decumbent with a perforated injury in the buccinator muscle of the right mandible and did not present any fracture or internal injury diagnosed by X-ray. After a more detailed examination two open wounds of approximately 5 mm were found in the ventral portion of the right ulna and another at the back of the right humerus. Fifty larvae were removed from the wounds and reared under laboratory conditions (25°C / 60 RH) on meat (1g per larva) until the beginning of pupation on April 7<sup>th</sup>, 2009. Only eight adults (two males and six females) were obtained after approximately 10 days, and all of them were deposited in the Coleção de Entomologia do Departamento de Zoologia da Universidade de Brasília (CEDZ/UNB), all of them identified as *C. hominivorax*. To our knowledge this is the first report of myiasis in a free-living maned wolf *C. brachyurus* caused by the screw worm *C. hominivorax* in Brazil.

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