

PNEUMONYSSOIDES CANINUM:
A MITE FROM THE NASAL CAVITIES AND
FRONTAL SINUSES OF THE DOG. A CASE REPORT

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Abstract. The dog nasal mite, *Pneumonyssoides caninum*, is reported from Italy for the first time. The identification of the mite was based upon the morphology of larvae and adults.

Key words: *Pneumonyssoides caninum*, dog, Italy.

INTRODUCTION

In 1940, Chandler and Ruhe described a mite from the nasal cavities and frontal sinuses of the dog. They classified it in the genus *Pneumonyssus* as *Pneumonyssus caninum* n. sp. Later, Fain (1955) proposed the new genus *Pneumonyssoides* in which he included *P. caninum*, distinguishing it taxonomically from the lung mites of monkeys, which he left in the genus *Pneumonyssus*.

The mite has been found in dogs in Australia, South Africa and the USA. In Europe it has since now been observed twice, in Sweden by Christenson and Rehbindler (1971) and in Norway by Tharaldsen and Grondalen (1978). Presented herein is a case report from Italy.

MATERIALS AND METHODS

A 10-year-old male Hungarian hound was admitted to the Clinic of The Veterinary School of Milan, because small white mites were seen crawling out the nostrils, while the dog was sneezing. One year later, during which a progressive health worsening was observed, a Cushing's syndrome was diagnosed. The owner decided to remove the dog by euthanasia.

Mites were collected both *intra vitam* from nostrils (larval stages), and by necroscopy from nasal cavities and frontal sinuses (larval stages and adult mites).

Lactophenol-cleared specimens (15 larvae and 8 adult females and 1 male)

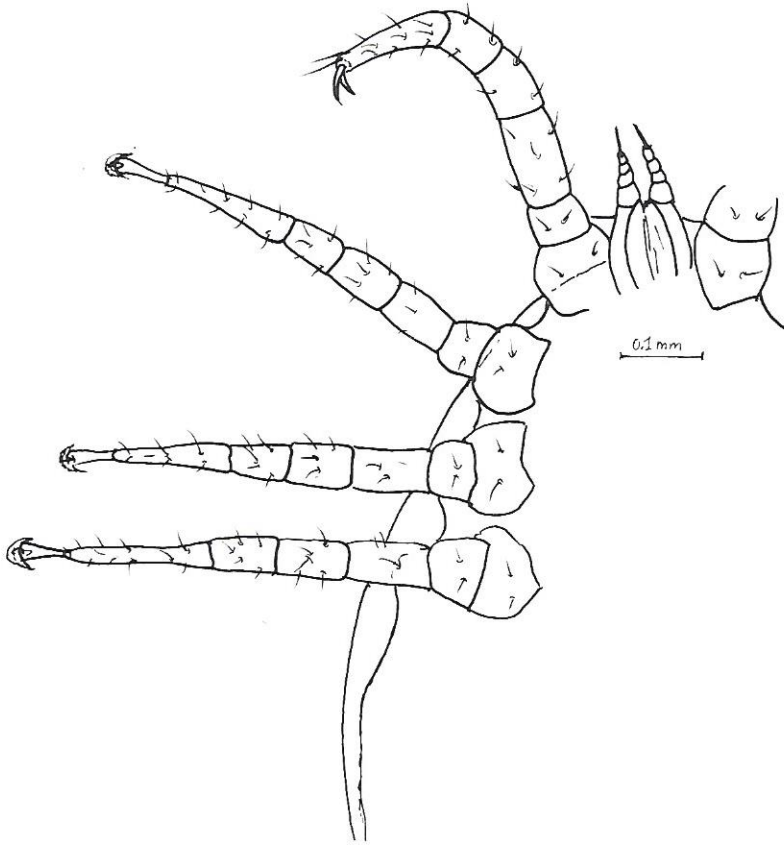


Fig. 1. *Pneumonyssoides caninum*: adult male, ventral view; note the larger hooks on leg I compared with those of the other three legs.

were studied by a light microscope and drawn with the aid of a camera lucida. Besides, 3 adult females were prepared for scanning electron microscopy. The specimens were fixed for 2 hours in 2.5% glutaraldehyde in 0.1 M phosphate buffer (pH 7.6) and then post-fixed in 2% OsO₄, dehydrated in a graded ethanol series and critical-point dried. They were mounted, 200 Å gold coated, and then examined and photographed in a Philips 501/B scanning electron microscope.

RESULTS AND DISCUSSION

All collected mites were identified as *Pneumonyssoides caninum*, accepting Fain's distinction. Females of this mite were described in the first record by Chandler and Ruhe (1940) who gave also a few morphological details of larvae.



Fig. 2. *Pneumonyssoides caninum*: chelicerae and palpi, adult female.

The morphology of the male was studied by Furman (1954) and the entire larva was described for the first time by Besch (1960). Briefly, larvae and adults of *P. caninum* have in the first pair of legs strong heavily sclerotized claws, more developed than those of the other pairs of legs, which end with long pretarsi having a caruncle and two slender claws; the last palpal segment, both in larvae and adults, is a typical elongate tibio-tarsus. Adult male and female mites of *P. caninum* have ventrally a sternal plate and an anal plate, which are absent in larvae. *Intra vitam*, any clinical symptoms were observed. At the necropsy, the signs of a chronic catarrhal rhinitis were found.

This report reveals the presence of the parasite in the canine population in Italy.

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