Proc. NIPR Symp. Polar Biol., 2, 223-224, 1989

A NOTE ON THE TERRESTRIAL NEMATODES AROUND PALMER STATION, ANTARCTICA (EXTENDED ABSTRACT)

Yukio SHISHIDA[1] and Yoshikuni OHYAMA[2]

[1]*Gunma Agricultural Research Centre, 1251, Egimachi, Maebashi 371*
[2]*National Institute of Polar Research, 9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173*

The terrestrial nematodes from the Antarctic Peninsula region were reported first by the scientific results of the Belgica Expedition (DE MAN, 1904). Further information was not added from the region for more than fifty years thereafter. The faunistic and ecological surveys on the nematodes have, however, been carried out by the British scientists at Signy Island and the Peninsula region since the 1970's, and some forty species of the nematodes have been reported from these regions up to now (SPAULL, 1973, 1981; LOOF, 1975; MASLEN, 1979).

In January and February 1985, one of the authors, OHYAMA, had an opportunity to survey soil microfauna at several sites around Palmer Station, Anvers Island of the Peninsula region. The animal samples were hand-sorted under the microscope at the Station from the materials of the following sites:

Litchfield Island: decaying moss mats with blue-green algae,
Bonaparte Point: moss mats,
Palmer Station: soil around roots of *Deschampsia antarctica*,
Biscoe Point: soil around roots of *D. antarctica*,
Dream Island: moss mats with green algae, and
Old Palmer: moss mats.

The samples contained a variety of animal groups such as nematodes, dipteran larvae, collembolans, acarids, tardigrades and rotifers. A short note is presented here for the lack of records on the nematodes in the vicinity of Palmer Station.

The nematodes amounting to 1834 individuals were examined in the present study, and the following species were identified (Table 1). The genus *Plectus* may contain three species including *P. antarcticus*. The order Dorylaimida in Table 1 may contain two species which might belong to the genus other than *Eudorylaimus*, *Enchodelus* or *Mesodorylaimus*. But it cannot be confirmed because all the specimens are of juvenile stage.

1. *Coomansus gerlachei* (DE MAN, 1904) JAIRAJPURI and KHAN, 1977.
   This species has been reported not only from the maritime Antarctic but from the Canadian Arctic (MULVEY, 1978). The male specimens of the present study differ from the original description in having a well-developed gubernaculum. One female specimen from Biscoe Point has a body length of 4027 μm, being greatest for this species as far as known.

Table 1. Occurrence of nematode species.

Nematode species	Site					
	Litchfield Is.	Bonaparte Pt.	Palmer Stn.	Biscoe Pt.	Dream Is.	Old Palmer
Coomansus gerlachei	+			+	+	+
Plectus (spp.)	+			+	+	
Eudorylaimus sp. near *verrucosus*	+					+
Mesodorylaimus signatus				+	+	
Enchodelus signyensis					+	
Dorylaimida (spp.)	+				+	

2. *Eudorylaimus* sp.
   This species is very close to *E. verrucosus* LOOF, 1975, which was described on the specimens from Elephant Island, not only in general features but also in the morphometric characters. But the specimens examined differ from *E. verrucosus* in the shape of tail and genital organ in female.
3. *Mesodorylaimus signatus* LOOF, 1975.
   This is the second record of this species. The specimens from Biscoe Point and Dream Island agree well with the original description in almost all the characters, but differ only in having longer stylets.
4. *Enchodelus signyensis* LOOF, 1975.
   The specimens from Dream Island agree with the original description in almost all the characters.

References

DE MAN, J. G. (1904): Nematodes libres. Résult Voyage S. Y. Belgica, Zoologie, Anvers, 55 p.
LOOF, P. A. A. (1975): Dorylaimoidea from some subantarctic islands. Nematologica, **21**, 219–255.
MASLEN, N. R. (1979): Additions to the nematode fauna of the Antarctic region with keys to taxa. Br. Antarct. Surv. Bull., **49**, 207–229.
MULVEY, R. H. (1978): Predaceous nematodes of the family Mononchidae from the Mackenzie and Porcupine river systems and Somerset Island, N. W. T., Canada. Can. J. Zool., **56**, 1847–1868.
SPAULL, V. W. (1973): Distribution of soil nematodes in the maritime Antarctic. Br. Antarct. Surv. Bull., **37**, 1–6.
SPAULL, V. W. (1981): Observations on *Coomansus gerlachei* (DE MAN) (Nematoda: Mononchidae), a predacious nematode from the Antarctic. Br. Antarct. Surv. Bull., **53**, 195–200.

(Received June 7, 1988; Revised manuscript received September 5, 1988)