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THE NATIONAL NEMATODE COLLECTION OF NEW ZEALAND

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Abstract

Type material described and deposited at different localities in New Zealand has been brought together in one national collection. The history of New Zealand nematode taxonomy is outlined and a list of the type material held in the National Nematode Collection of New Zealand is presented.

It is in the best interest of nematology that type material be deposited at a centre of active nematological research, where it will be properly curated and from where it is readily available on request. In New Zealand the nematode collection of the Nematology Section, Entomology Division, DSIR, Nelson, was considered most suitable.

NEW ZEALAND NEMATODE TAXONOMY

The first nematodes recorded from New Zealand were four freshwater species dredged from Lakes Taupo, Waikaremoana, Wakatipu, and Manapouri in 1902, and described by N. A. Cobb in 1904, who was working in Australia at that time. Although type material of these species may exist, it could not be located by this author.

Subsequently H. Ditlevsen described 13 new species and two new genera from two New Zealand subantarctic islands, Auckland Island and Campbell Island (1922), and 18 new species from New Zealand (Three Kings Islands to Stewart Island) (1930). All his species are marine nematodes, collected on Dr Th. Mortensen's Pacific Expedition 1914-16, the type material being deposited at the Universitets Zoologiske Museum, Copenhagen, Denmark, where it is readily available on request (J. B. Kirkegaard, curator, pers. comm.).

At about the same time as Ditlevsen, C. Allgén also studied nematodes from New Zealand subantarctic islands, collected on C. A. Larsen's Rossmeer Expedition 1923-24. From Campbell Island he described successively two new genera and 16 new species (1928), four new species (1929a), and one new genus and 49 new species (1932). From Macquarie Island he described three new species (1929b). All his species are referred to as free-living and their habitats, 40-m deep water of Perseverance Harbour and beach area, indicate that most of them are probably marine forms. At least part of Allgén's material was deposited at the Naturhistoriske Riksmuseet, Stockholm, Sweden. Only some of it is labelled properly; most seems to be numbered but no reference to the numbers is available. It is, therefore, possible that all type material of Allgén's species can still be retrieved, but it is not readily available in its present form (Dr C. Holmquist, curator, pers. comm.).

The first New Zealander in the field was J. M. Hoy, who in 1954 described an insect parasitic nematode, *Neoaplectana leucaniae*. His type material was deposited at the Entomological Research Station, Palmerston North, and has since been transferred to the nematode collection at Nelson. Like previous workers, Hoy did not assign a holotype but has selected from the specimens used for his illustrations a female which is here designated lectotype. (Collector, J. M. Hoy; locality Seafield, 5 November 1947; $L = 1850 \mu\text{m}$; width = $116 \mu\text{m}$; length aesophagus = $147 \mu\text{m}$; length tail = $50 \mu\text{m}$; $V = 54\%$; catalogue no. 84, Entomology Division, DSIR, Nelson, New Zealand.)

Serious study of the native nematode fauna by workers in New Zealand began during the 1960s with the publications of Clark (1960, 1961a-c, 1962, 1963a-e, 1964a, b), Dale (1964a, b, 1965, 1966a-c, 1967a, b), Egunjobi (1968a, b), Grandison (1964), Killick (1964), Wouts (1966), and Yeates (1967a-h, 1969). They all assigned holotypes and paratypes for their species, which were usually deposited at the institute or university with which these workers were associated. As a result primary material accumulated at Entomology Division, DSIR, Nelson, and the zoology departments of Massey University, Palmerston North, and University of Canterbury, Christchurch; some remained in private collections. From

these collections a considerable amount of material became dispersed to places other than those specified in the literature and only 42 of the 81 holotypes deposited in New Zealand could be located by Watt (1970).

NATIONAL NEMATODE COLLECTION

During the first half of 1971 all type material held in the country was relocated and transferred to the nematode collection of the Nematology Section, Entomology Division, Nelson, which is at present the only collection in New Zealand containing type material and is, therefore, named the National Nematode Collection of New Zealand (NNCNZ). Although no types of Cobb's, Ditlevsen's, and Allgén's species are present, it contains many paratypes and the holotypes of all but two of the 82 holotypes ever assigned to nematodes from New Zealand. The holotype of *Iotonchus basidontus* could not be relocated; the holotype of *Radopholus nativis* Sher, 1968 is in a foreign collection (Riverside, California).

Each nematode species held in the NNCNZ on 31 December 1971 is listed below with the author, sex of holotype, amount of paratype material, and NNCNZ number.

LIST OF TYPE MATERIAL

(Names as in the original publication)

	a*	b	c	d	e
<i>Acrobeles kotingotingus</i> Yeates, 1967e	10	9	13	1-29	
<i>Acrobeles maeneeneus</i> Yeates, 1967e	8	9	19	594-629	
<i>Acrobeles tarauus</i> Yeates, 1967e	2	9	8	1378-1395	
<i>Acrobeloides ellesmerensis</i> Yeates, 1967e	1	—	13	1270-1284	
<i>Acrobeloides syrtisus</i> Yeates, 1967e	2	—	9	1203-1213	
<i>Actinolaimus zealandicus</i> Clark, 1963d	40	28	10	31-58	
<i>Alaimus himatangiensis</i> Yeates, 1967c	5	6	—	1259-1269	
<i>Amphorostoma saccatus</i> Clark, 1962	1	1	—	1374-1375	
<i>Anaplectus arenicola</i> Killick, 1964	18	—	4	77-85	
<i>Anatonchus killicki</i> Clark, 1963e	7	—	5	86-90	
<i>Anguilluloides zondagi</i> Dale, 1967a	7	10	—	1487-1494	
<i>Aporcelaimellus maitai</i> Yeates, 1967f	8	—	7	91-105	
<i>Aporcelaimellus taylori</i> Yeates, 1967f	—	4	2	630-635	
<i>Arenasoma terricola</i> Yeates, 1967f	6	4	9	830-848	
<i>Atalodera ucri</i> Wouts & Sher, 1971	10	16	23	1040-1056	
<i>Beleodorus spiralis</i> Egunjobi, 1968a	4	—	—	1376-1377	
<i>Blatticola tuapakae</i> Dale, 1966c	6	2	—	1503-1508	
<i>Cephalobellus costelytrae</i> Dale, 1964b	4	2	—	1434-1438	
<i>Cephalobellus fluxi</i> Dale, 1966a	8	3	—	1439-1445	
<i>Cobbonchus australis</i> Clark, 1963e	2	1	22	147-155	
<i>Cobbonchus chauliodus</i> Clark, 1961b	—	—	1	131	
<i>Cobbonchus pounamua</i> Clark, 1961b	2	3	12	132-146	
<i>Crassolabium australe</i> Yeates, 1967f	6	9	28	1141-1183	
<i>Discolaimium sabuli</i> Yeates, 1967f	—	3	7	192-201	
<i>Discolaimus arenicolus</i> Yeates, 1967f	3	—	3	652-658	
<i>Dolichodorus arenarius</i> Clark, 1963a	6	7	3	156-167	
<i>Dorylaimellus monticolus</i> Clark, 1963d	2	—	—	1372-1373	
<i>Dorylaimellus tahatikus</i> Yeates, 1967f	6	2	—	644-651	
<i>Doryllium australe</i> Grandison, 1964	14	4	1	1184-1202	
<i>Ereptonema inflatum</i> Yeates, 1967h	2	—	—	667-668	

	a	b	c	d	e
<i>Eurystomina whangae</i> Yeates, 1967c	6	5	6	1285-1301	
<i>Falcihastha palustris</i> Clark, 1964b	14	23	8	202-231	
<i>Haliplectus onepui</i> Yeates, 1967b	6	5	14	334-358	
<i>Helicotylenchus depressus</i> Yeates, 1967a	6	—	6	245-256	
<i>Hemicyclophora halophila</i> Yeates, 1967h	11	—	2	232-244	
<i>Iotonchus maragnus</i> Clark, 1961a	1	1	5	302-306	
<i>Iotonchus ophiocercus</i> Clark, 1961a	5	2	29	307-328	
<i>Iotonchus percivali</i> Clark, 1961a	—	1	6	329-333	
<i>Labronema rikia</i> Yeates, 1967f	2	6	—	636-643	
<i>Leptonchus dicephalus</i> Yeates, 1967f	3	7	14	168-191	
<i>Longibulbophora ammophilae</i> Yeates, 1967d	42	—	14	1057-1083	
<i>Longidorus taniwha</i> Clark, 1963b	2	—	7	359-364	
<i>Mesorhabditis littoralis</i> Yeates, 1969	3	8	16	686-712	
<i>Miconchus kirikiri</i> Yeates, 1967c	2	3	—	722-726	
<i>Miconchus reflexus</i> Yeates, 1967c	13	3	5	59-76	
<i>Monochoides potohikus</i> Yeates, 1969	29	3	22	1084-1135	
<i>Mononchus composticola</i> Clark, 1960	64	3	17	442-480	
<i>Mononchus mauritianus</i> Williams, 1958	1	—	—	30	
<i>Mononchus mesadenus</i> Clark, 1960	24	31	32	407-441	
<i>Mononchus propapillatus</i> Clark, 1960	98	1	45	365-406	
<i>Morulaimus arenicolus</i> Sauer, 1966	12	11	—	592	
<i>Mylonchulus arenicolus</i> Clark, 1961c	—	2	—	489-490	
<i>Mylonchulus psammophilus</i> Yeates, 1967c	17	9	8	778-807	
<i>Mylonchulus ubis</i> Clark, 1961c	6	4	—	481-488	
<i>Neoapectana leucaniae</i> Hoy, 1954	78	19	7	1396-1417	
<i>Pakira orae</i> Yeates, 1967b	15	14	22	491-541	
<i>Panagrolaimus australis</i> Yeates, 1969	2	3	12	669-685	
<i>Pandurinema mowhitia</i> Yeates, 1967b	21	12	19	990-1035	
<i>Paratylenchus halophilus</i> Wouts, 1966	9	7	—	1418-1433	
<i>Protrellina gurri</i> Dale, 1966c	7	7	—	1478-1486	
<i>Pungentus maorium</i> Clark, 1963d	64	—	26	563-586	
<i>Radopholus cavenessi</i> Egunjobi, 1968a	—	—	—	—	
<i>Radopholus nativus</i> Sher, 1968	6	—	—	1509	
<i>Ruamowhitia orae</i> Yeates, 1967g	2	3	16	106-127	
<i>Sarisodera hydrophila</i> Wouts & Sher, 1971	29	29	15	1036-1039	
<i>Scutellonema magna</i> Yeates, 1967a	26	13	7	1214-1258	
<i>Sectonema sica</i> Clark, 1964a	—	—	—	—	
<i>Stegelleta iketaia</i> Yeates, 1967e	6	5	18	749-777	
<i>Stegelleta tuarua</i> Yeates, 1967e	1	2	3	743-748	
<i>Synonchium pacificum</i> Yeates, 1967g	19	42	51	849-960	
<i>Takakia waipukea</i> Yeates, 1967g	10	11	1	1350-1371	
<i>Takamangai waenga</i> Yeates, 1967f	3	—	5	659-666	
<i>Tetleyus clarki</i> Dale, 1965	9	9	5	1446-1454	
<i>Tetleyus lissotetos</i> Dale, 1966b	4	3	—	1455-1662	
<i>Tetleyus miersi</i> Dale, 1965	6	6	3	1463-1467	
<i>Tetleyus pericopti</i> Dale, 1964a	14	3	—	1468-1477	
<i>Torumanawa wahapuensis</i> Yeates, 1967f	9	10	3	808-829	
<i>Trichodorus clarki</i> Yeates, 1967d	5	12	12	961-989	
<i>Trichodorus cottieri</i> Clark, 1963c	19	13	6	542-562	
<i>Trissonchulus littoralis</i> Yeates, 1967c	13	13	22	1302-1349	
<i>Trissonchulus quinquepapillatus</i> Yeates, 1967c	1	8	—	713-721	
<i>Tylenchus areolatus</i> Egunjobi, 1968b	4	—	—	128-129	
<i>Tylenchus clarki</i> Egunjobi, 1968a	1	—	—	591	
<i>Tylenchus neozealandicus</i> Egunjobi, 1968b	4	—	—	1136-1140	
<i>Tylenchus ruatus</i> Egunjobi, 1968b	2	—	—	130	
<i>Tylenchus whitus</i> Egunjobi, 1968b	4	—	—	587-590	
<i>Wetanema hula</i> Dale, 1967b	6	5	—	1495-1502	
<i>Xiphinema monohysterum</i> Brown, 1968	—	1	—	593	
<i>Zeldia punua</i> Yeates, 1967	2	13	—	727-741	

* a = sex of holotype; b = number of female paratypes; c = number of male paratypes; d = number of juvenile paratypes; e = NNCNZ numbers of paratype slides.

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