

# Table S1 – CODE OF THE TROPHIC SPECIES (5 NUMBERS, 378 TAXA)

1<sup>st</sup> NUMBER (1 up to 9) PROVIDE INFORMATION ON THE **FEEDING STRATEGY**

**1 = Plant-feeder**

**2 = Fungivore**

**3 = Bacterivore**

**4 = Substrate ingestion**

**5 = Predator of nematodes**

**6 = Predator of arthropods**

**7 = General predator** (predator of nematodes and of arthropods, but no parasitizing life stage)

**8 = Omnivore** (generalist, predator, plant-feeder and/or fungivore, possibly parasite)

**9 = Parasite** (hosts are mites or nematodes; no passive dispersal of deutonymphs by phoresy)

2<sup>nd</sup> NUMBER (0 up to 5) PROVIDES INFORMATION ON THE **TAXOCENES** and BODY-WIDTH RANGE OF EUKARYOTES IN RELATION TO THE SOIL STRUCTURE: a. *microfauna*: decomposers, inhabit water films; b. *mesofauna*: predators and microbial grazers, inhabit air-filled pore spaces, use existing pore structures not altering pore structure; c. *macrofauna*: create their own spaces through burrowing activities, thus changing pore structure

## PROKARYOTES

MICROFLORA (MICROBES)

0 **Bacteria** (no taxonomical definition possible, all species lumped together, code “0000”)

## EUKARYOTES

### Class Nematoda

MICROFAUNA

1 **Nematoda** (169 taxa)

### Phylum Arthropoda

MESOFAUNA

2 *Acarina* (“Mites”, 146 taxa). Four suborders:

Oribatei (“K” strategists),

Prostigmata (*r*-strategists),

Mesostigmata, and

Astigmata

Generally, very little is known about the niches or ecological requirements of most soil mite species

3 *Insecta* (Subclass Apterygota)

Collembola – springtails, wingless hexapodous microarthropods

Protura – closely related to collembolans, minute, slender and wingless soil microarthropods

Diplura – japygids are predators on small arthropods, nematodes and enchytraeids or saprophagous feeders

*Myriapoda*

Pauropoda – blind, sense organs include peculiar 2-branched antennae, 3 long flagella

Symphyla – resemble tiny centipedes

### Class Oligochaeta

MESOFAUNA

4 Family Enchytraeidae (“potworms”, 8 genera), anatomically similar to tiny earthworms

MACROFAUNA

5 Family Lumbricidae (“Earthworms”, 9 genera)

Achromadora	21001	Drilocephalobus	31061	Paratylenchidae	11121
Acrobeles	31002	Ecphyadophora	11062	Paratylenchus	11122
Acrobeloides	31003	Ecumenicus	81063	Pareudiplogaster	31123
Acrobelophis	31004	Epidorylaimus	81064	Pellioiditis	31124
Acrolobus	31005	Eucephalobus	31065	Pelodera	31125
Aglenchus	11006	Eudorylaimus	81066	Plectidae	31126
Alaimidae	31007	Eumonhystera	31067	Plectus	31127
Alaimus	31008	Euteratocephalus	31068	Pratylenchidae	11128
Allodorylaimus	81009	Fictor	31069	Pratylenchus	11129
Amphidelus	31010	Filenchus	11070	Prionchulus	51130
Amplimerlinius	11011	Geocenamus	11071	Prismatolaimus	31131
Anaplectus	31012	Geomonhystera	31072	Pristionchus	31132
Anatonchus	51013	Gracilacus	11073	Prodesmodora	31133
Anguinidae	11014	Helicotylenchus	11074	Prodorylaimus	81134
Aphelenchidae	21015	Hemicycliophora	11075	Protorhabditis	31135
Aphelenchoides	21016	Heterocephalobus	31076	Pseudhalenchus	21136
Aphelenchoididae	21017	Heterodera	11077	Psilenchidae	11137
Aphelenchus	21018	Heteroderidae	11078	Psilenchus	11138
Aporcelaimellus	81019	Heterorhabditis	91079	Pungentus	81139
Aporcelaimidae	81020	Hoplolaimidae	11080	Qudsianematidae	81140
Aporcelaimus	81021	Labronema	81081	Quinisulcius	11141
Basiria	11022	Laimydorus	81082	Rhabditidae	31142
Bastiana	31023	Lelenchus	11083	Rhabditis	31143
Bastianiidae	31024	Leptonchidae	21084	Rotylenchus	11144
Bitylenchus	11025	Longidorella	11085	Scutylenchus	11145
Boleodorus	11026	Longidoridae	11086	Seinura	51146
Bunonema	31027	Longidorus	11087	Steinernematidae	91147
Bunonematidae	31028	Macroposthonia	11088	Teratocephalidae	31148
Bursilla	31029	Macrotrophurus	11089	Teratocephalus	31149
Butlerius	31030	Malenchus	11090	Thonus	51150
Cephalenchus	31031	Meloidogyne	11091	Thornematidae	81151
Cephalobidae	31032	Merlinius	11092	Thornia	81152
Cephalobus	31033	Mesodorylaimus	81093	Torumanawa	81153
Cervidellus	31034	Mesorhabditis	31094	Trichodoridae	11154
Chiloplacus	31035	Metateratocephalus	31095	Trichodorus	11155
Chromadoridae	31036	Microdorylaimus	81096	Tripyla	51156
Chronogaster	31037	Microlaimidae	31097	Tripylidae	51157
Clarkus	51038	Microlaimus	31098	Trischistoma	51158
Coarctadera	31039	Monhystera	31099	Trophurus	11159
Coomansus	51040	Monhysteridae	31100	Tylenchidae	21160
Coslenchus	11041	Monhystrella	31101	Tylencholaimellus	21161
Criconematidae	11042	Mononchidae	51102	Tylencholaimus	21162
Cruznema	31043	Mononchoides	51103	Tylenchorhynchus	11163
Cuticularia	31044	Mononchus	51104	Tylenchus	21164
Cylindrolaimus	31045	Mydonomidae	81105	Tylocephalus	31165
Dauerlarvae stage	41046	Mylonchulus	51106	Tyloaimophorus	21166
Deladenus	91047	Nagelus	11107	Tylopharynx	31167
Diphtherophora	21048	Neodiplogasteridae	81108	Wilsonema	31168
Diplogaster	81049	Neopsilenchus	11109	Xiphinema	11169
Diplogasteridae	81050	Neothada	11110		
Diploscapter	31051	Nordiidae	81111	<b>NEMATODA, 2nd</b>	
Discolaimus	51052	Nothotylenchus	21112	<b>NUMBER = 1, THE 3rd-5th</b>	
Ditylenchus	21053	Odontolaimus	31113	<b>NUMBERS ARE</b>	
Dolichodoridae	11054	Panagrobelus	31114	<b>GENERA/FAMILIES</b>	
Dolichorhabditis	31055	Panagrolaimidae	31115	<b>FEEDING STRATEGIES:</b>	
Dolichorhynchus	11056	Panagrolaimus	31116		
Dorydorella	81057	Paramphidelus	31117		
Dorylaimoidea	81058	Paraphanolaimus	31118		
Dorylaimoides	81059	Paratrichodorus	11119		
Dorylaimus	81060	Paratrophurus	11120		

1 = Plant-feeder, 2 = Fungivore,  
3 = Bacterivore, 4 = Substrate  
ingestion (only dauerlarvae), 5 =  
Predators of nematodes, 8 =  
Omnivore (1+2+5), 9 = Parasite

Achipteria 12001  
 Adamaeus 22002  
 Adoristes 22003  
 Alliphis 52004  
 Amblyseius 62005  
 Anystidae 72006  
 Arctoseius 72007  
 Asca 72008  
 Astegistes 22009  
 Astigmata 82010  
 Atropacarus 12011  
 Balaustium 92012  
 Banksinoma 22013  
 Bdella 62014  
 Bdellidae 62015  
 Belbidae 22016  
 Berniniella 22017  
 Blattisocius 62018  
 Brachychthoniidae 22019  
 Brachychthonius 22020  
 Camisia 12021  
 Cepheus 22022  
 Ceratoppia 22023  
 Ceratozetes 82024  
 Chamobates 22025  
 Cheiroseius (=Sejus) 72026  
 Cilliba 82027  
 Coccotydeus 12028  
 Cosmochthonius 22029  
 Cyrtolaelaps 72030  
 Damaeidae (sensu lato) 22031  
 Damaeobelba 22032  
 Damaeus 22033  
 Dendrolaelaps 72034  
 Dendroseius 72035  
 Diapterobates 22036  
 Dissorhina 22037  
 Diversipes 22038  
 Enochthonius 22039  
 Epicriopsis 22040  
 Ereyneidae 92041  
 Eriophyidae 12042  
 Erythraeidae 82043  
 Eulohmannia 22044  
 Eupelops 32045  
 Eupodes 82046  
 Eupodidae 82047  
 Euzetes 22048  
 Galumna 12049  
 Gamasodes 72050  
 Gamasolaelaps 72051  
 Geholaspis 62052  
 Hemileius 22053  
 Hermannia 22054  
 Histiostoma 32055  
 Holoparasitus 72056  
 Humeroabates 82057

Hypoaspis 72058  
 Hypochthonius 22059  
 Imparipes 22060  
 Isozercon 72061  
 Johnstonianidae 92062  
 Labidostomma 72063  
 Lasioseius 72064  
 Lauroppia 22065  
 Ledermuelleria 12066  
 Leioseius 72067  
 Liebstadia 22068  
 Linopodes 22069  
 Liochthonius 22070  
 Lysigamasus 72071  
 Macrocheles 72072  
 Macrochelidae 72073  
 Medioppia 22074  
 Mesostigmata (juven.) 82075  
 Metabelba 22076  
 Micropoppia 22077  
 Microtritia 12078  
 Microtydeus 22079  
 Minunthozetes 22080  
 Nanhermannia 22081  
 Nanorchestes 12082  
 Nenteria 82083  
 Neojordensia 72084  
 Nothrus 12085  
 Odontocephus 22086  
 Oppiella 22087  
 Oppiidae 22088  
 Oribatella 22089  
 Oribatida (juveniles) 82090  
 Oribatula 12091  
 Pachygnatidae 12092  
 Pachylaelaps 72093  
 Pachyseius 72094  
 Palaeacarus 22095  
 Parasitus 72096  
 Parazercon 72097  
 Penthaleus 12098  
 Penthalodidae 12099  
 Pergamasus 72100  
 Phauloppia 22101  
 Phthiracarus 12102  
 Phytoseiidae 62103  
 Platynothrus 12104  
 Prostigmata 92105  
 Protodinychus 82106  
 Prozercon 72107  
 Pseudoparasitus 92108  
 Punctoribates 22109  
 Pyemotes 92110  
 Pyemotidae 92111  
 Pygmephorus 22112  
 Quadroppia 22113  
 Ramusella 22114

Rhagidia 72115  
 Rhagidiidae 72116  
 Rhizoglyphus 12117  
 Rhodacarellus 72118  
 Rhodacaridae 72119  
 Rhodacarus 72120  
 Rhysotritia 22121  
 Scheloribates 82122  
 Schwiebea 22123  
 Scutacaridae 82124  
 Scutacarus 82125  
 Sellnickochthonius 22126  
 Siteroptes 22127  
 Spatiodamaeus 22128  
 Speleorchestes 22129  
 Steganacarus 12130  
 Stigmaeidae 82131  
 Suctobelbella 22132  
 Tarsonemidae 92133  
 Tarsonemus 82134  
 Tectocephus 22135  
 Trachytes 22136  
 Trichoribates 22137  
 Trombidiidae 92138  
 Tydeidae 12139  
 Tyrophagus 22140  
 Urobovella 72141  
 Uropoda 72142  
 Uroseius 72143  
 Veigaia 72144  
 Zercon 72145  
 Zercoseius 72146

**ACARINA (=MITES), THE 2<sup>nd</sup>  
 NUMBER = 2, 3<sup>rd</sup>-5<sup>th</sup> NUMBERS  
 ARE MOSTLY GENERA**

**THE DOMINANT FEEDING  
 STRATEGIES AS DERIVED  
 FROM FEEDING GUILDS:**

- 1 = Plant-feeder**  
(macrophytophages+panphytophages)
- 2 = Fungivore** (microphytophages)
- 3 = Bacterivore**
- 4 = Substrate ingestion** (does not occur in micro-arthropods)
- 5 = Predator of nematodes**
- 6 = Predator of arthropods**
- 7 = General predator** (5+6, no 9)
- 8 = Omnivore** (7+1+2, poss. +9)
- 9 = Parasite** (hosts are mites or nematodes; no passive dispersal of deutonymphs by phoresy)

## INSECTS AND OTHERS

Allacma	13001
Anurida	23002
Brachystomella	23003
Ceratophysella	23004
Dicyrtoma	13005
DIPLURA	83006
Entomobrya	13007
Entomobryidae	13008
Folsomia	23009
Friesea	23010
Heteromurus	23011
Hypogastrura	23012
Isotoma	23013
Isotomiella	23014
Isotomurus	23015
Lepidocyrtus	23016
Megalothorax	23017
Mesaphorura	23018
Neanura	23019
Neelides	23020
Onychiurus	23021
Orchesella	23022
Paratullbergia	23023
Parisotoma	23024
PAUROPODA	23025
Proisotoma	23026
Protaphorura	23027
PROTURA	23028
Pseudachorutes	23029
Pseudisotoma	23030
Pseudosinella	23031
Sminthuridae	13032
Sminthurides	13033
Sminthurinus	13034
Sminthurus	13035
Sphaeridia	13036
Stenaphorurella	23037
SYMPHYLA	13038
Tomocerus	23039
Vertagopus	23040
Willemia	23041

THE SECOND NUMBER ("3") IS ONLY FOR COLLEMBOLA, DIPLURA, PAUROPODA, PROTURA AND SYMPHYLA

**FIRST NUMBER REFLECTS THE FEEDING-STRATEGY OF THESE ARTHROPODS: 1=plant-feeder, 2=fungivore, or 8=omnivore (1+2+7). OTHER FOUR NUMBERS PROVIDE TAXONOMIC INFORMATION**

## OLIGOCHAETA

Juveniles (undiff/indet)	44000
Achaeta	24001
Buchholzia	44002
Cognettia	24003
Enchytraeus	34004
Enchytronia	34005
Fridericia	24006
Hemienchytraeus	34007
Hemifridericia	24008
Henlea	44009
Marionina	44010
Mesenchytraeus	34011
Allobophora	45012
Aporrectodea	45013
Dendrobaena	45014
Dendrodrilus	45015
Eisenia	45016
Eiseniella	45017
Lumbricus	45018
Octolasion	45019
Satchellius	45020

**OLIGOCHAETA (=WORMS)  
ENCHYTRAEIDAE  
( 2<sup>nd</sup> NUMBER = 4)  
AND LUMBRICIDAE  
(2<sup>nd</sup> NUMBER =5),  
THE 3<sup>rd</sup>-5<sup>th</sup> NUMBERS ARE  
GENERA OR LIFE-STAGES**

### FEEDING STRATEGIES:

**2 = Fungivore  
3 = Bacterivore  
4 = Substrate ingestion**

Please note: the feeding strategy **9 (= Parasite)** never occurs. These worms are not leeches.

**BACTERIAL CELLS HAVE NOT BEEN RECOGNIZED AT TAXONOMICAL LEVEL, AND ARE ENTERED IN THE DATASET WITH THE CODE 40000 (MORPHOSPECIES).**

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