**Parasites of three closely related Antarctic fish species (Teleostei: Nototheniinae) from Elephant Island**

Acta Parasitologica

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**Table S1:** Sampling sites of *Nototheniops larseni*, *N. nudifrons* and *Lepidonotothen squamifrons* off Elephant Island (Antarctica).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Haul | Latitude  | Longitude | Sampled species | Depth1 [m] | Depth2 [m] |
| 188 |  61° 11,22' S |  54° 35,30' W | *N. larseni, L. squamifrons* | 277.5 | 355.9 |
| 190 |  61° 12,00' S |  54° 52,49' W | *N. nudifrons* | 71.3 | 52.8 |
| 206 |  60° 49,77' S |  55° 37,25' W | *L. squamifrons* | 479.7 | 470.6 |

**Table S2:** Food items of *Nototheniops larseni*, *N. nudifrons* and *Lepidonotothen squamifrons.* Frequency of occurrence (F[%]), numerical percentage of prey (N[%]), weight percentage of prey (W[%]) and index of relative importance (IRI).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Fish species | Full stomachs | Food item | F[%] | N[%] | W[%] | IRI |
| *Nototheniops larseni* (n=40) | 18 |  |  |  |  |  |
|  |  | Crustacea | 94.44 | 97.78 | 93.25 | 18041.13 |
|  |  | Euphausiacea | 22.22 | 11.11 | 26.25 | 830.32 |
|  |  | Teleostei | 5.56 | 2.22 | 6.75 | 49.87 |
| *N. nudifrons* (n=40) | 8 |  |  |  |  |  |
|  |  | Crustacea | 50.00 | 50.00 | 78.20 | 6409.92 |
|  |  | Amphipoda | 12.50 | 12.50 | 1.28 | 172.21 |
|  |  | Euphausiacea | 25.00 | 25.00 | 73.30 | 2457.38 |
|  |  | Mollusca | 50.00 | 50.00 | 21.80 | 3590.08 |
|  |  | Bivalvia | 37.50 | 37.50 | 19.73 | 2145.99 |
| *Lepidonotothen squamifrons* (n=49) | 42 |  |  |  |  |  |
|  |  | Crustacea | 97.62 | 89.32 | 47.75 | 13379.89 |
|  |  | Amphipoda | 59.52 | 56.16 | 4.96 | 3638.14 |
|  |  | Euphausiacea | 59.52 | 17.81 | 26.20 | 2643.44 |
|  |  | Isopoda | 14.29 | 2.74 | 3.63 | 90.93 |
|  |  | Ostracoda | 4.76 | 0.55 | 0.02 | 2.69 |
|  |  | Mollusca | 11.90 | 1.37 | 11.51 | 153.35 |
|  |  | Bivalvia | 7.14 | 0.82 | 11.21 | 85.92 |
|  |  | Gastropoda | 2.38 | 0.27 | 0.30 | 1.38 |
|  |  | Polychaeta | 7.14 | 0.82 | 0.44 | 8.99 |
|  |  | Teleostei | 7.14 | 0.82 | 40.30 | 293.76 |

**Table S3:** List of parasites of *Nototheniops larseni*, *N. nudifrons* and *Lepidonotothen squamifrons*. Synonyms included in the list are *Notothenia larseni, Lepidonotothen larseni* for *Nototheniops larseni; Notothenia nudifrons, Lepidonotothen nudifrons, Lindbergichthtys nudifrons, Notothenia mizops nudifrons* for *Nototheniops nudifrons* and *Notothenia squamifrons, Lepidonotothen kempi, Notothenia brevipectoralis, Notothenia kempi, Notothenia macrophthalma* for *Lepidonotothen squamifrons*. Region abbreviations: LB = Lena Bank, OB = Ob Bank, SGI = South Georgia Island, SSI = South Shetland Islands, PF = Port Foster (Deception Island), AB = Admiralty Bay, KGI = King George Island, EI = Elephant Island, SG = South Georgia, BI = Bouvet Island, SOI = South Orkney Islands, PEI = Prince Edward Island, MI = Marion Island, CI = Cozet Islands, KS = Kerguelen Subregion, VS = Vernadsky Station, LI = Loinville Island, HI = Heard Island, McI =Macquarie Island, PB = Prydz Bay, SB = Skif Bank, NSR = North Scotia Ridge, SR = Shag Rocks, KI = Kherd Island. Compiled from a checklist by Oğuz et al 20151, the Host-parasite database of the NHM London2 and Google Scholar search of publications since 2015; the taxonomy was checked in WoRMS 2020 and updated.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Host | Group | Family | Species | Region | Ref. |
| *Nototheniops larseni* | Digenea | Derogenidae | *Gonocerca phycidis* | LB, OB | 3 |
|  |  | Hemiuridae | *Elytrophalloides oatesi* | SGI | 4 |
|  |  |  | *Lecithochirium* sp. | OB | 3 |
|  |  | Lecithasteridae | *Lecithaster macrocotyle* | SSI | 5 |
|  |  | Lepocreadiidae | *Lepidapedon garrardi* | PF, SGI | 4,6 |
|  |  |  | *Neolepidapedon magnatestis* (as syn. *Opechona magnatestis*) | LB | 3 |
|  |  | Opecoelidae | *Macvicaria georgiana* | PF | 6 |
|  |  |  | *Neolebouria antarctica* | PF, SGI, AB, KGI, EI, SG, SSI | 4,6,7 |
|  | Cestoda | Oncobothriidae | Unspecified Pseudophyllidea sp. | SSI | 5 |
|  |  | Diphyllobothriidae | Unspecified plerocercoid | PF | 6 |
|  |  | Phyllobotrhiidae | Phyllobothrium cercoid V | SGI | 8 |
|  |  | Tetraphyllidae | Unspecified larvae type „Scolex pleuronectis“ | LB, OB | 3 |
|  |  |  | Unspecified Tetraphyllidae gen. sp. | LB, OB, PF | 3,6 |
|  | Acanthocephala | Polymorphoidea | unspecified | SGI | 9 |
|  |  |  | *Corynosoma* spp. | SSI | 5 |
|  |  |  | *Corynosoma bullosum* (as syn. *C. arctocephali*) | PF, SGI, SSI | 5,6,9 |
|  |  |  | *Corynosoma hamanni* | PF, LB, SSI | 3,5,6 |
|  |  |  | *Corynosoma pseudohamanni* | PF | 6 |
|  |  |  | *Corynosoma shackletoni* | SSI | 5 |
|  |  | Rhadinorhynchidae | *Metacanthocephalus* sp. | PF, SSI | 5,6 |
|  |  |  | *Metacanthocephalus dalmori* | SSI | 5 |
|  | Nematoda | Anisakidae | *Contracaecum* sp. | LB, OB | 6 |
|  |  |  | *Contracaecum osculatum* (s.l.) | SSI | 5 |
|  |  |  | *Contracaecum radiatum* | SSI | 5 |
|  |  |  | *Pseudoterranova decipiens* (s.l.) | SSI, PF | 5,6,10 |
|  |  | Cucullanidae | *Dichelene (Cucullanellus) fraseri* (as syn. *Cucullanellus fraseri*) | LB | 3 |
|  |  | Cystidicolidae | *Ascarophis nototheniae* | SSI | 5 |
|  | Annelida | Piscicolidae | *Trulliobdella bacilliformis*(valid?) | BI, SSI, SOI, SGI, PEI, MI, CI, KS | 11 |

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| --- | --- | --- | --- | --- | --- |
| Host | Group | Family | Species | Region | Ref. |
| *Nototheniops nudifrons* | Monogenea | Capsalidae | *Pseudobenedenia nototheniae* |  | 12 |
|  |  |  | *Pseudobenedenoides shorti* |  | 12 |
|  |  | Gyrodactylidae | *Gyrodactylus* sp. | AB, SSI | 13 |
|  |  |  | *Gyrodactylus nudifronsi* | AB | 13 |
|  | Digenea | Derogenidae | *Gonocerca phycidis* | SGI, VS | 4,14 |
|  |  | Hemiuridae | *Elytrophalloides oatesi* | SGI, VS, AB | 4,14 |
|  |  |  | *Genolinea bowersi* | SSI, SGI, VS, AB | 4,14,15 |
|  |  | Lecithasteridae | *Lecithaster macrocotyle* | SGI, AB, EI, LI | 4,5,16 |
|  |  | Lepocreadiidae | *Lepidapedon garrardi* | SSI, VB, AB | 14,17 |
|  |  |  | *Lepidapedon notogeorgianum* | SGI | 4 |
|  |  |  | *Neolepidapedon magnatestis* (as syn. *Opechona magnatestis*) |  | 18 |
|  |  | Monoorchiidae | *Postmonorchis variabilis* | SGI | 4 |
|  |  | Opecoelidae | *Discoverytrema gibsoni* | SGI | 4 |
|  |  |  | *Discoverytrema markowskii* |  | 19 |
|  |  |  | *Macvicaria antarctica* | SGI | 4 |
|  |  |  | *Macvicaria georgiana* (as *Macvicaria lobata georgiana*) | VS, AB | 14 |
|  |  |  | *Macvicaria ophthalmolyci* |  | 20 |
|  |  |  | *Macvicaria pennelli* | SG, SSI | 21,22 |
|  |  |  | *Neolebouria antarctica* | SSI, KGI, EI, SGI, VS | 5,7,14 |
|  | Cestoda | unspecified | Cercoid IV bilocular | SSI | 8 |
|  |  | Oncobothriidae | Unspecified Pseudophyllidea | SSI | 5 |
|  |  |  | *Onchobothrium antarcticum* |  | 8 |
|  |  | Diphyllobothriidae | Unspecified plerocercoid | PF | 6 |
|  |  | Phyllobothriidae | Phyllobothrium cercoid I | SSI | 8 |
|  |  |  | Phyllobothrium cercoid IV | SSI | 8 |
|  |  |  | Phyllobothrium cercoid V | SSI | 8 |
|  |  |  | Phyllobothrium cercoid VI | SSI | 8 |
|  | Acanthocephala | Arhythmacanthidae | *Heterosentis heteracanthus* | SGI | 9 |
|  |  | Echinorhynchidae | unspecified | SGI | 9 |
|  |  |  | *Echinorhynchus petrotschenkoi* | SG | 22 |
|  |  | Heteroacanthocephalidae | *Aspersentis austrinus* | SSI | 23 |
|  |  | Polymorphoidea | unspecified | SSI | 9 |
|  |  |  | *Corynosoma bullosum* (syn. *Corynosoma arctocephali*) | PF, SSI, SGI, VS | 5,6,9,24 |
|  |  |  | *Corynosoma hamanni* | SSI, PF | 6,24 |
|  |  |  | *Corynosoma pseudohamanni* | SSI, PF, AB, VS | 6,14,24 |
|  |  |  | *Corynosoma shackletoni* | SSI, SG | 9 |
|  |  | Rhadinorhynchidae | *Metacanthocephalus spp.* | PF, SSI | 5,6 |
|  |  |  | *Metacanthocephalus dalmori* | VS, AB | 14 |
|  |  |  | *Metacanthocephalus johnstoni* | SSI, VS, AB | 14,24 |
|  | Nematoda | Anisakidae | *Contracaecum* spp. | PF, VS, AB, KGI | 6,14,25 |
|  |  |  | *Contracaecum osculatum* | SSI | 5 |
|  |  |  | *Contracaecum radiatum* | SSI | 5 |
|  |  |  | *Pseudoterranova decipiens* (s.l.) | SSI, PF, KGI, AB, VS | 6,10,14,25 |
|  |  | Cystidiocolidae | *Ascarophis nototheniae* | SSI, VS, AB | 5,14 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Host | Group | Family | Species | Region | Ref. |
| *Lepidonotothen squamifrons* | Monogenea | Capsalidae | *Pseudobenedenoides antarctica* | HI, McI, LB, OB | 3,26,27 |
|  |  |  | *Pseudobenedenia nototheniae* |  | 27 |
|  |  | Gyrodactylidae | *Gyrodactylus* spp. | PB, HI, McI | 27,28 |
|  | Digenea | Derogenidae | *Derogenes varicus* | OB, KS | 3,29,30 |
|  |  |  | *Gonocerca muraenolepisi* | SB, OB, LB | 29 |
|  |  |  | *Gonocerca phycidis* | KS, SB, OB, LB | 29,30 |
|  |  | Hemiuridae | *Boreascotia megavesicula* | NSR | 31 |
|  |  |  | *Elytrophalloides oatesi* | OB, CI, SGI | 3,4,29,30 |
|  |  |  | *Genolinea nototheniae* (as syn. *Pseudobunocotyla nototheniae*) |  | 20 |
|  |  | Lecithasteridae | *Lecithaster macrocotyle* (as syn. *Lecithaster australis*) | KS, OB, LB, SB, SGI | 4,29,30 |
|  |  |  | *Lecithaster micropsi* | SR | 16  |
|  |  |  | *Lecithophyllum botryophoron* (as syn. *Lecithophyllum anteroporum*) | KS, SB, OB | 3,29,30 |
|  |  | Lepocreadiidae | *Lepidapedon notogeorgianum* | SGI | 4,32 |
|  |  |  | *Neolepidapedon magnatestis* (as syn. *Opechona magnatestis*) | NSR, SGI, SR, KS, CO, OB | 3,29,30,32,33 |
|  |  | Monorchiidae | *Postmonorchis variabilis* | LB, OB | 3 |
|  |  | Opecoelidae | *Macvicaria georgiana* | SR | 29 |
|  |  |  | *Macvicaria antarctica* | NSR, KS, CI, OB, LB | 3,29,30,33 |
|  |  |  | *Macvicaria skorai* | NSR | 33 |
|  |  |  | *Neolebouria antarctica* | AB, KGI, EI, SGI, SG, KGI, SSI | 4,5,7 |
|  | Cestoda | Oncobothriidae | Unspecified Pseudophyllidea | SSI | 5 |
|  |  |  | Unspecified Tetraphyllidae | KS, CI, SB, OB, LB | 3,29,30 |
|  |  |  | Unspecified Tetraphylidae (bilocular bothria) | HI | 34 |
|  |  | Diphyllobothriidae | Phyllobothrium cercoid II | SGI | 8 |
|  |  |  | Phyllobothrium cercoid IV | SGI | 8 |
|  |  |  | Phyllobothrium cercoid V | SGI | 8 |
|  |  | Tetraphyllidae | Unspecified type “Scolex pleuronectis” | KS, CI, SB, OB, LB,  | 3,29,30 |
|  |  | Triaenophoriedae | *Eubothrium* sp. | KS, CI, SB, OB, LB | 29,30 |
|  | Acanthocephala | Arhythmacanthidae | *Heterosentis hetaracanthus* | SGI | 9 |
|  |  |  | *Hypoechinorhynchus magellanicus* | LB | 3 |
|  |  | Echinorhynchoidea | unspecified | LB | 9 |
|  |  | Heteroacanthocephalidae | *Aspersentis austrinus* (as syn. *Aspersentis megarhynchus*) | SSI, OB | 3,5 |
|  |  | Polymorphoidea | unspecified | OB, SSI | 9 |
|  |  |  | *Corynosoma* spp. | SSI | 5 |
|  |  |  | *Corynosoma bullosum* (also as syn. *Corynosoma arctocephali*) | SSI, SGI | 5,9 |
|  |  |  | *Corynosoma hamanni* | KS, CI, SB, LB | 3,29,30 |
|  |  | Rhadinorhynchidae | *Metacanthocephalus spp.* | SSI | 5 |
|  |  |  | *Metacanthocephalus rennicki* (as syn. *Echinorhynchus debenhami*) | KS, CI, OB, LB | 29,30 |
|  | Nematoda | Anisakidae | *Anisakis* sp. | KS, CI, SB, OB, LB | 3,29,30 |
|  |  |  | *Contracaecum* sp. | KS, CI, SB, OB, LB, KI | 3,29,30 |
|  |  |  | *Contracaecum osculatum* | SSI | 5 |
|  |  |  | *Contracaecum radiatum* | SSI | 5 |
|  |  |  | *Pseudoterranova decipiens* (s.l.) | SSI | 10 |
|  |  | Cucullanidae | *Dichelene (Cucullanellus) fraseri* (as syn. *Cucullanus fraseri* and var. *nototheniae*) | KS, CI, SB, OB, LB | 29,30 |
|  |  | Cystidicolidae | *Ascarophis morrhuae* | KS, CI, SB, OB, LB | 30 |
|  |  |  | *Ascarophis nototheniae* | SSI, KS, CI, SB, OB, LB, SG | 3,29 |
|  | Annelida | Unspecified | Unspecified Hirudinea |  | 28 |
|  |  | Piscicolidae | *Cryobdella* sp. | CI | 29,30 |
|  |  |  | *Cryobdella pallida* | CI | 11 |

**Table S4:** List of hosts of the parasites detected in this study. Compiled from a on a checklist by Oğuz et al 20151, the Host-parasite database of the NHM London2 and Google Scholar search of publications since 2015; the taxonomy was checked in WoRMS 2020 and updated.

|  |  |  |  |
| --- | --- | --- | --- |
| Species | Host | Host Family | Ref |
| *Elytrophalloides oatesi* | *Artedidraco mirus* | Artedidraconidae (Notothenioidei) | 4 |
|  | *Artedidraco skottsbergi* |  | 35 |
|  | *Gymnodraco acuticeps* | Bathydraconidae (Notothenioidei) | 36 |
|  | *Parachaenichthys charcoti* |  | 4,37,38 |
|  | *Parachaenichthys georgianus* |  | 4,15 |
|  | *Prionodraco evansii* |  | 39,40 |
|  | *Psilodraco breviceps* |  | 4 |
|  | *Chaenocephalus aceratus* | Channichthyidae (Notothenioidei) | 4,15,29 |
|  | *Champsocephalus gunnari* |  | 15,29 |
|  | *Channichthys rhinoceratus* |  | 29,41 |
|  | *Chionodraco hamatus* |  | 42–44 |
|  | *Chionodraco rastrospinosus* |  | 4 |
|  | *Cryodraco antarcticus* |  | 4,38,42 |
|  | *Cygnodraco mawsoni* |  | 36,42 |
|  | *Pseudochaenichthys georgianus* |  | 15,29,45 |
|  | *Macrourus carinatus* | Macrouridae (Gadiformes) | 46 |
|  | *Upeneichthys lineatus* | Mullidae (Perciformes) | 42 |
|  | *Muraenolepis microps* | Muraenolepididae (Gadiformes) | 4 |
|  | *Dissostichus eleginoides* | Nototheniidae | 3,4,29,30,47,48 |
|  | *Gobionotothen gibberifrons* |  | 4,29 |
|  | *Lepidonotothen squamifrons* |  | 3,4,29,30 |
|  | *Lindbergichthys mizops* |  | 42 |
|  | *Notothenia coriiceps* |  | 15,43,44,49,50 |
|  | *Notothenia rossii* |  | 3,4,15,29,30 |
|  | *Nototheniops larseni* |  | 4 |
|  | *Nototheniops nudifrons* |  | 4,14 |
|  | *Patagonotothen ramsayi* |  | 29 |
|  | *Trematomus bernacchii* |  | 14,37,42,51 |
|  | *Trematomus eulepidotus* |  | 17,39 |
|  | *Trematomus hansoni* |  | 4,15,44 |
|  | *Trematomus lepidorhinus* |  | 17,42 |
|  | *Trematomus newnesi* |  | 14,42,52 |
|  | *Trematomus nicolai* |  | 17 |
|  | *Trematomus pennellii* |  | 42 |
|  | *Trematomus scotti* |  | 17,42 |
| *Lepidapedon garrardi* | *Artedidraco loennbergi* | Artedidraconidae (Notothenioidei) | 35,53 |
|  | *Artedidraco shackletoni* |  | 42 |
|  | *Artedidraco skottsbergi* |  | 42 |
|  | *Bathydraco marri* | Bathydraconidae (Notothenioidei) | 40,53 |
|  | *Parachaenichthys charcoti* |  | 4,54 |
|  | *Prionodraco evansii* |  | 40,42,53 |
|  | *Chaenocephalus aceratus* | Channichthyidae (Notothenioidei) | 15 |
|  | *Chionodraco hamatus* |  | 42 |
|  | *Chionodraco rastrospinosus* |  | 4 |
|  | *Cryodraco antarcticus* |  | 42 |
|  | *Dissostichus eleginoides* | Nototheniidae | 4 |
|  | *Gobionotothen gibberifrons* |  | 4,15,19 |
|  | *Notothenia coriiceps* |  | 15,43,44,49,50 |
|  | *Notothenia rossii* |  | 4,15 |
|  | *Nototheniops larseni* |  | 4,6 |
|  | *Nototheniops nudifrons* |  | 14,17 |
|  | *Patagonotothen guntheri* |  | 4 |
|  | *Trematomus bernacchii* |  | 14,42,51 |
|  | *Trematomus eulepidotus* |  | 17,53 |
|  | *Trematomus hansoni* |  | 17,43,44,53 |
|  | *Trematomus lepidorhinus* |  | 17,53 |
|  | *Trematomus nicolai* |  | 17,53 |
|  | *Trematomus pennellii* |  | 42 |
|  | *Trematomus scotti* |  | 17,53 |
|  | *Tremotomus loennbergi* |  | 17,53 |
| *Neolebouria antarctica* | *Gerlachea australis* | Bathydraconidae (Notothenioidei) | 55 |
|  | *Gymnodraco acuticeps* |  | 55 |
|  | *Parachaenichthys charcoti* |  | 4,7,54 |
|  | *Psilodraco breviceps* |  | 4,7 |
|  | *Chaenocephalus aceratus* | Channichthyidae (Notothenioidei) | 4,5,7,15,56 |
|  | *Chaenodraco wilsoni* |  | 45 |
|  | *Champsocephalus gunnari* |   | 4,7,38  |
|  | *Chionodraco rastrospinosus* |  | 4,7  |
|  | *Cryodraco antarcticus* |   | 4,7,38  |
|  | *Neopagetopsis ionah* |   | 7,38 |
|  | *Pseudochaenichthys georgianus* |   | 4,7,45 |
|  | *Paraliparis meganchus* | Liparidae (Scorpaeniformes) | 7 |
|  | *Dissostichus eleginoides* | Nototheniidae | 7,47,48 |
|  | *Dissostichus mawsoni* |  | 7 |
|  | *Lepidonotothen squamifrons* |  | 4,5,7 |
|  | *Notothenia coriiceps* |  | 7,50 |
|  | *Notothenia rossii* |  | 4,7 |
|  | *Nototheniops larseni* |  | 4–7 |
|  | *Nototheniops nudifrons* |  | 5,7,14 |
|  | *Trematomus bernacchii* |  | 36 |
|  | *Trematomus eulepidotus* |  | 5,7,14 |
|  | *Trematomus hansoni* |  | 7 |
|  | *Trematomus newnesi* |  | 7,14 |
| *Echinorhynchus petrotschenkoi* | *Chaenocephalus aceratus* | Channichthyidae (Notothenioidei) | 9 |
|  | *Cryodraco antarcticus* |  | 9 |
|  | *Macrourus whitsoni* | Macrouridae (Gadiformes) | 57 |
|  | *Muraenolepis microps* | Muraenolepididae (Gadiformes) | 5,9 |
|  | *Dissostichus eleginoides* | Nototheniidae | 9,48,58 |
|  | *Notothenia coriiceps* |  | 49,50 |
|  | *Nototheniops nybelini* |  | 9 |
| *Corynosoma bullosum* | *Artedidraco loennbergi* | Artedidraconidae (Notothenioidei) | 57 |
|  | *Artedidraco mirus* |  | 9 |
|  | *Artedidraco orianae* |  | 57 |
|  | *Pogonophryne permitini* |  | 57 |
|  | *Gymnodraco acuticeps* | Bathydraconidae (Notothenioidei) | 55 |
|  | *Parachaenichthys charcoti* |  | 5,9,24,54,55 |
|  | *Parachaenichthys georgianus* |  | 9,59 |
|  | *Prionodraco evansii* |  | 57 |
|  | *Racovitzia glacialis* |  | 57 |
|  | *Chaenocephalus aceratus* | Channichthyidae (Notothenioidei) | 5,9,24,60 |
|  | *Champsocephalus esox* |  | 61,62 |
|  |  |  |  |
|  | *Chionodraco rastrospinosus* |  | 24 |
|  | *Cryodraco antarcticus* |  | 9,24 |
|  | *Pseudochaenichthys georgianus* |  | 45 |
|  | *Harpagifer antarcticus* | Harpagiferidae (Notothenioidei) | 14 |
|  | *Macrourus whitsoni* | Macrouridae (Gadiformes) | 57,63 |
|  | *Muraenolepis microps* | Muraenolepididae (Gadiformes) | 5,9 |
|  | *Dissostichus eleginoides* | Nototheniidae | 9,24,47,48,64 |
|  | *Dissostichus mawsoni* |  | 9,58 |
|  | *Gobionotothen gibberifrons* |  | 5,60 |
|  | *Lepidonotothen squamifrons* |  | 5,9 |
|  | *Notothenia coriiceps* |  | 24,50,60 |
|  | *Notothenia gibberifrons* |  | 9,24 |
|  | *Notothenia rossii* |  | 9,24 |
|  | *Nototheniops larseni* |  | 5,6,9 |
|  | *Nototheniops nudifrons* |  | 5,6,9,14,24 |
|  | *Nototheniops nybelini* |  | 9 |
|  | *Patagonotothen guntheri* |  | 9 |
|  | *Trematomus bernacchii* |  | 6,14,24 |
|  | *Trematomus eulepidotus* |  | 5,57 |
|  | *Trematomus hansoni* |  | 24,57,59 |
|  | *Trematomus lepidorhinus* |  | 57 |
|  | *Trematomus loennbergi* |  | 57 |
|  | *Trematomus pennellii* |  | 57 |
|  | *Trematomus scotti* |  | 57 |
|  | *Lycodichthys antarcticus* | Zoarcidae (Perciformes) | 57 |
| *Contracaecum osculatum (s.l.)* | *Gerlachea australis* | Bathydraconidae (Notothenioidei) | 55,65 |
|  | *Gymnodraco acuticeps* |  | 55 |
|  | *Parachaenichthys charcoti* |  | 5,55 |
|  | *Racovitzia glacialis* |  | 55 |
|  | *Chaenocephalus aceratus* | Channichthyidae (Notothenioidei) | 5 |
|  | *Chaenodraco wilsoni* |  | 45 |
|  | *Champsocephalus gunnari* |  | 45 |
|  | *Chionodraco myersi* |  | 65 |
|  | *Cryodraco antarcticus* |  | 65 |
|  | *Neopagetopsis ionah* |  | 45 |
|  | *Pagetopsis macroptera* |  | 45 |
|  | *Pseudochaenichthys georgianus* |  | 45 |
|  | *Muraenolepis microps* | Muraenolepididae (Gadiformes) | 5 |
|  | *Dissostichus eleginoides* | Nototheniidae | 47 |
|  | *Gobionotothen gibberifrons* |  | 5 |
|  | *Lepidonotothen squamifrons* |  | 5 |
|  | *Notothenia coriiceps* |  | 49 |
|  | *Nototheniops larseni* |  | 5 |
|  | *Nototheniops nudifrons* |  | 5 |
|  | *Pleuragramma antarctica* |  | 65 |
|  | *Trematomus eulepidotus* |  | 5 |
|  | *Trematomus newnesi* |  | 52 |
|  | *Trematomus scotti* |  | 65 |
| *Pseudoterranova decipiens (s.l.)* | *Acanthodraco dewitti* | Artedidraconidae (Notothenioidei) | 25 |
|  | *Artedidraco orianae* |  | 10 |
|  | *Artedidraco skottsbergi* |  | 10 |
|  | *Dolloidraco largedorsalis* |  | 10 |
|  | *Pogonophryne marmorata* |  | 25 |
|  | *Gymnodraco acuticeps* | Bathydraconidae (Notothenioidei) | 55 |
|  | *Parachaenichthys charcoti* |  | 10,54,55 |
|  | *Racovitzia glacialis* |  | 55 |
|  | *Chaenocephalus aceratus* | Channichthyidae (Notothenioidei) | 5,10,25,29 |
|  | *Chaenodraco wilsoni* |  | 25 |
|  | *Champsocephalus gunnari* |  | 25 |
|  | *Chionodraco hamatus* |  | 10,43 |
|  | *Chionodraco myersi* |  | 10 |
|  | *Chionodraco rastrospinosus* |  | 10,25 |
|  | *Cryodraco antarcticus* |  | 10,25 |
|  | *Cygnodraco mawsoni* |  | 65 |
|  | *Pseudochaenichthys georgianus* |  | 10,29,45 |
|  | *Paradiplospinus gracilis* | Gempylidae (Perciformes) | 10 |
|  | *Harpagifer antarcticus* | Harpagiferidae (Notothenioidei) | 14,66 |
|  | *Macrourus whitsoni* | Macrouridae (Gadiformes) | 63 |
|  | *Muraenolepis microps* | Muraenolepididae (Gadiformes) | 5,10,25 |
|  | *Dissostichus eleginoides* | Nototheniidae | 48 |
|  | *Dissostichus mawsoni* |  | 25 |
|  | *Gobionotothen gibberifrons* |  | 5,10,25 |
|  | *Lepidonototen squamifrons* |  | 25 |
|  | *Notothenia coriiceps* |  | 43  |
|  | *Notothenia rossii* |  | 3,25,29,30 |
|  | *Nototheniops larseni* |  | 5,6,10 |
|  | *Nototheniops nudifrons* |  | 6,10,14,25 |
|  | *Nototheniops nybelini* |  | 25 |
|  | *Trematomus bernacchii* |  | 14,25 |
|  | *Trematomus eulepidotus* |  | 5,10,25 |
|  | *Trematomus hansoni* |  | 10,25,43 |
|  | *Trematomus lepidorhinus* |  | 10,25 |
|  | *Trematomus loennbergi* |  | 10 |
|  | *Trematomus newnesi* |  | 14,25 |
|  | *Trematomus scotti* |  | 10,65 |
|  | *Lycenchelys aratrirostris* | Zoarcidae (Perciformes) | 25 |
| *Ascarophis nototheniae* | *Gerlachea australis* | Bathydraconidae (Notothenioidei) | 55 |
|  | *Gymnodraco acuticeps* |  | 36 |
|  | *Parachaenichthys charcoti* |  | 5,54,55 |
|  | *Racovitzia glacialis* |  | 55 |
|  | *Cryodraco antarcticus* | Channichthyidae (Notothenioidei) | 67 |
|  | *Pseudochaenichthys georgianus* |  | 45 |
|  | *Harpagifer antarcticus* | Harpagiferidae (Notothenioidei) | 66 |
|  | *Macroururs carinatus* | Macrouridae (Gadiformes) | 46 |
|  | *Dissostichus eleginoides* | Nototheniidae | 48 |
|  | *Gobionotothen gibberifrons* |  | 5 |
|  | *Lepidonotothen squamifrons* |  | 3,5,29 |
|  | *Notothenia acuta* |  | 29 |
|  | *Notothenia coriiceps* |  | 43,49,50 |
|  | *Notothenia rossi* |  | 29 |
|  | *Nototheniops larseni* |  | 5 |
|  | *Nototheniops nudifrons* |  | 5,14 |
|  | *Trematomus bernacchii* |  | 14,43,51 |
|  | *Trematomus hansoni* |  | 43 |
|  | *Trematomus newnesi* |  | 14 |

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**Data S1:** Sequences of Nematoda subsamples from *Nototheniops larseni*, *N. nudifrons* and *Lepidonotothen squamifrons* in .fasta format.

>ant-Nlar-1.521.1\_NC5

TCATTATCGAGCGAATCCAAAACGAANAAGTCTCCCAACGTGCATACCATCCATTTGCATGTTGTTGTGAGCCGCATAGAAACTCATACACGCGTGGTGGCAGCCGTCTGCTGTGCTTTATCGTGCAGACAATGGCTTATGAGTGGCTGTGTGATTGTTGAACAACGGTGACCAATTTGGCGTCTACGCCGTATCTAGCTTCCGCCTGGACCGTCGGTAGCGATGAAAGATGCGGAGGAAGTTCCTCTGTTTTGGTTTCAACGCTAACGCAGAGTTGAGCAGACTTAATGAGCCACGCTTGGTGGCCGCCAAAACCCAAAACACAACCAGTCTATTTTAACGTTTGTTGATATGTTAATGTACAAATCTTGGCGGTGGATCACTCGGTTCGTGGATCGATGAAGAACGCAGCCAGCTGCGATAAATAGTGCGAATTGCAGACACATTGAGCACTAAGAATTCGAACGCACATTGCGCTATCGGGTTCATTCCCGATGGCACGTCTGGCTGAGGGTCGAATTGTAGTAAACTGTCTTCAAGTACTTTTTATGGTCGTGAAGTATTCGGCAAGCAGTTGTCGGATAGTTGTTTTTGTTGATCGTCCGTTCGTTCGGTCGGTCCAGAGCAATATTCTGAGGCTCCTTGCTTAGTTGCGTTTTGGTAGACGTTAACACCCGAACAATATGTGGTGGTGATATTTGGNNNNRNTGGCGAGAATCATNGCCGCTTCAATGGNGGCAGCAACCAGCATACGCTAATGACAGTTGGTTGATTGAAGCCAGGGCAACGGAGTGATGTGTGGCGATCATTTAACGTTTGTATTTGACCTCAGCTCAGTCGTGATTACCCGCTGAATTTAAGCATATAATTAAGCGGAGAAAAAAAAAAYYAAAAAAN

>ant-Nlar-1.522.1\_NC5

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>ant-Nlar-10.555.1\_NC5

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>ant-Nlar-38.633.1\_NC5

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>ant-Nlar-38.635.1\_NC5

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>ant-Nlar-4.535.1\_NC5

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>ant-Nlar-40.643.1\_NC5

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>ant-Nlar-5.536.1\_NC5

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>ant-Nlar-5.537.1\_NC5

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>ant-Nlar-8.544.1\_NC5

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>ant-Nnud-1.375.1\_NC5

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>ant-Nnud-11.413.1\_93

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>ant-Nnud-15.435.1\_93

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>ant-Nnud-18.451.1\_93

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>ant-Nnud-19.455.1\_93

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>ant-Nnud-2.379.1\_NC5

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>ant-Nnud-21.460.1\_93

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>ant-Nnud-27.479.1\_93

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>ant-Nnud-28.486.1\_93\_edit

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>ant-Nnud-33.496.1\_NC5

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>ant-Nnud-35.503.1\_93

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>ant-Nnud-38.509.1\_93

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>ant-Nnud-39.512.1\_93

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>ant-Nnud-40.515.1\_NC5

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>ant-Nnud-6.392.1\_NC5

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>ant-Nnud-6.394.1\_NC5

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>ant-Nnud-8.401.1\_NC5

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>ant-Nnud-9.408.1\_93

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>ant-Lsqu-1.1.1\_NC5

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>ant-Lsqu-14.131.1\_NC5

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>ant-Lsqu-15.143.1\_NC5

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>ant-Lsqu-18.162.1\_NC5

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>ant-Lsqu-20.187.1\_NC5

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>ant-Lsqu-25.231.1\_NC5

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>ant-Lsqu-26.235.1\_NC5

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>ant-Lsqu.28.245.1\_NC5

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>ant-Lsqu-31.266.1\_NC5

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>ant-Lsqu-35.281.1\_NC5

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>ant-Lsqu-37.287.1\_NC5

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>ant-Lsqu-39.302.1\_NC5

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>ant-Lsqu-4.53.1\_NC5

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