**Table S3**. Intragenomic variation across marine nematode morphospecies. ASV genetic divergence within (i.e., among ASVs of the same specimen) and between (i.e., among ASVs representing different specimens) specimens was estimated using p-distance (%). Data (mean and range) is presented for morphospecies represented by ≥ 2 AVSs. For each nematode morphospecies, the number of specimens (N) and the number of ASVs (ASVs) matching the expected nematode ID are given. High values (> 5%) of intragenomic variation are highlighted in gray.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Family** | **Genus** | **Species** | **N** | **ASVs** | **Alignment features1** | | | | | **p-distance (%)** | |
| **L** | **C** | **V** | **Pi** | **S** | **Within** | **Between** |
| Anticomidae | *Anticoma* | *Anticoma* sp1 | 2 | 7 | 362 | 357 | 5 | 1 | 4 | 0.5 (0.0-1.1) | 0.4 (0.0-1.1) |
|  |  | *Anticoma* sp2 | 1 | 3 | 363 | 361 | 2 | 0 | 2 | 0.4 (0.3-0.6) | - |
| Camacolaimidae | *Alaimella* | *Alaimella* sp. | 2 | 22 | 366 | 350 | 16 | 5 | 11 | 0.7 (0.3-1.4) | 0.7 (0-1.4) |
|  | *Deontolaimus* | *Deontolaimus* sp1 | 1 | 3 | 373 | 371 | 2 | 0 | 2 | 0.4 (0.3-0.5) | - |
|  |  | *Deontolaimus* sp2 | 1 | 31 | 373 | 331 | 42 | 15 | 27 | 1.2 (0.3-2.7) | - |
|  | *Procamacolaimus* | *Procamacolaimus* sp. | 1 | 4 | 374 | 370 | 4 | 0 | 4 | 0.5 (0.3-0.8) | - |
| Ceramonematidae | *Pselionema* | *Pselionema* sp1 | 1 | 6 | 363 | 358 | 5 | 0 | 5 | 0.5 (0.3-0.6) | - |
|  |  | *Pselionema* sp2 | 2 | 10 | 363 | 353 | 10 | 2 | 8 | 0.7 (0.3-1.4) | 0.4 (0.0-0.8) |
| Chromadoridae | - | *Chromadoridae* sp1 | 1 | 3 | 361 | 356 | 5 | 0 | 5 | 0.9 (0.6-1.1) | - |
|  | - | *Chromadoridae* sp2 | 1 | 2 | 359 | 358 | 1 | 0 | 0 | 0.3 | - |
|  | - | *Chromadoridae* sp3 | 1 | 1 | - | - | - | - | - | - | - |
|  | - | *Chromadoridae* sp4 | 1 | 14 | 366 | 318 | 48 | 10 | 38 | 2.4 (0.3-9.8) | - |
|  | - | *Chromadoridae* sp5 | 1 | 2 | 361 | 327 | 32 | 0 | 0 | 8.9 | - |
|  | *Chromadorella* | *Chromadorella* sp1 | 1 | 4 | 361 | 339 | 22 | 0 | 22 | 3.0 (0.3-5.8) | - |
|  |  | *Chromadorella* sp2 | 1 | 3 | 365 | 356 | 5 | 0 | 5 | 0.9 (0.6-1.4) | - |
|  |  | *Chromadorella* sp3 | 1 | 11 | 362 | 350 | 12 | 3 | 9 | 0.8 (0.3-1.4) | - |
|  | *Dichromadora* | *Dichromadora* sp. | 14 | 94 | 386 | 237 | 147 | 66 | 81 | 2.6 (0.0-20.9) | 2.5 (0.0-22.3) |
|  | *Euchromadora* | *Euchromadora* sp. | 3 | 8 | 361 | 353 | 8 | 1 | 7 | 0.8 (0.3-1.7) | 0.5 (0-1.7) |
|  | *Neochromadora* | *Neochromadora* sp. | 1 | 1 | - | - | - | - | - | - | - |
| Comesomatidae | - | *Comesomatidae* sp1 | 1 | 5 | 364 | 360 | 4 | 1 | 3 | 0.5 (0.3-0.8) | - |
|  | - | *Comesomatidae* sp2 | 4 | 13 | 363 | 314 | 49 | 21 | 28 | 2.8 (0.3-10.4) | 3.0 (0.0-10.1) |
|  | - | *Comesomatidae* sp3 | 4 | 13 | 361 | 355 | 6 | 1 | 5 | 0.4 (0.3-0.5) | 0.3 (0.0-0.5) |
|  | - | *Comesomatidae* sp4 | 1 | 8 | 363 | 357 | 6 | 2 | 4 | 0.6 (0.0-1.0) | - |
|  | *Cervonema* | *Cervonema* sp1 | 1 | 1 | - | - | - | - | - | - | - |
|  |  | *Cervonema* sp2 | 12 | 43 | 363 | 312 | 51 | 36 | 15 | 1.3 (0.3-9.1) | 2.4 (0.0-9.1) |
|  | *Sabatieria* | *Sabatieria* sp1 | 2 | 12 | 363 | 339 | 24 | 6 | 18 | 0.7 (0.3-4.4) | 2.5 (0.8-5.2) |
|  |  | *Sabatieria* sp2 | 3 | 25 | 363 | 324 | 39 | 27 | 12 | 2.5 (0.3-6.1) | 2.3 (0.0-5.5) |
|  |  | *Sabatieria* sp3 | 1 | 20 | 363 | 341 | 22 | 4 | 18 | 0.8 (0.3-2.2) | - |
|  |  | *Sabatieria* sp4 | 6 | 41 | 363 | 334 | 29 | 5 | 24 | 0.6 (0.3-1.7) | 0.6 (0.0-1.8) |
|  |  | *Sabatieria* sp5 | 14 | 47 | 363 | 338 | 25 | 4 | 21 | 0.5 (0.3-1.4) | 0.4 (0.0-1.7) |
|  | *Setosabatieria* | *Setosabatieria* sp. | 4 | 38 | 363 | 314 | 49 | 32 | 17 | 1.8 (0.3-7.8) | 2.2 (0.0-7.8) |
| Cyatholaimidae | - | *Cyatholaimidae* sp1 | 1 | 24 | 361 | 331 | 30 | 8 | 22 | 1.3 (0.3-3.1) | - |
|  | - | *Cyatholaimidae* sp2 | 1 | 4 | 363 | 359 | 4 | 0 | 4 | 0.6 (0.3-0.8) | - |
|  | - | *Cyatholaimidae* sp3 | 2 | 14 | 363 | 350 | 13 | 5 | 8 | 0.7 (0.3-1.4) | 0.7 (0.0-1.7) |
|  | *Metacyatholaimus* | *Metacyatholaimus* sp. | 5 | 22 | 367 | 304 | 63 | 58 | 5 | 0.7 (0.3-1.4) | 6.5 (0.0-15.9) |
|  | *Pomponema* | *Pomponema* sp. | 3 | 11 | 365 | 281 | 84 | 84 | 0 | 0.5 (0.0-1.1) | 13.7 (0.0-23.1) |
| Desmodoridae | *Desmodora* | *Desmodora* sp1 | 1 | 6 | 361 | 353 | 8 | 4 | 4 | 1.0 (0.3-1.7) | - |
|  |  | *Desmodora* sp2 | 8 | 114 | 388 | 304 | 84 | 53 | 31 | 2.6 (0.0-11.5) | 2.6 (0.0-11.5) |
| Desmoscolecidae | *Desmoscolex* | *Desmoscolex* sp1 | 1 | 5 | 365 | 324 | 41 | 0 | 41 | 4.5 (0.3-10.8) | - |
|  |  | *Desmoscolex* sp2 | 1 | 7 | 376 | 352 | 12 | 7 | 5 | 1.3 (0.3-2.5) | - |
|  |  | *Desmoscolex* sp3 | 3 | 41 | 369 | 294 | 71 | 21 | 50 | 1.6 (0.3-7.6) | 1.5 (0.0-8.3) |
|  |  | *Desmoscolex* sp4 | 2 | 11 | 365 | 354 | 11 | 1 | 10 | 0.5 (0.3-1.4) | 0.6 (0.0-1.4) |
|  |  | *Desmoscolex* sp5 | 3 | 15 | 371 | 329 | 36 | 1 | 35 | 1.6 (0.3-9.9) | 1.6 (0.0-9.2) |
|  |  | *Desmoscolex* sp6 | 1 | 3 | 365 | 357 | 8 | 0 | 8 | 1.5 (0.3-2.2) | - |
|  |  | *Desmoscolex* sp7 | 1 | 4 | 369 | 364 | 5 | 2 | 3 | 0.8 (0.3- 1.4) | - |
|  |  | *Desmoscolex* sp8 | 1 | 15 | 363 | 346 | 17 | 2 | 15 | 0.8 (0.3-1.4) | - |
|  |  | *Desmoscolex* sp9 | 6 | 37 | 363 | 334 | 29 | 5 | 24 | 0.7 (0.0-2.9) | 0.5 (0.0-3.8) |
|  |  | *Desmoscolex* sp10 | 1 | 3 | 365 | 363 | 2 | 0 | 2 | 0.4 (0.3-0.5) | - |
|  |  | *Desmoscolex* sp11 | 9 | 52 | 364 | 326 | 38 | 8 | 30 | 0.7 (0.3-1.4) | 0.6 (0.0-1.6) |
|  |  | *Desmoscolex* sp12 | 1 | 5 | 365 | 359 | 6 | 0 | 6 | 0.7 (0.3-1.1) | - |
| Diplopeltidae | - | *Diplopeltidae* sp1 | 1 | 5 | 364 | 359 | 5 | 0 | 5 | 0.5 (0.3-0.8) | - |
|  | - | *Diplopeltidae* sp2 | 1 | 5 | 364 | 359 | 5 | 0 | 5 | 0.5 (0.3-0.8) | - |
|  | *Diplopeltis* | *Diplopeltis* sp. | 1 | 8 | 362 | 354 | 8 | 1 | 7 | 0.6 (0.3-1.1) | - |
|  | *Mudwigglus* | *Mudwigglus* sp. | 1 | 2 | 363 | 362 | 1 | 0 | 0 | 0.3 | - |
|  | *Neodiplopeltula* | *Neodiplopeltula* sp*.* | 1 | 9 | 362 | 351 | 11 | 1 | 10 | 0.7 (0.3-1.1) | - |
| Diplopeltoididae | *Diplopeltoides* | *Diplopeltoides* sp. | 1 | 35 | 365 | 329 | 36 | 14 | 22 | 1.1 (0.3-2.2) | - |
| Leptolaimidae | - | *Leptolaimidae* sp1 | 1 | 2 | 369 | 368 | 1 | 0 | 0 | 0.3 | - |
|  | *Antomicron* | *Antomicron* sp. | 1 | 7 | 366 | 346 | 20 | 1 | 19 | 1.6 (0.3-4.1) | - |
|  | *Leptolaimus* | *Leptolaimus* sp. | 3 | 16 | 368 | 343 | 25 | 13 | 12 | 1.2 (0.3-3.8) | 1.2 (0.0-4.1) |
| Linhomoeidae | - | *Linhomoeidae* sp1 | 1 | 15 | 361 | 339 | 22 | 4 | 18 | 1.0 (0.3-1.7) | - |
|  | - | *Linhomoeidae* sp2 | 1 | 13 | 366 | 350 | 16 | 5 | 11 | 1.0 (0.3-1.9) | - |
|  | *Linhomoeus* | *Linhomoeus* sp. | 1 | 14 | 367 | 348 | 19 | 3 | 16 | 0.8 (0.3-1.6) | - |
|  | *Terschellingia* | *Terschellingia* sp1 | 3 | 45 | 366 | 311 | 50 | 13 | 37 | 1.0 (0.3-2.2) | 1.0 (0.0-1.9) |
|  |  | *Terschellingia* sp2 | 2 | 15 | 361 | 348 | 13 | 2 | 11 | 0.5 (0.3-1.1) | 0.5 (0.0-0.8) |
| Microlaimidae | - | *Microlaimidae* sp1 | 1 | 2 | 359 | 358 | 1 | 0 | 0 | 0.3 | - |
|  | - | *Microlaimidae* sp2 | 2 | 31 | 359 | 330 | 29 | 9 | 20 | 0.8 (0.3-1.9) | 0.8 (0.0-1.9) |
|  | *Microlaimus* | *Microlaimus* sp. | 1 | 2 | 359 | 358 | 1 | 0 | 0 | 0.3 | - |
| Monoposthiidae | *Nudora* | *Nudora* sp. | 2 | 13 | 354 | 343 | 11 | 2 | 9 | 0.6 (0.3-0.8) | 0.5 (0.0-1.1) |
| Oncholaimidae | *Viscosia* | *Viscosia* sp1 | 1 | 4 | 360 | 357 | 3 | 0 | 3 | 0.4 (0.3-0.6) | - |
|  |  | *Viscosia* sp2 | 1 | 6 | 360 | 352 | 8 | 0 | 8 | 0.7 (0.3-1.4) | - |
|  |  | *Viscosia* sp3 | 1 | 6 | 360 | 352 | 8 | 0 | 8 | 0.7 (0.3-1.4) | - |
|  |  | *Viscosia* sp4 | 1 | 3 | 360 | 358 | 2 | 0 | 2 | 0.4 (0.3-0.6) | - |
| Oxystominidae | - | *Oxystominidae* sp1 | 1 | 2 | 362 | 361 | 1 | 0 | 0 | 0.3 | - |
|  | - | *Oxystominidae* sp2 | 1 | 13 | 362 | 340 | 15 | 7 | 8 | 1.1 (0.3-2.3) | - |
|  | - | *Oxystominidae* sp3 | 1 | 8 | 352 | 335 | 17 | 11 | 6 | 0.7 (0.0-1.0) | - |
|  | *Halalaimus* | *Halalaimus* sp1 | 1 | 4 | 391 | 356 | 1 | 0 | 1 | 0.1 (0.0-0.3) | - |
|  |  | *Halalaimus* sp2 | 1 | 22 | 358 | 322 | 33 | 7 | 26 | 0.6 (0.2-1.1) | - |
|  |  | *Halalaimus* sp3 | 1 | 4 | 356 | 353 | 3 | 0 | 3 | 0.4 (0.3-0.6) | - |
|  |  | *Halalaimus* sp4 | 4 | 13 | 358 | 348 | 9 | 1 | 8 | 0.6 (0.3-1.4) | 0.5 (0.0-1.1) |
|  |  | *Halalaimus* sp5 | 4 | 15 | 357 | 330 | 27 | 6 | 21 | 1.5 (0.3-5.6) | 1.2 (0.0-5.3) |
|  |  | *Halalaimus* sp6 | 2 | 7 | 357 | 353 | 4 | 2 | 2 | 0.5 (0.3-0.8) | 0.4 (0-0.8) |
|  |  | *Halalaimus* sp7 | 1 | 3 | 357 | 355 | 2 | 0 | 2 | 0.4 (0.3-0.6) | - |
|  |  | *Halalaimus* sp8 | 3 | 13 | 357 | 349 | 8 | 1 | 7 | 0.5 (0.3-0.6) | 0.3 (0.0-0.6) |
|  | *Litinium* | *Litinium* sp. | 1 | 2 | 362 | 361 | 1 | 0 | 0 | 0.3 | - |
|  | *Oxystomina* | *Oxystomina* sp1 | 2 | 15 | 367 | 344 | 22 | 10 | 12 | 1.2 (0.3-3.3) | 1.2 (0.3-3.3) |
|  | *Thalassoalaimus* | *Thalassoalaimus* sp1 | 1 | 4 | 384 | 360 | 2 | 0 | 2 | 0.3 (0.3-0.6) | - |
|  |  | *Thalassoalaimus* sp2 | 4 | 9 | 364 | 306 | 56 | 2 | 54 | 5.2 (0.3-15.2) | 3.1 (0.3-15.2) |
| Rhabdodemaniidae | *Rhabdodemania* | *Rhabdodemania* sp1 | 1 | 6 | 365 | 357 | 8 | 0 | 8 | 0.7 (0.3-1.4) | - |
|  |  | *Rhabdodemania* sp2 | 2 | 6 | 365 | 362 | 3 | 1 | 2 | 0.4 (0.3-0.5) | 0.3 (0.0-0.5) |
| Selachinematidae | *Halichoanolaimus* | *Halichoanolaimus* sp. | 3 | 14 | 362 | 354 | 8 | 5 | 3 | 0.6 (0.0-1.4) | 0.7 (0.0-1.4) |
|  | *Siphonolaimus* | *Siphonolaimus* sp1 | 1 | 13 | 363 | 351 | 12 | 3 | 9 | 0.7 (0.0-1.4) | - |
|  |  | *Siphonolaimus* sp2 | 1 | 13 | 368 | 322 | 41 | 5 | 36 | 2.0 (0.3-8.9) | - |
| Sphaerolaimidae | *Sphaerolaimus* | *Sphaerolaimus* sp. | 3 | 18 | 364 | 345 | 19 | 5 | 14 | 0.9 (0.3-1.6) | 0.8 (0.0-2.5) |
|  | *Subsphaerolaimus* | *Subsphaerolaimus* sp1 | 2 | 13 | 367 | 359 | 8 | 2 | 6 | 0.5 (0.3-0.5) | 0.4 (0.0-0.5) |
|  |  | *Subsphaerolaimus* sp2 | 1 | 11 | 367 | 356 | 11 | 1 | 10 | 0.6 (0.3-1.1) | - |
| Thoracostomopsidae | - | *Thoracostomopsidae* sp. | 2 | 25 | 361 | 318 | 43 | 9 | 34 | 1.3 (0.3-5.3) | 1.3 (0.0-5.3) |
|  | *Mesacanthion* | *Mesacanthion* sp1 | 1 | 4 | 360 | 353 | 7 | 2 | 5 | 1.1 (0.3-1.7) | - |
|  |  | *Mesacanthion* sp2 | 3 | 13 | 361 | 348 | 13 | 1 | 12 | 0.6 (0.6-1.9) | 0.6 (0.3-1.9) |
| Xyalidae | - | *Xyalidae* sp1 | 1 | 4 | 365 | 362 | 3 | 0 | 3 | 0.4 (0.3-0.5) | - |
|  | - | *Xyalidae* sp2 | 1 | 7 | 368 | 362 | 6 | 0 | 6 | 0.5 (0.3-0.8) | - |
|  | - | *Xyalidae* sp3 | 1 | 4 | 363 | 359 | 4 | 0 | 4 | 0.6 (0.3-0.8) | - |
|  | - | *Xyalidae* sp4 | 1 | 3 | 363 | 361 | 2 | 0 | 2 | 0.4 (0.3-0.5) | - |
|  | *Amphimonhystera* | *Amphimonhystera* sp. | 1 | 3 | 364 | 362 | 2 | 0 | 2 | 0.3 (0.3-0.5) | - |
|  | *Amphimonhystrella* | *Amphimonhystrella* sp. | 1 | 3 | 368 | 366 | 2 | 0 | 2 | 0.4 (0.3-0.5) | - |
|  | *Daptonema* | *Daptonema* sp1 | 1 | 1 | - | - | - | - | - | - | - |
|  |  | *Daptonema* sp2 | 1 | 3 | 368 | 358 | 10 | 0 | 10 | 1.8 (0.5-2.8) | - |
|  |  | *Daptonema* sp3 | 2 | 2 | 364 | 364 | 0 | 0 | 0 | - | - |
|  | *Promonhystera* | *Promonhystera* sp. | 1 | 6 | 363 | 356 | 7 | 0 | 7 | 0.6 (0.3-1.1) | - |
|  | *Theristus* | *Theristus* sp. | 1 | 1 | - | - | - | - | - | - | - |

1 Alignment features: L: alignment length, C: number of conserved sites, V: number of variable sites, Pi: number of parsimony-informative sites, S: number of singletons.

(-) Not calculated due to the low number of sequences.