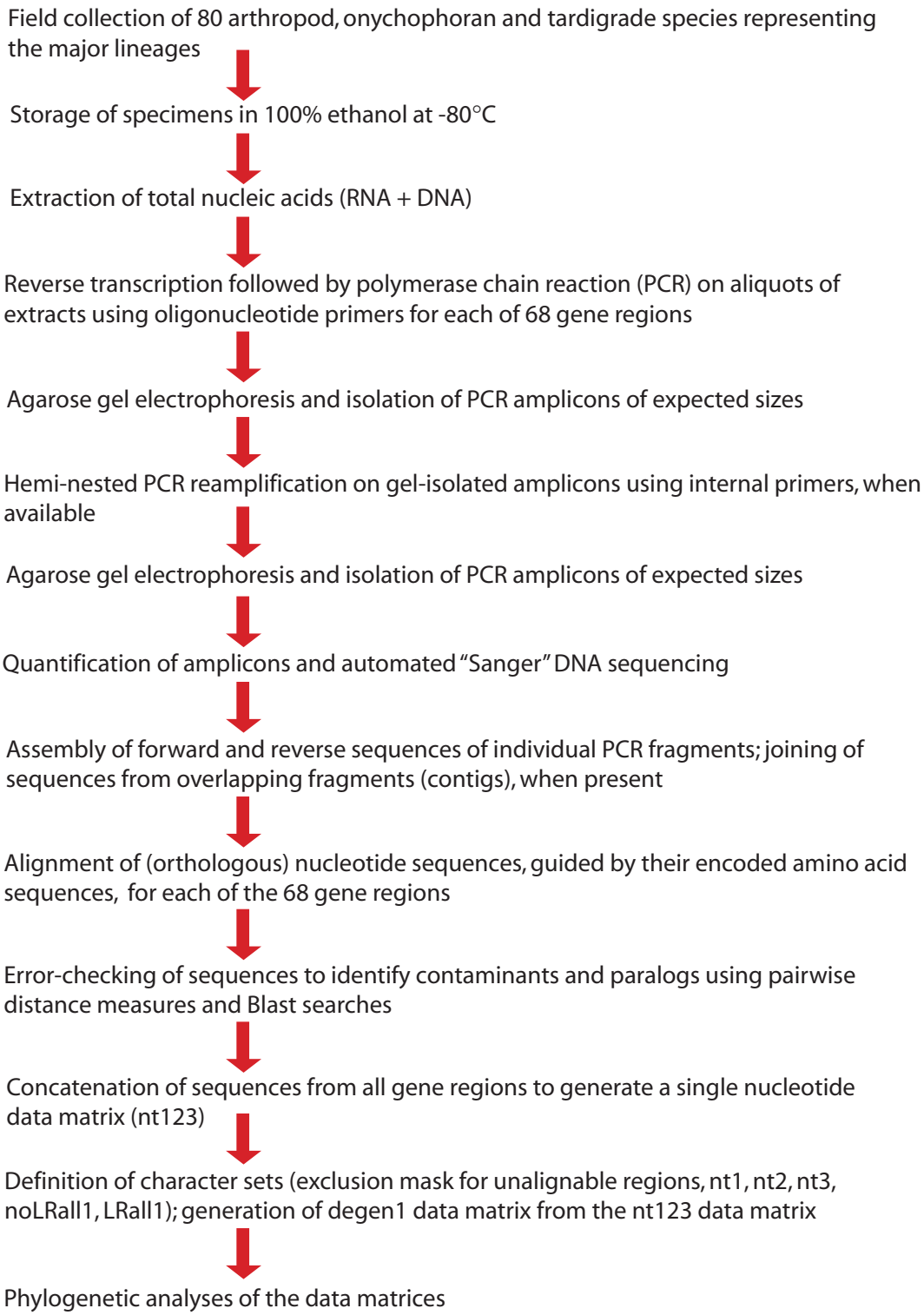
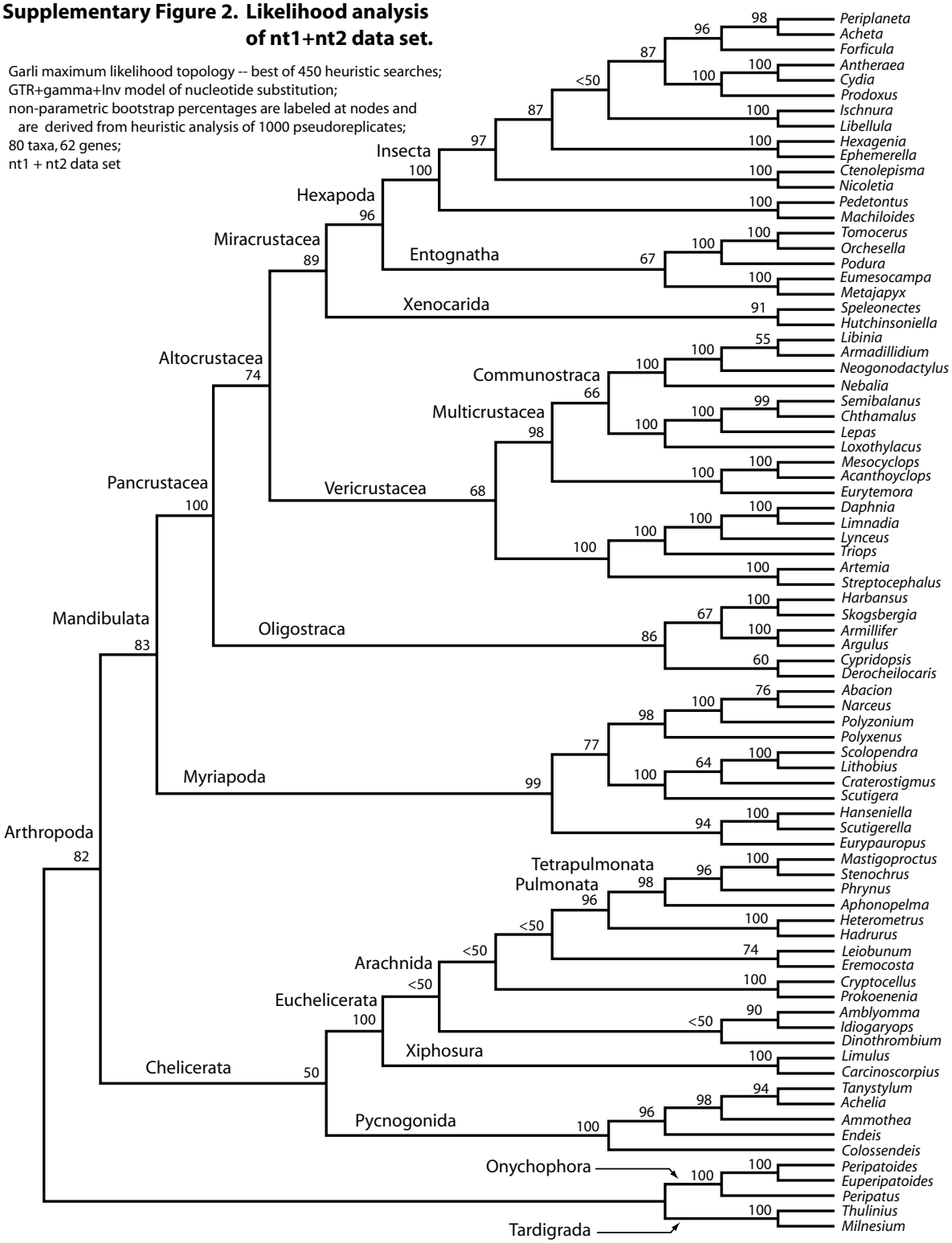
SUPPLEMENTARY INFORMATION

Supplementary Figure 1. Flow chart of activities leading to the phylogenetic trees of Figures 1 & 2.



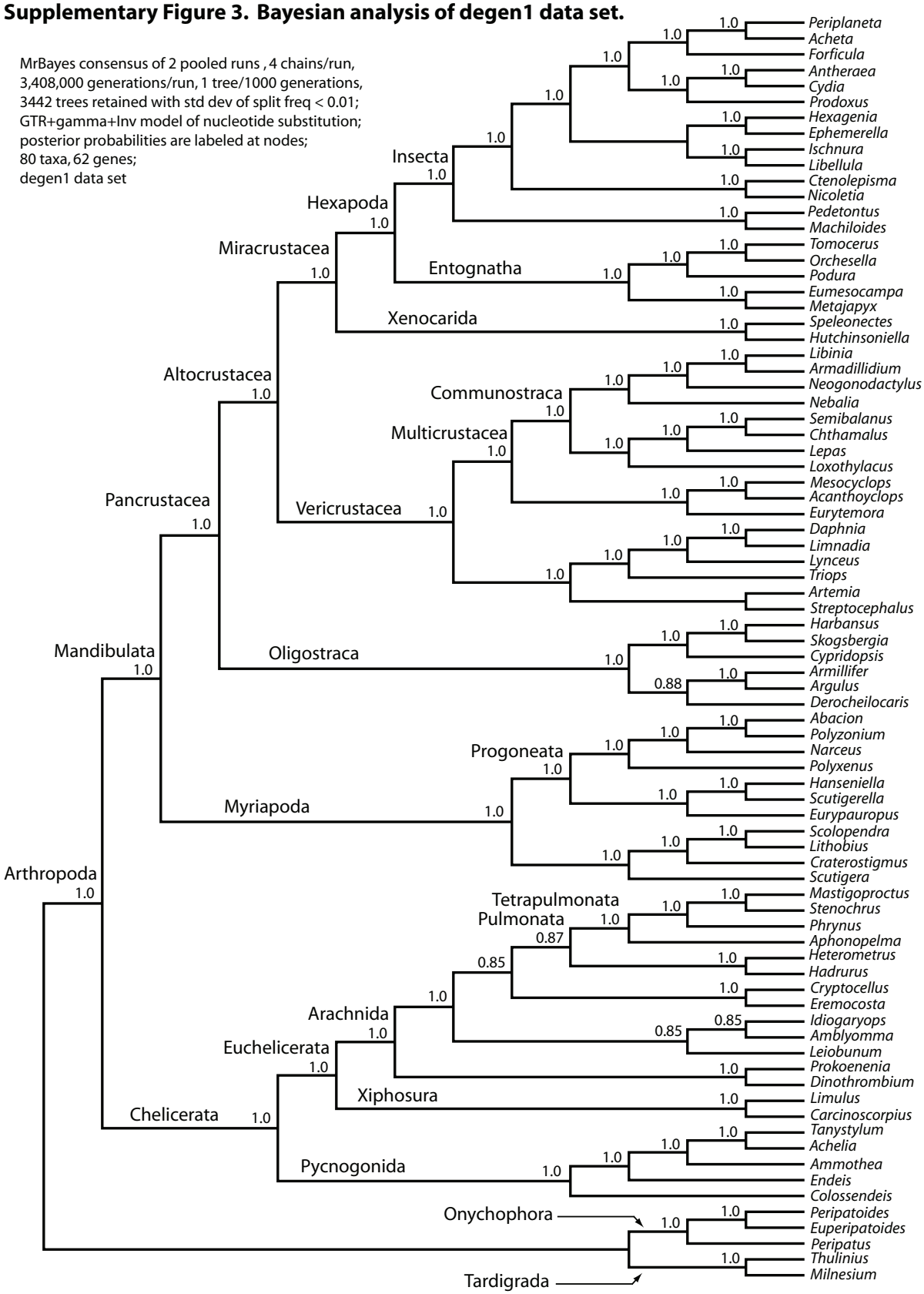
Supplementary Figure 2. Likelihood analysis of nt1+nt2 data set.

Garli maximum likelihood topology -- best of 450 heuristic searches;
GTR+gamma+Inv model of nucleotide substitution;
non-parametric bootstrap percentages are labeled at nodes and are derived from heuristic analysis of 1000 pseudoreplicates;
80 taxa, 62 genes;
nt1 + nt2 data set



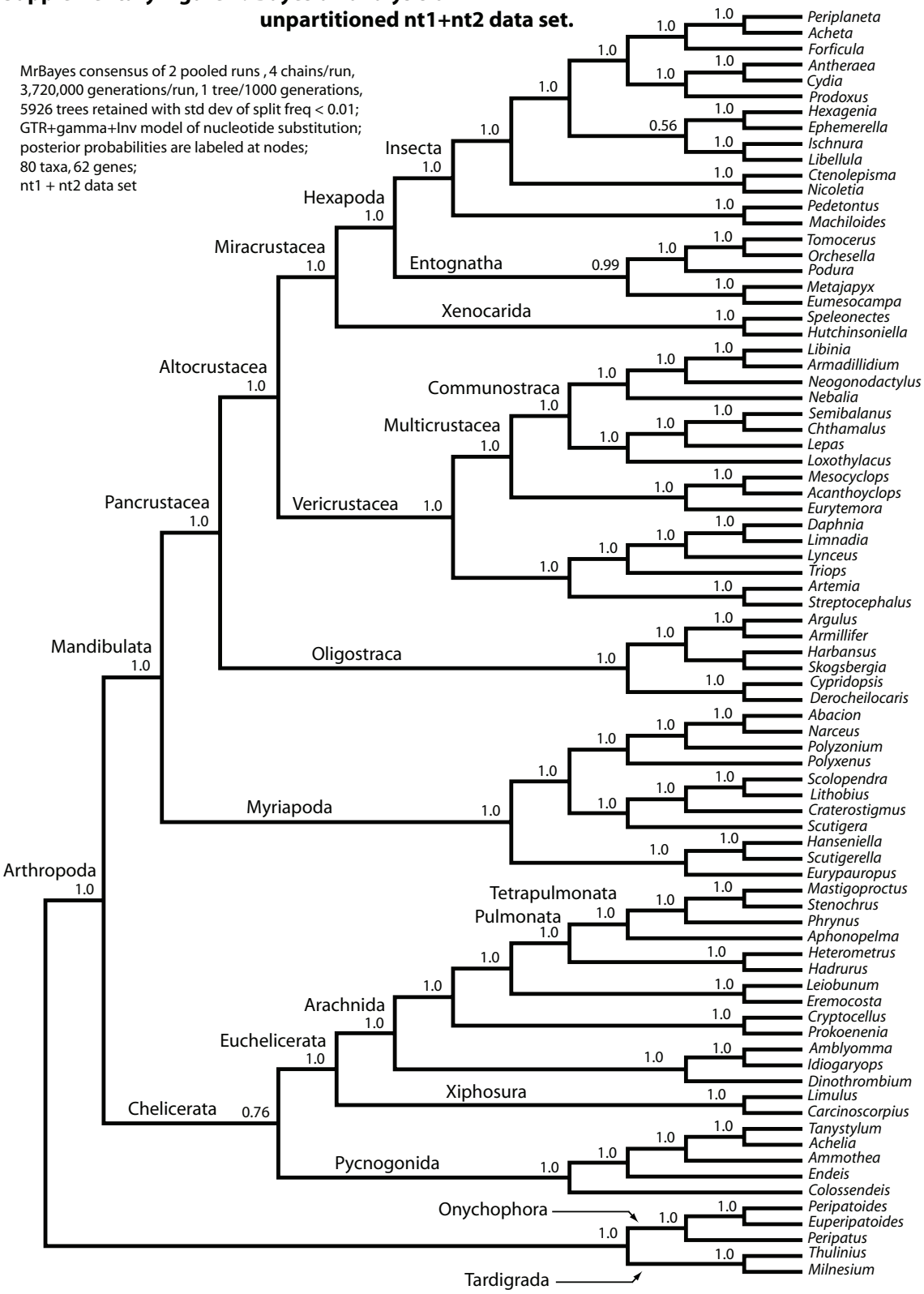
Commentary on Supplementary Figure 2: For comparison, 34 out of 37 pancrustacean nodes and 67 out of the 77 total nodes found in Figure 1 of the main text are also present in this figure, including all six higher-level pancrustacean clades of note, namely, Altocrustacea, Vericrustacea, Multicrustacea, Communostraca, Xenocarida and Miracrustacea. For these six nodes, bootstrap values are modest to strong but are consistently somewhat lower than for the degen1 data set shown in Figure 1. Note also that node support for Mandibulata, for Symphyla (represented by *Hanseniella* and *Scutigerella*) + Pauropoda (represented by *Eurypauropus*) and for Pulmonata remains high (93%, 94% and 96%, respectively).

Supplementary Figure 3. Bayesian analysis of degen1 data set.



Commentary on Supplementary Figure 3: For comparison, the topology in this figure is identical to that in Figure 1 of the main text. Only one node in Pancrustacea and four nodes within Arachnida have posterior probabilities that are less than 1.0.

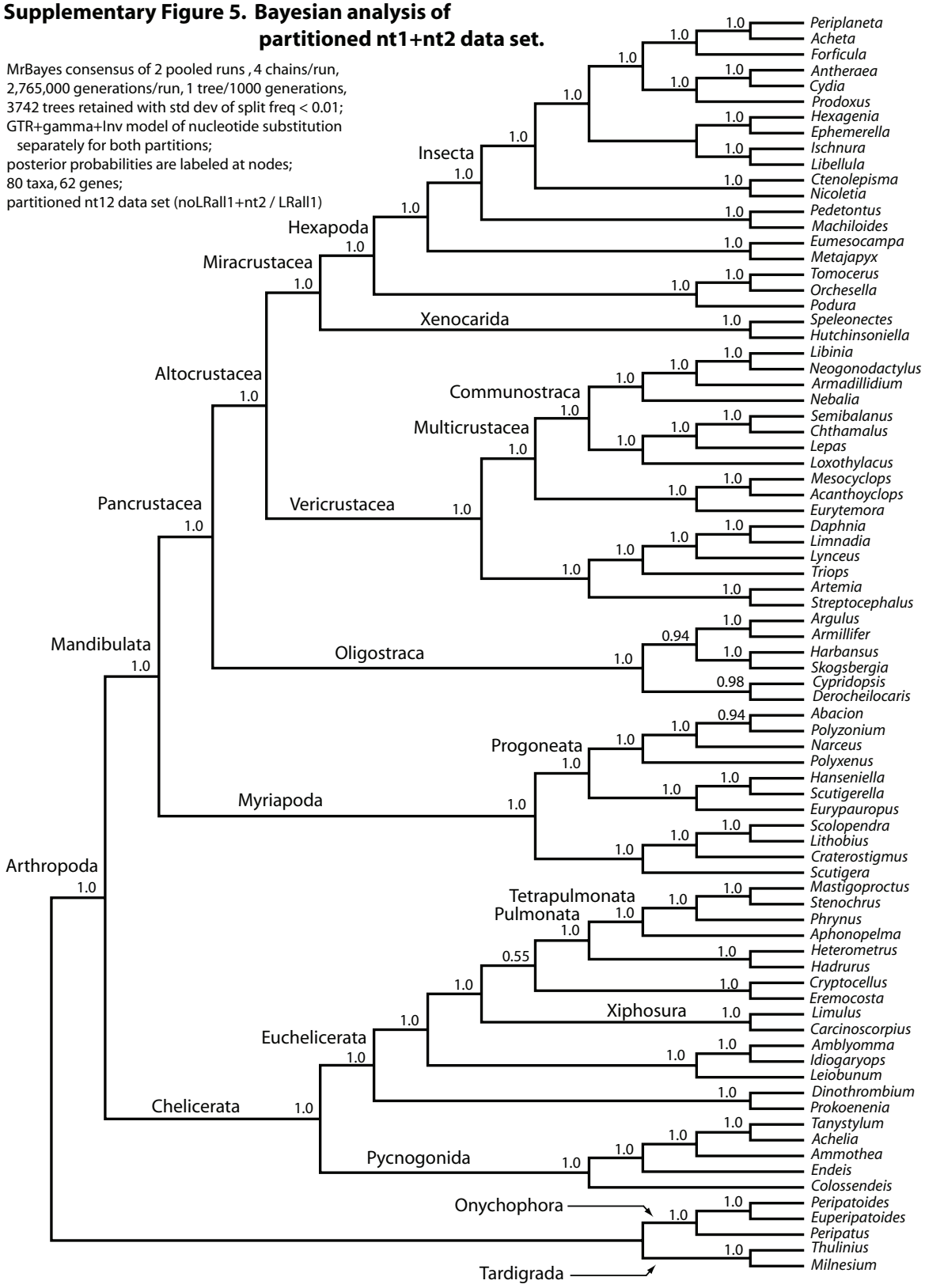
Supplementary Figure 4. Bayesian analysis of unpartitioned nt1+nt2 data set.



Commentary on Supplementary Figure 4: For comparison, 35 out of 37 pancrustacean nodes and 68 out of the 77 total nodes found in Figure 1 of the main text are also present in this figure, including all six higher-level pancrustacean clades of note, namely, Altocrustacea, Vericrustacea, Multicrustacea, Communostraca, Xenocarida and Miracrustacea. Only two nodes in Pancrustacea and one node in Chelicerata have posterior probabilities that are less than 1.0.

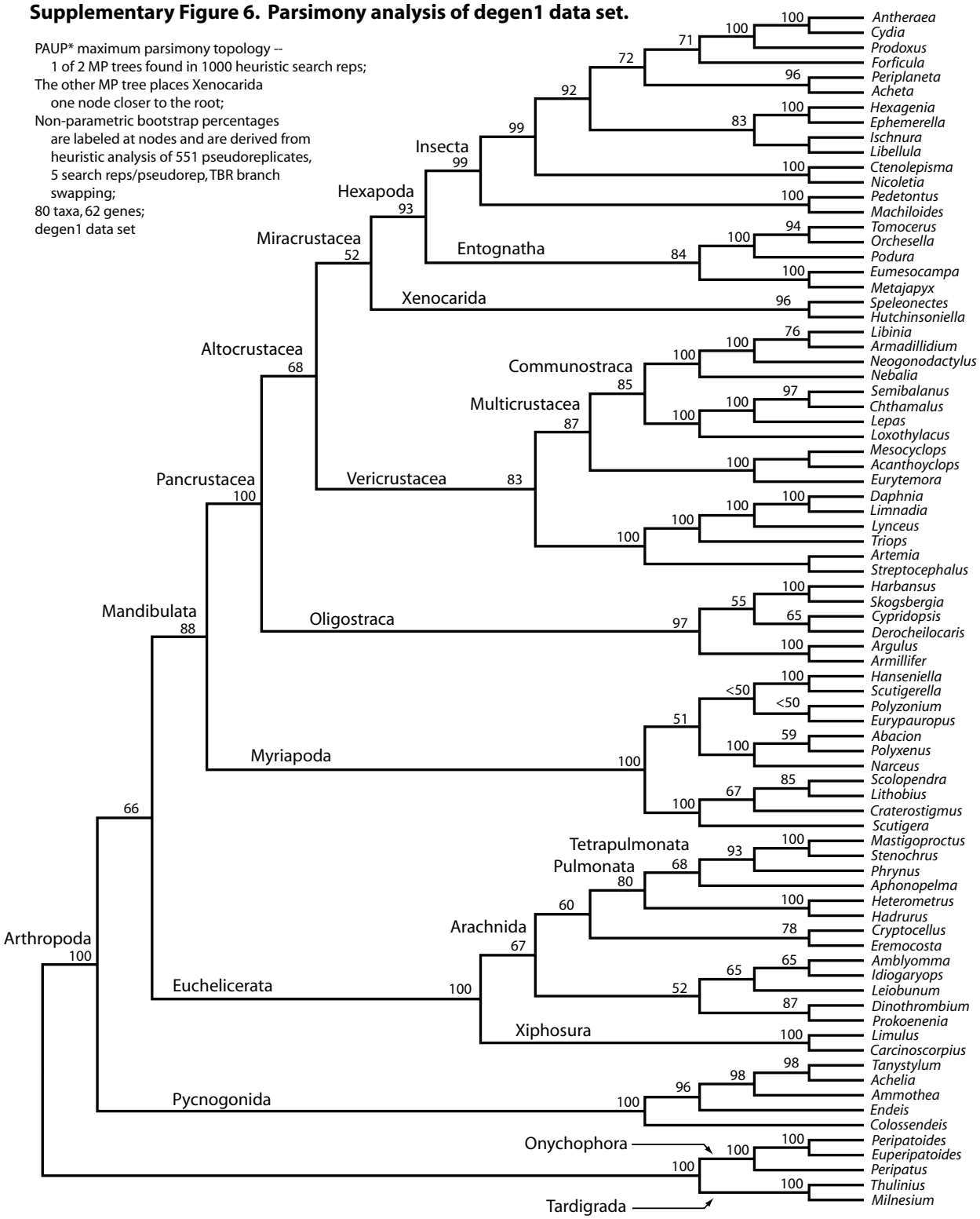
Supplementary Figure 5. Bayesian analysis of partitioned nt1+nt2 data set.

MrBayes consensus of 2 pooled runs , 4 chains/run,
2,765,000 generations/run, 1 tree/1000 generations,
3742 trees retained with std dev of split freq < 0.01;
GTR+gamma+Inv model of nucleotide substitution
separately for both partitions;
posterior probabilities are labeled at nodes;
80 taxa, 62 genes;
partitioned nt12 data set (noLRall1+nt2 / LRall1)



Commentary on Supplementary Figure 5: For comparison, 33 out of 37 pancrustacean nodes and 71 out of the 77 total nodes found in Figure 1 of the main text are also present in this figure, including all six higher-level pancrustacean clades of note, namely, Altocrustacea, Vericrustacea, Multicrustacea, Communostraca, Xenocarida and Miracrustacea. Only two nodes in Pancrustacea and one each in Myriapoda and Eucheliceratа have posterior probabilities that are less than 1.0.

Supplementary Figure 6. Parsimony analysis of degen1 data set.



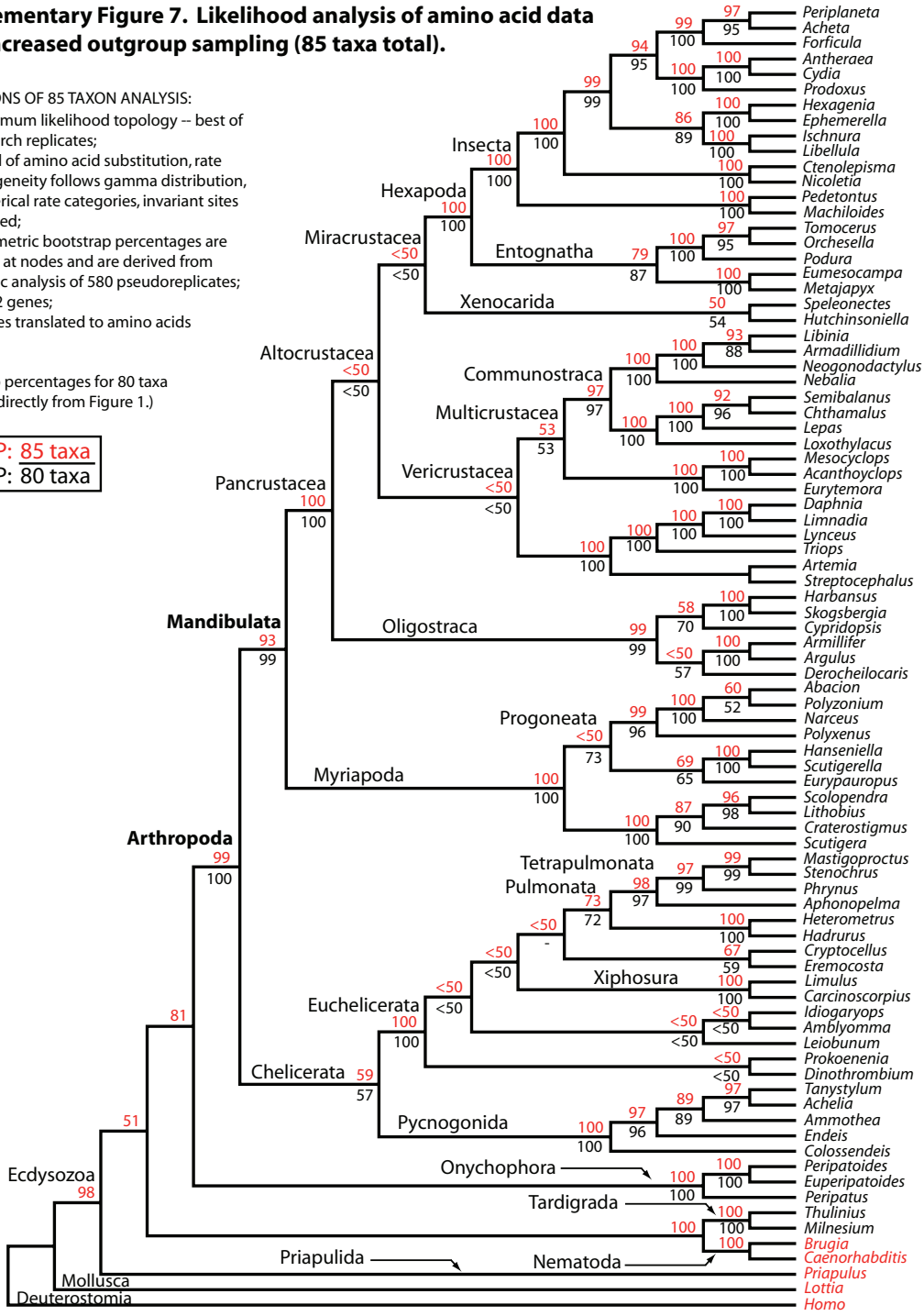
Commentary on Supplementary Figure 6: For comparison, 35 out of 37 pancrustacean nodes and 72 out of the 77 total nodes found in Figure 1 of the main text are also present in this figure, including all six higher-level pancrustacean clades of note, namely, Altocrustacea, Vericrustacea, Multicrustacea, Communostraca, Xenocarida and Miracrustacea. Of the six nodes, Altocrustacea and Miracrustacea show the greatest difference in bootstrap values between likelihood and parsimony analyses (93% vs. 68% and 94% vs. 52%, respectively; cf. Fig. 1 of the main text and this figure).

Supplementary Figure 7. Likelihood analysis of amino acid data with increased outgroup sampling (85 taxa total).

CONDITIONS OF 85 TAXON ANALYSIS:
Garli maximum likelihood topology -- best of 215 search replicates;
JTT model of amino acid substitution, rate heterogeneity follows gamma distribution, 4 numerical rate categories, invariant sites estimated;
non-parametric bootstrap percentages are labeled at nodes and are derived from heuristic analysis of 580 pseudoreplicates;
85 taxa, 62 genes;
nucleotides translated to amino acids in Garli

(Bootstrap percentages for 80 taxa are taken directly from Figure 1.)

BP: 85 taxa
BP: 80 taxa



Commentary on Supplementary Figure 7: In this likelihood analysis of amino acids, the outgroup shown in Figure 1 of the main text (namely, 3 spp. Onychophora and 2 spp. Tardigrada) was supplemented with two Nematoda, one Priapulida, one Mollusca and one Deuterostomia species to test whether an expansion of the outgroup would dramatically affect node support values within Arthropoda, particularly for the more inclusive groups such as Mandibulata. It did not. Indeed, the expanded outgroup resulted in no topological changes within Arthropoda relative to the 80-taxon analysis except for one weakly supported node (BP <50%) within Euchelicerata (see "-"). Bootstrap values for the 85-taxon analysis are in red (above branches); those for the 80-taxon analysis are in black (below branches, see also Fig. 1 of the main text). Both sets of values are mapped onto the ML topology for 85 taxa. Details of supplementary sequence acquisition, including their database accession numbers, are in Supplementary Table 5.

Supplementary Table 1. Exemplar species used in this study, showing distribution across higher taxa and laboratory codename.

ARTHROPODA
Pancrustacea: Hexapoda
- Entognatha
  - Collembola
    - Poduridae: *Podura aquatica* (Paq)
    - Entomobryidae: *Orchesella imitari* (Oim)
    - Tomoceridae: *Tomocerus* sp. (Tom)
  - Diplura
    - Japygidae: *Metajapyx subterraneus* (Msu & Jap)
    - Campodeidae: *Eumesocampa frigilis* (Efr)
- Insecta
  - Archaeognatha
    - *Pedetontus saltator* (Psa)
    - *Machiloides banksi* (Mba)
  - Zygentoma
    - *Ctenolepisma lineata* (Cli)
    - *Nicoletia meinerti* (Nme)
  - Pterygota: Paleoptera: Ephemeroptera
    - *Hexagenia limbata* (May)
    - *Ephemerella inconstans* (Ein)
  - Pterygota: Paleoptera: Odonata
    - *Ischnura verticalis* (Ive)
    - *Libellula lydia* (Lly)
  - Pyterygota: Neoptera: Polyneoptera
    - Dermaptera: *Forficula auricularia* (Fau)
    - Blattodea: *Periplaneta americana* (Pam)
    - Orthoptera: *Acheta domesticus* (Ado)
  - Pterygota: Neoptera: Lepidoptera
    - *Antheraea paukstadtorum* (Apauk)
    - *Cydia pomonella* (Cpo)
    - *Prodoxus quinquepunctella* (Pqu)

Pancrustacea: former "Crustacea"
- Xenocarida: Remipedia
  - *Speleonectes tulumensis* (Stu)
- Xenocarida: Cephalocarida
  - *Hutchinsoniella macracantha* (Hma)
- Vericrustacea: Malacostraca
  - Phyllopoda: *Nebalia hessleri* (Nhe)
  - Hoplocarida: *Neogonodactylus oerstedii* (Neo)
  - Peracarida: *Armadillidium vulgare* (Avu)
  - Eucarida: *Libinia emarginata* (Lem)
- Vericrustacea: Thecostraca ("Maxillopoda")
  - Sessilia: *Semibalanus balanoides* (Bba)
  - Sessilia: *Chthamalus fragilis* (Cfr)
  - Pedunculata: *Lepas anserifera* (Lean)
  - Rhizocephala: *Loxothylacus texanus* (Lox)
- Vericrustacea: Copepoda ("Maxillopoda")
  - Cyclopoida: *Mesocyclops edax* (Meso)
  - Cyclopoida: *Acanthocyclops vernalis* (A369)

Calanoida: *Eurytemora affinis* (Eaf)
Vericrustacea: Branchiopoda
Notostraca: *Triops longicaudatus* (Tlo)
Anostraca: *Artemia salina* (Asa3)
Anostraca: *Streptocephalus seali* (ufs)
Cladocera: *Daphnia magna* (Dma)
Spinicaudata: *Limnadia lenticularis* (Lle)
Laevicaudata: *Lynceus* sp. (Lyn)
Oligostraca
Ostracoda
Podocopa: *Cypridopsis vidua* (Ost)
Myodocopa: *Harbansus paucichelatus* (Hapa)
Myodocopa: *Skogsbergia lerneri* (Skle)
Branchiura: *Argulus* sp. (Arg2)
Pentastomida: *Armillifer armillatus* (Aar)
Mystacocarida: *Derocheilocaris typicus* (Dty)
Myriapoda
Chilopoda
Lithobiomorpha: *Lithobius forficatus* (Lfo)
Scutigeromorpha: *Scutigera coleoptrata* (Scol)
Scolopendromorpha: *Scolopendra polymorpha* (Spo)
Craterostigmomorpha: *Craterostigmus tasmanianus* (Ctas)
Diplopoda
Spirobolida: *Narceus americanus* (Nam)
Callipodida: *Abacion magnum* (Ama)
Polyzoniida: *Polyzonium germanicum* (Pge2)
Polyxenida: *Polyxenus fasciculatus* (Pol2)
Symphyla
Hanseniella sp.(Han & Han2)
Scutigerella sp.(Scu3)
Pauropoda
Eurypauropus spinosus (Eury)
Euchelicerata
Arachnida
Thelyphonida: *Mastigoproctus giganteus* (Mga)
Scorpiones: *Hadrurus arizonensis* (Hari)
Scorpiones: *Heterometrus spinifer* (Hsp)
Araneae: *Aphonopelma chalcodes* (Ach)
Acari: Parasitiformes: *Amblyomma* sp. (Amb2)
Ricinulei: *Cryptocellus centralis* (Crp)
Acari: Acariformes: *Dinothrombium pandorae* (Din)
Amblypygi: *Phrynus marginemaculatus* (Pma)
Schizomida: *Stenochrus portoricensis* (Stp)
Solifugae: *Eremocosta gigasella* (Egig)
Pseudoscorpiones: *Idiogaryops pumilis* (Ipum)
Opiliones: *Leiobunum nigripes* (Lnig) [N.B.: recently established as junior synonym of *L. verrucosum*]
Palpigrada: *Prokoenenia wheeleri* (Pwh)
Xiphosura
Limulus polyphemus (Lpo)
Carcinoscorpius rotundicauda (Cro)

Pycnogonida

Tanystylum orbiculare (Tor)
Achelia echinata (Aeli)
Colossendeis sp. (Col)
Endeis laevis (Ele)
Ammothea hilgendorfi (Ahi)

ONYCHOPHORA

Peripatopsidae: *Euperipatoides rowelli* (Erw & Ero)
Peripatopsidae: *Peripatoides novaezealandiae* (Pno2)
Peripatidae: *Peripatus* sp. (Pep & Per2)

TARDIGRADA

Eutardigrada: Parachela: *Thulinius stephaniae* (Thul) [N.B.: The genus name has recently been changed from *Thulinia* to *Thulinius*.]
Eutardigrada: Apochela: *Milnesium tardigradum* (Mta & Mtd & Hyp)

Supplementary Table 2. Chi-Square Test results for combined- and single-gene-region data, using PAUP*4.0b10 (ref. 36), and sequences missing for particular taxa. The unalignable portion of the data matrix was removed prior to running these tests.

data set	P value (68 gene regions)
nt123	< 0.0001
nt12	< 0.0001
nt1	< 0.0001
nt2	0.5085
nt3	< 0.0001
noLRall1	0.9870
LRall1	< 0.0001
noLRall1+nt2	0.1450

	P value (single gene regions)		
	nt12	noLRall1+nt2	Sequences missing
charset 109fin1_2 = 1-711;	> 0.9999	> 0.9999	Meso Nhe A369 Bba Cfr Dma Hma Lyn Skle Efr Lly Nme Ahi Ipum
charset 113fin1_2 = 718-1722;	> 0.9999	> 0.9999	Asa3 Bba Hma May Tom2 Hapa Pol2 Pno2 Ahi Amb2 Egig
charset 127fin1_2 = 1729-2196;	> 0.9999	> 0.9999	Meso Cpo A369 Cfr Eaf Hma Lean Lem Spo Aar Hapa Skle Pno2 Ctas2 Din2 Dty Ipum Pwh Stp
charset 149fin2_3 = 2203-3195;	> 0.9999	> 0.9999	Thul Apauk Cpo Pqu Hma Jap Scol Hapa Ein Pge2 Pno2 Erw Mtd Pep
charset 166fin2_3 = 3202-3546;	> 0.9999	> 0.9999	Psa
charset 192fin1_2 = 3553-3975;	> 0.9999	> 0.9999	Paq Stu Thul A369 Hma Lean Oim Aar Ado Ive Lly Ama Pno2 Avu3 Col2 Mtd
charset 197fin1_2 = 3982-4434;	> 0.9999	> 0.9999	Meso Stu Thul Asa3 Cfr Pam Tom2 ufs Hapa Lox Skle Ama Pno2 Dty Ele Ipum Mtd Pwh
charset 220fin1_2 = 4441-4992;	> 0.9999	> 0.9999	Mga Paq Thul A369 Cli Eaf Hma Jap Aar Hapa Lox Lyn Skle Pno2 Cro2 Ipum Mtd
charset 226fin1_2 = 4999-5673;	> 0.9999	> 0.9999	Fau Meso Pqu Cfr Hma Hap Ado Pno2
charset 247fin1_2 = 5680-6174;	> 0.9999	> 0.9999	Lfo Nhe Pqu Arg2 Bba Lem Aar Hapa Lyn Skle Mba Pge2 Pno2 Amb2 Col2 Cro2 Crp2 Dty Egig Lle2 Mtd Stp
charset 25fin2_4 = 6181-6486;	> 0.9999	> 0.9999	Nhe Cfr Hma Lean Neo Aar Ach Hapa Skle Avu3

charset 262fin1_2 = 6493-7089;	> 0.9999	> 0.9999	Paq Thul Bba May Hapa Efr Amb2 Ctas2 Mtd
charset 265fin2_3 = 7096-7572;	> 0.9999	> 0.9999	Cfr Scol Spo ufs Aar Ach Hapa Ado Amb2 Col2 Cro2 Dty Ele Ipum Lle2
charset 267fin2_3 = 7579-8187;	> 0.9999	> 0.9999	Stu Hari Aar Hapa Lly Dty
charset 268fin1_2 = 8194-8988;	> 0.9999	> 0.9999	Nhe Thul Tor Asa3 Bba Cfr Cli Hari Hma Hsp Lean Lem Jap Neo Spo Aar Ach Hapa Efr Pno2 Avu3 Dty Ele Eury Mtd Pma2
charset 26fin3_4 = 8995-9726;	> 0.9999	> 0.9999	Fau Mga Nhe Stu Apauk Cpo Pqu Cfr Hma Jap Neo Oim Psa Efr Mtd
charset 270fin2_3 = 9733-10206;	> 0.9999	> 0.9999	Nhe Thul A369 Arg2 Asa3 Hma ufs Aar Efr Ein Ama Pge2 Pol2 Scu3 Pno2 Aeli Ahi Eury Ipum Lle2 Mtd Pep Pwh
charset 274fin1_2 = 10213-10752;	> 0.9999	> 0.9999	Lpo Nhe Paq Stu Thul Tor Cli Eaf Hari Jap Neo Oim Psa Tom2 Hapa Lnig Efr Mba Nme Pno2 Aeli Ahi Avu3 Col2 Cro2 Egig Ele Erw Ipum Mtd Pma2 Stp
charset 2fin3_4 = 10759-11292;	> 0.9999	> 0.9999	May
charset 2fin7_8 = 11299-11919;	> 0.9999	> 0.9999	Paq A369 Cfr Dma Hma Lean Jap Oim Tom2 Hapa Pge2 Aeli Col2 Cro2 Dty Egig Ele Lle2 Mtd Pwh Stp Fau
charset 3006fin1_2 = 11926-12147;	> 0.9999	> 0.9999	Asa3 Dma Lyn Cro2 Din2 Dty Egig Ipum Lle2 Mtd Pma2 Pwh Stp
charset 3007fin1_2 = 12154-12783;	0.9855	> 0.9999	Mga Thul Tor Asa3 Cli Hari Hma Lean Aar Skle Ein Pol2 Pno2 Aeli Col2 Cro2 Ele Mtd Stp
charset 3009fin2_3 = 12790-13161;	> 0.9999	> 0.9999	Bba Cfr Lean Pam Hapa Lox Lly Ama Pol2 Pno2 Amb2 Cro2 Eury Lle2
charset 3012fin1_2 = 13168-13692;	> 0.9999	> 0.9999	Nam Pqu Lean May Pam Aar Ach Lnig Ive Lly Pge2 Pno2 Crp2 Dty Egig
charset 3017fin1_2 = 13699-14307;	> 0.9999	> 0.9999	Meso Bba Cfr Cli Hma Lean Oim Aar Hapa Lyn Han2 Pno2 Ahi Amb2 Col2 Din2 Lle2 Mtd
charset 3031fin2_3 = 14314-14916;	> 0.9999	> 0.9999	Fau Stu Tlo Apauk A369 Eaf Hma May Ach Hapa Skle Ado Ein Pol2 Pno2 Aeli Cro2 Erw Mtd Pep Pwh
charset 3031fin4_5 = 14923-15348;	> 0.9999	> 0.9999	A369 Arg2 Hma Lem May ufs Skle Ein Nme Pge2 Cro2 Mtd Pwh
charset 3044fin1_2 = 15355-15678;	> 0.9999	> 0.9999	A369 Bba Hari Hsp Lean Pam Hapa Aeli Dty Egig Eury Pma2

charset 3055fin2_3 = 15685-15930;	> 0.9999	> 0.9999	Ost Tor Asa3 Spo ufs Aar Hapa Lox Lly Mba Pge2 Pol2 Dty Egig Ipum Lle2
charset 3059fin1_3 = 15937-16686;	> 0.9999	> 0.9999	May Hapa Lox Lyn Mba Han2 Pge2 Pol2 Scu3 Pno2 Cro2 Ele
charset 3064fin6_7 = 16693-17298;	> 0.9999	> 0.9999	Apauk Cpo Lem Mba Cro2 Dty
charset 3066fin1_3 = 17305-18051;	> 0.9999	> 0.9999	Meso Paq Thul Apauk Asa3 Bba Cfr Dma Hma Lean Jap ufs Hapa Lox Mba Han2 Scu3 Pno2 Aeli Ahi Din2 Dty Ele Eury
charset 3070fin4_5 = 18058-18777;	> 0.9999	> 0.9999	Meso Nhe Ost Tor Bba Hma Lean Jap Hapa Efr Ein Mba Nme Pno2 Aeli Ahi Amb2 Col2 Ctas2 Dty Ele Pol2
charset 3089fin2_3 = 18784-19092;	> 0.9999	> 0.9999	Dma Pam Lox Mba Pol2
charset 3094fin2_3 = 19099-19497;	> 0.9999	> 0.9999	Fau Nhe Tlo Apauk Cpo A369 May Tom2 Aar Ein Mba Pno2 Avu3
charset 3114fin1_2 = 19504-19881;	> 0.9999	> 0.9999	Lpo Nhe Apauk Dma Hari Hma Hsp Oim Aar Ach Hapa Lyn Skle Mba Ama Pol2 Amb2 Col2 Cro2 Dty Mtd Pep Pma2 Stp
charset 3121fin2_3 = 19888-20343;	> 0.9999	> 0.9999	Lpo Paq Tlo Cpo Bba Cfr Eaf Hsp Lean Oim Tom2 Hapa Lox Mba Nme Ama Pol2 Col2 Cro2 Dty
charset 3136fin1_2 = 20350-21201;	> 0.9999	> 0.9999	Hapa Scu3 Pno2 Dty
charset 3152fin1_2 = 21208-21486;	> 0.9999	> 0.9999	Tor Cfr Cli Lem Hapa Lox Mba Aeli Ahi Dty Ele Eury Pwh Stp
charset 3153fin1_2 = 21493-22059;	> 0.9999	> 0.9999	Hma Jap Lnig Efr Crp2 Dty Mtd Pwh
charset 3196fin1_3 = 22066-22608;	> 0.9999	> 0.9999	Lean Hapa Cro2 Egig Erw Pep
charset 3196fin5_6 = 22615-23334;	> 0.9999	> 0.9999	A369 Hapa Erw Mtd
charset 3202fin1_3 = 23341-23859;	> 0.9999	> 0.9999	Ost A369 Asa3 Cfr Hari Hsp Neo ufs Hapa Din2 Egig Ele Ipum
charset 36fin1_2 = 23866-24363;	> 0.9999	> 0.9999	Ost Thul A369 Arg2 Cfr Hma Hsp Oim Aar Ach Hapa Efr Crp2 Dty Egig Ele Mtd
charset 40fin2_3 = 24370-25131;	> 0.9999	> 0.9999	Cfr Tom2 Hapa Aeli Dty Ele
charset 42fin1_2 = 25138-25986;	> 0.9999	> 0.9999	Hma Hapa Lnig Efr Pno2 Eury Ipum Mtd
charset 44fin2_3 = 25993-26520;	> 0.9999	> 0.9999	A369 Arg2 Hma Lean Oim Psa Aar Efr Pno2 Dty Egig Ele Erw Eury
charset 58fin3_6 = 26527-27462;	> 0.9999	> 0.9999	A369 Arg2 Asa3 Cfr Hma Jap Oim Pno2 Cro2

			Ipum Pep
charset 58fin7_9 = 27469-27807;	> 0.9999	> 0.9999	Lpo Thul Tor Asa3 Hari Hsp Aar Hapa Lyn Efr Cro2 Egig Ipum Mtd Pma2
charset 62fin2_3 = 27814-28647;	> 0.9999	> 0.9999	Lpo Mga Bba Cfr Hari Hma Hsp Lean Jap Hapa Lox Ado Efr Scu3 Pno2 Pma2 Stp
charset 63fin2_3 = 28654-29178;	> 0.9999	> 0.9999	Hari Hsp Skle Efr Amb2
charset 69fin2_3 = 29185-29856;	> 0.9999	> 0.9999	Dma Hma Hapa Lyn Efr Mba Ipum Pwh
charset 6fin2_3 = 29863-30204;	> 0.9999	> 0.9999	Mga Nam Stu Apauk A369 Asa3 Cli Eaf Hma Lean May Jap Spo Hapa Lyn Skle Ado Ive Lly Nme Pge2 Pno2 Aeli Din2 Egig Ele Lle2 Pwh Stp
charset 73fin2_3 = 30211-31089;	> 0.9999	> 0.9999	Paq Apauk Hma Lean Jap Oim Hapa Lox Efr Pno2 Dty Lle2 Mtd
charset 8018fin1_2 = 31096-31398;	> 0.9999	> 0.9999	Meso Ost Paq Stu Thul Tlo A369 Bba Lem Neo Aar Lox Ado Efr Mba Han2 Pge2 Pol2 Aeli Ahi Avu3 Dty Ele Erw Eury Mtd
charset 8028fin1_2 = 31405-31728;	> 0.9999	> 0.9999	Fau Lpo Meso A369 Arg2 Asa3 Cli Dma Lean May Neo Pam Tom2 ufs Aar Lnig Lyn Efr Ein Mba Nme Pol2 Avu3 Cro2 Din2 Egig Eury Ipum
charset 8029fin6_7 = 31735-32277;	> 0.9999	> 0.9999	Lfo Lpo Ost Stu Apauk Cfr Lean Lyn Skle Cro2 Mtd
charset 8053fin2_3 = 32284-32856;	> 0.9999	> 0.9999	Meso Thul A369 Arg2 Dma Eaf Hapa Mba Pge2 Ctas2 Lle2 Mtd Stp
charset 8070fin1_3 = 32863-33405;	> 0.9999	> 0.9999	Paq Thul Tor Arg2 Asa3 Neo Oim Tom2 ufs Skle Han2 Pno2 Aeli Avu3 Col2 Dty Egig Ele Erw Mtd Stp
charset 8091fin1_2 = 33412-34080;	> 0.9999	> 0.9999	Lfo Thul Arg2 Bba Cfr Cli Dma Hma Lean May Oim Scol Spo Tom2 Hapa Skle Ado Efr Ama Scu3 Aeli Col2 Crp2 Ctas2 Dty Ele Erw Eury Ipum Mtd Pma2
charset 96fin1_3 = 34087-34548;	> 0.9999	> 0.9999	Spo Skle Pol2 Aeli Cro2 Dty Ele Ipum Lle2
charset acc2_4 = 34555-35085;	> 0.9999	> 0.9999	May Jap Aar Ach Hapa Lnig Lox Lyn Skle Ado Efr Ein Ive Lly Mba Nme Ama Han2 Pge2 Pol2 Scu3

charset aspec11_12 = 35092-35694;	> 0.9999	> 0.9999	Tlo A369 Hsp Aar Ach Hapa Lnig Lox Lyn Skle Ado Efr Ein Ive Lly Mba Nme Ama Han2 Pge2 Pol2 Scu3 Pno2 Erw Eury Ipum Pma2 Stp
charset aspec19_21 = 35701-36210;	> 0.9999	> 0.9999	Meso Mga Cpo Pqu A369 Hari Hsp Aar Ach Hapa Lnig Lox Lyn Skle Ado Efr Ein Ive Lly Mba Nme Ama Pge2 Pol2 Scu3 Cro2 Pma2 Stp
charset aspec2_6 = 36217-36513;	> 0.9999	> 0.9999	Meso Thul Tlo Apauk Cpo Pqu A369 Asa3 Eaf Aar Ach Hap Lnig Lox Lyn Skle Ado Efr Ein Ive Lly Mba Nme Ama Han2 Pge2 Pol2 Scu3 Pno2 Din2 Dty Eury Ipum Lle2 Mtd Pep Pma2 Pwh Stp
charset ef1a = 36520-37611;	> 0.9999	> 0.9999	
charset ef2 = 37618-39843;	> 0.9999	> 0.9999	Apauk Cpo Pqu Ive Pno2
charset polii = 39850-41976;	> 0.9999	> 0.9999	Apauk Cpo Pqu Col2 Dty Jap (partial sequence) Pno2 (partial sequence)

Supplementary Table 3. Taxonomic groups recovered with ≥ 70% bootstrap support in single-gene-region, degen1-data-matrix, likelihood analyses, with **summary** below.*

2fin3_4: Asa3 + ufs (95%) Hari + Hsp (70%) Psa + Mba (87%) Hapa + Skle (72%) Han2 + Scu3 (88%) Fau + Pam + Ado (88%) Nam + Ama + Pge2 (76%) Apauk + Cpo + Pqu (79%) Pep + Pno2 + Erw (98%) Pno2 + Erw (81%) Eaf + Meso + A369 (84%) Meso + A369 (96%) Nhe + Avu3 + Lem + Neo (96%) Avu3 + Lem + Neo (79%) Lem + Neo (82%) Lox + Bba + Cfr + Lean (80%) Bba + Cfr + Lean (70%)

2fin7_8: Mga + Pma2 (82%) Tor + Ahi (94%) Asa3 + ufs (100%) Bba + Lox (71%) Hari + Hsp (74%) May + Ein (76%) Psa + Mba (94%) Ive + Lly (91%) Pqu + Apauk + Cpo (100%) Pep + Pno2 + Erw (90%) Nhe + Lem + Neo + Avu3 (100%)

6fin: Lpo + Cro2 (100%) Paq + Tom2 (84%) Bba + Cfr (85%) Hari + Hsp (96%)

25fin: Thul + Mtd (76%) Meso + A369 (100%) May + Ein (100%) Ive + Lly (100%) Han2 + Scu3 (70%) Cpo + Apauk + Pqu (98%) Apauk + Pqu (70%) Hari + Hsp (77%) Bba + Lox (94%) Eaf + Lem (70%)

26fin: Lpo + Cro2 (71%) Paq + Tom2 (92%) Asa3 + ufs (74%) Hari + Hsp (70%) Lem + Avu3 (97%) May + Ein (90%) Hapa + Skle (99%) Eaf + Meso + A369 (77%) Meso + A369 (92%) Bba + Lean + Lox (84%) Lyn + Dma + Lle2 (70%) Pno2 + Erw + Pep (90%) Tor + Aeli + Ahi + Col2 + Ele (97%)

36fin: Pep + Pno2 + Erw (100%) Pno2 + Erw (85%) Paq + Tom2 (96%) Asa3 + ufs (99%) Psa + Mba (100%) Spo + Ctas (82%) Pqu + Apauk + Cpo (80%) Apauk + Cpo (96%) Lean + Bba + Lox (100%) Nhe + Avu3 + Lem + Neo (89%) Lem + Neo (70%) Han2 + Scu3 + Aeli + Ahi + Tor + Col2 (72%) Aeli + Ahi + Tor + Col2 (97%) Tor + Col2 (75%) Mga + Hari + Amb2 + Din2 + Pma2 + Pwh + Stp + Lpo + Cro2 + Lnig + Ipum = Euchelicerata (97%) Lpo + Cro2 (72%)

40fin: Thul + Mtd (88%) Lpo + Cro2 (97%) Asa3 + ufs (85%) Hari + Hsp (99%) May + Ein (99%) Pam + Ado (82%) Psa + Mba (100%) Ive + Lly (94%) Han2 + Scu3 (72%) Erw + Pep (93%) Mga + Stp (94%) Col2 + Tor + Ahi (71%) Tor + Ahi (93%) Pqu + Apauk + Cpo (95%) Apauk + Cpo (94%) Lean + Bba + Lox (89%) Lem + Avu3 + Nhe + Neo (81%) Nhe + Neo (71%) Tlo + Lyn + Dma + Lle2 (78%) Dma + Lle2 (96%)

42fin: Lpo + Cro2 (100%) Asa3 + ufs (100%) Hari + Hsp (100%) May + Ein (100%) Psa + Mba (100%) Ive + Lly (100%) Han2 + Scu3 (81%) Erw + Pep (100%) Meso + A369 + Eaf (100%) Lyn + Dma + Lle2 (82%) Dma + Lle2 (97%) Neo + Lem + Avu3 (94%) Lem + Avu3 (91%) Lean + Cfr + Bba + Lox (100%) Cfr + Bba + Lox (78%) Bba + Lox (94%) Aeli + Ahi + Ele + Tor + Col2 (97%) Paq + Oim + Tom2 (97%) Oim + Tom2 (74%) Apauk + Cpo + Pqu (99%)

44fin: Lpo + Cro2 (96%) Tor + Ahi (71%) Asa3 + ufs (100%) May + Ein (97%) Ive + Lly (91%) Han2 + Scu3 (77%) Pqu + Apauk + Cpo (70%) Apauk + Cpo (99%) Lox + Bba + Cfr (78%) Bba + Cfr (88%) Scol + Spo + Lfo + Ctas2 (76%) Mga + Pma2 (72%) Hari + Hsp (98%) Nhe + Lem + Neo + Avu3 (75%)

58fin3_6: Thul + Mtd (99%) Thul + Mtd + Erw (72%) Meso + Eaf (72%) Paq + Tom2 (72%) May + Ein (90%) Psa + Mba (94%) Aar + Dty (81%) Hapa + Skle (96%) Han2 + Scu3 (99%) Pge2 + Nam + Ama (91%) Bba + Lean + Lox (99%) Ive + Lly (92%) Apauk + Cpo + Pqu (100%) Nhe + Lem + Neo + Avu3 (100%) Tor + Aeli + Ahi + Col2 + Ele (100%) Mga + Stp (92%) Hari + Hsp (86%)

58fin7_9: Pno2 + Erw (92%) Pno2 + Erw + Pep (100%) May + Ein (90%) Ive + Lly (95%) A369 + Meso + Eaf (86%) Meso + Eaf (72%) Lox + Cfr + Bba + Lean (97%) Bba + Lean (92%) Ele + Aeli + Ahi + Col2 (77%) Ahi + Col2 (74%)

62fin: Thul + Mtd (98%) May + Ein (82%) Psa + Mba (75%) Ive + Lly (81%) Paq + Oim + Tom2 (97%) Oim + Tom2 (71%) Pqu + Apauk + Cpo (100%) Meso + A369 (98%) Nhe + Lem + Neo + Avu3 (91%) Erw + Pep (99%) Col2 + Ele + Tor + Aeli + Ahi (95%)

63fin: Thul + Mtd (100%) Pno2 + Erw + Pep (92%) Thul + Mtd + Pno2 + Erw + Pep (71%) Han2 + Scu3 (98%) Scol + Spol + Lfo + Ctas (87%) Col2 + Ele + Aeli + Tor + Ahi (94%) Ele + Aeli + Tor + Ahi (71%) Lpo + Cro2 (99%) Ach + Mga + Pma2 + Stp (75%) Mga + Pma2 + Stp (76%) Pancrustracea -- 42 taxa (71%) Asa3 + ufs (100%) May + Ein (84%) Pam + Ado (74%) Psa + Mba (93%) Ive + Lly (92%) Tom2 + Paq + Oim (84%) Pqu + Apauk + Cpo (92%) Apauk + Cpo (70%) Lox + Lean + Bba + Cfr (100%) Bba + Cfr (73%) Eaf + Meso + A369 + Nhe + Avu3 + Lem + Neo (72%) Eaf + Meso + A369 (92%) Avu3 + Lem + Neo (85%) Lem + Neo (89%)

69fin: Thul + Mtd (99%) Meso + A369 (100%) Asa3 + ufs (100%) May + Ein (98%) Ive + Lly (96%) Han2 + Scu3 (92%) Paq + Oim + Tom2 (90%) Cpo + Apauk + Pqu (99%) Lean + Bba + Cfr (85%) Pep + Pno2 + Erw (100%) Pno2 + Erw (95%) Col2 + Tor + Aeli + Ahi + Ele (77%) Euchelicerata -- 13 taxa (77%) Lpo + Cro2 (100%) Hari + Hsp (99%)

73fin: Lpo + Cro2 (100%) Cpo + Pqu (99%) Bba + Cfr (100%) Hari + Hsp (96%) May + Ein (98%) Psa + Mba (89%) Lnig + Egig (70%) Ive + Lly (96%) Erw + Pep (96%) Eaf + Meso + A369 (71%) Meso + A369 (98%) Tor + Aeli + Ahi + Col2 + Ele (96%) Lyn + Asa3 + ufs (77%) Asa3 + ufs (100%)

96fin: Amb2 + Pwh (90%) Meso + A369 (87%) Paq + Oim + Tom2 (88%)

109fin: Thul + Mtd (100%) Lpo + Cro2 (100%) Mga + Stp (82%) Asa3 + ufs (92%) Hari + Hsp (97%) Lean + Lox (96%) May + Ein (96%) Psa + Mba (91%) Pol2 + Eury (71%) Fau + Pam + Ado (80%) Nam + Ama + Pge2 (70%) Paq + Oim + Tom2 (100%) Oim + Tom2 (87%) Pqu + Apauk + Cpo (100%) Apauk + Cpo (100%) Neo + Lem + Avu3 (99%) Pno2 + Erw + Pep (99%) Col2 + Ele + Tor + Aeli (95%) Ele + Tor + Aeli (84%) Tor + Aeli (87%)

113fin: Thul + Mtd (100%) Han2 + Scu3 (99%) Lfo + Spo (98%) Lpo + Cro2 (100%) Hari + Hsp (99%) Erw + Pep (100%) Tor + Aeli + Col2 + Ele (100%) Pancrustacea -- 38 taxa (100%) Paq + Oim (100%) Jap + Efr (84%) Eaf + Meso + A369 (100%) Meso + A369 (100%) Lox + Cfr + Lean (100%) Cfr + Lean (98%) Dma + Lle2 (90%) Nhe + Lem + Neo + Avu3 (88%) Psa + Mba (100%) Pqu + Apauk + Cpo (99%) Apauk + Cpo (72%)

127fin: Thul + Mtd (98%) Nam + Pge2 (86%) Paq + Oim (80%) Apauk + Pqu (100%) Asa3 + ufs (97%) May + Ein (100%) Psa + Mba (95%) Ive + Lly (74%) Tor + Aeli + Ahi + Col2 + Ele (97%) Lpo + Cro2 (94%) Hari + Hsp (99%)

149fin: Tor + Aeli + Ahi + Ele + Col2 (100%) Han2 + Scu3 (100%) Lfo + Spo + Ctas + Eury (74%) Nam + Ama (81%) Amb2 + Din2 (78%) Lpo + Cro2 (100%) Hari + Hsp (100%) Meso + A369 (100%) Lem + Avu3 + Neo + Nhe (100%) Lem + Avu3 + Neo (96%) Lem + Avu3 (76%) Asa3 + ufs (100%) Dma + Lle2 (92%) Bba + Cfr + Lean + Lox (100%) Bba + Cfr + Lean (84%) Psa + Mba (100%) Insecta -- 10 taxa (96%) Dicondylia -- 8 taxa (85%) Fau + May + Ive + Lly (86%) Ive + Lly (100%) Oim + Tom2 + Paq (100%) Oim + Tom2 (97%) Meso + A369 + Eaf (99%) Lfo + Spo + Ctas (74%)

166fin: Thul + Mtd (75%) Meso + A369 (97%) Asa3 + ufs (97%) Bba + Cfr + Lean (79%)

192fin: Erw + Pep (95%) Lpo + Cro2 (74%) Apauk + Cpo (87%) Asa3 + ufs (99%) Bba + Cfr (98%) Hari + Hsp (95%) Psa + Mba (78%) Hapa + Skle (88%) Han2 + Scu3 (76%) Nhe + Lem + Neo (94%) Lem + Neo (80%) Ele + Tor + Aeli + Ahi (88%)

197fin: Erw + Pep (96%) Lpo + Cro2 (99%) Paq + Oim (100%) Bba + Lean (97%) Hari + Hsp (99%) Psa + Mba (98%) Ive + Lly (93%) Pqu + Apauk + Cpo (99%) Lfo + Scol + Spo + Ctas2 (79%) Nhe + Neo + Lem + Avu3 (91%) Neo + Lem + Avu3 (78%) Lem + Avu3 (80%) Col2 + Tor + Aeli + Ahi (100%) Tor + Aeli + Ahi (78%)

220fin: Erw + Pep (98%) Asa3 + ufs (100%) Hari + Hsp (95%) Psa + Mba (99%) Han2 + Scu3 (86%) Nam + Ama + Pge2 (89%) Bba + Cfr + Lean (100%) Lem + Neo (70%) Col2 + Tor + Aeli + Ahi + Ele (92%) Tor + Aeli + Ahi + Ele (72%) Oim + Tom2 (84%) Pqu + Apauk + Cpo (99%) Apauk + Cpo (79%)

226fin: Thul + Mtd (86%) Lpo + Cro2 (100%) Asa3 + ufs (100%) Hari + Hsp (98%) May + Ein (90%) Psa + Mba (100%) Ive + Lly (100%) Erw + Pep (96%) Ama + Nam + Pge2 (82%) Nam + Pge2 (71%) Lox + Bba + Lean (75%) Bba + Lean (90%) Lyn + Dma + Lle2 (99%) Apauk + Cpo (100%) Paq + Oim + Tom2 (93%) Tor + Aeli + Ahi + Col2 + Ele (96%)

247fin: Meso + A369 (99%) Apauk + Cpo (98%) Cfr + Lean (99%) Hari + Hsp (93%) May + Ein (97%) Pam + Ado (88%) Ive + Lly (75%) Han2 + Scu3 (76%) Erw + Pep (70%) Paq + Oim + Tom2 (76%) Oim + Tom2 (84%) Ahi + Tor + Aeli + Ele (80%)

262fin: Pep + Pno2 + Erw (97%) Lpo + Cro2 (100%) Asa3 + ufs (100%) Hari + Hsp (100%) Oim + Tom2 (100%) Psa + Mba (100%) Ive + Lly (92%) Meso + A369 (99%) Pqu + Apauk + Cpo (100%) Apauk + Cpo (71%) Lean + Cfr + Lox (100%) Nhe + Lem + Neo + Avu3 (98%)

265fin: Meso + A369 (96%) Hari + Hsp (98%) Psa + Mba (97%) Ahi + Tor + Aeli (98%) Tor + Aeli (84%) Pqu + Apauk + Cpo (78%) Bba + Lean (82%) Pno2 + Erw (100%) Nhe + Neo + Lem + Avu3 (75%)

267fin: Meso + A369 (100%) Asa3 + ufs (98%) Cli + Nme (84%) May + Ein (100%) Psa + Mba (98%) Han2 + Scu3 (100%) Lfo + Spo + Ctas2 (78%) Pqu + Apauk + Cpo (98%) Apauk + Cpo (91%) Pep + Pno2 + Erw (85%) Pno2 + Erw (84%) Nhe + Avu3 + Lem + Neo (94%) Lox + Lean + Bba + Cfr (100%) Bba + Cfr (88%) Col2 + Ele + Tor + Aeli + Ahi (88%) Tor + Aeli + Ahi (74%) Euchelicerata -- 14 taxa (72%) Lpo + Cro2 (100%)

268fin: Erw + Pep (91%) Lpo + Cro2 (100%) Han2 + Scu3 (90%) Ctas + Lfo + Scol (72%) Lfo + Scol (90%) Col2 + Aeli + Ahi (94%) Aeli + Ahi (77%) Nam + Ama + Pge2 (86%) Eaf + Meso + A369 (97%) Meso + A369 (100%) Paq + Oim + Tom2 (74%) Psa + Mba (100%) May + Ein (99%) Ive + Lly (87%) Pqu + Apauk + Cpo (98%) Apauk + Cpo (95%)

270fin: Lpo + Cro2 (96%) Hari + Hsp (80%) Psa + Mba (73%) Ive + Lly (98%) Col2 + Tor + Ele (72%) Lem + Neo + Avu3 (92%) Lean + Lox + Bba + Cfr (71%)

274fin: Meso + A369 (100%) Asa3 + ufs (100%) Han2 + Scu3 (74%) Pqu + Apauk + Cpo (100%) Apauk + Cpo (100%) Lean + Bba + Cfr (89%) Bba + Cfr (94%)

3006fin: Hari + Hsp (86%) Erw + Pno2 + Pep (97%) Col2 + Ele + Tor + Aeli + Ahi (78%) May + Ein (72%) Psa + Mba (99%) Ive + Lly (94%) Nhe + Lem + Neo + Avu3 (72%) Lox + Lean + Bba + Cfr (77%)

3007fin: Meso + A369 (100%) Nhe + Lem (74%) May + Lly (79%) Psa + Mba (99%) Paq + Oim + Tom2 (76%) Pqu + Apauk + Cpo (78%) Apauk + Cpo (100%) Cfr + Bba + Lox (99%) Scol + Ctas + Lfo + Spo (74%)

3009fin: Asa3 + ufs (95%) Hari + Hsp (84%) Tor + Aeli + Ahi + Col2 + Ele (94%)

3012fin: Lfo + Ctas (85%) Lpo + Cro2 (88%) Meso + A369 (100%) Asa3 + ufs (99%) Cli + Nme (80%) Hari + Hsp (99%) Psa + Mba (100%) Hapa + Skle (88%) Erw + Pep (92%) Apauk + Cpo (100%) Lox + Bba + Cfr (96%) Nhe + Lem + Neo + Avu3 (75%) Ele + Col2 + Ahi + Tor + Aeli (73%)

3017fin: Lpo + Cro2 (97%) Asa3 + ufs (100%) Hari + Hsp (98%) May + Ein (99%) Psa + Mba (100%) Erw + Pep (99%) Nam + Ama + Pge2 (78%) Aeli + Tor + Ele (89%) Pqu + Apauk + Cpo (100%) Apauk + Cpo (89%)

3031fin2 3: Hari + Hsp (100%) Jap + Efr (89%) Oim + Paq + Tom2 (98%) Paq + Tom2 (98%) Scol + Lfo + Spo + Ctas (84%) Lem + Nhe + Neo + Avu3 (88%) Col2 + Tor + Ahi + Ele (85%) Lox + Lean + Bba + Cfr (100%) Lean + Bba + Cfr (91%) Bba + Cfr (87%) Han2 + Scu3 + Pge2 + Nam + Ama (78%) Han2 + Scu3 (93%) Pge2 + Nam + Ama (95%) Asa3 + ufs + Lyn + Dma + Lle2 (83%) Asa3 + ufs (100%) Lyn + Dma + Lle2 + Meso (92%) Dma + Lle2 (92%) Psa + Mba (98%) Cpo + Pqu (100%) Ive + Lly (100%)

3031fin4 5: Nhe + Avu3 (74%) Dma + Lle2 (70%) Psa + Mba (99%) Ive + Lly (99%) Han2 + Scu3 (96%) Paq + Oim + Tom2 (99%) Apauk + Cpo + Pqu (90%) Pep + Pno2 + Erw (100%) Pno2 + Erw (99%) Bba + Cfr + Lean (74%) Arachnida -- 12 taxa (88%)

3044fin: Lpo + Cro2 (94%) Meso + Eaf (76%) Asa3 + ufs (90%) Ive + Lly (98%) Pqu + Apauk + Cpo (96%) Apauk + Cpo (76%) Pep + Pno2 + Erw (87%) Pno2 + Erw (87%) Tlo + Lyn + Dma + Lle2 (77%) Ahi + Tor + Col2 + Ele (79%)

3055fin: Meso + A369 (100%) May + Ein (74%) Han2 + Scu3 (76%) Bba + Cfr (73%) Pep + Pno2 + Erw (71%) Jap + Efr (71%) Paq + Oim + Tom2 (81%)

3059fin: Thul + Mtd (100%) Nam + Ama (75%) Asa3 + ufs (100%) Cli + Nme (70%) Dma + Lle2 (99%) Hari + Hsp (81%) Ive + Lly (95%) Erw + Pep (100%) Ado + Fau + Pam (80%) Eaf + Meso + A369 (100%) Meso + A369 (100%) Mga + Pma2 + Stp (72%) Paq + Oim + Tom2 (100%) Oim + Tom2 (83%) Pqu + Apauk + Cpo (100%) Apauk + Cpo (76%) Lean + Bba + Cfr (100%) Bba + Cfr (72%) Nhe + Lem + Neo + Avu3 (88%) Tor + Aeli + Ahi + Col2 (99%)

3064fin: Thul + Mtd (100%) Pep + Pno2 + Erw (93%) Pno2 + Erw (91%) Tardigrada + Onychophora -- 5 taxa (76%) Asa3 + ufs (91%) Dma + Lle2 (92%) Hari + Hsp (98%) May + Ein (100%) Hapa + Skle (100%) Ive + Lly (92%) Han2 + Scu3 (94%) Eaf + Meso + A369 (74%) Neo + Nhe + Avu3 (87%) Lox + Bba + Cfr + Lean (98%) Bba + Cfr + Lean (86%) Ele + Tor + Aeli + Ahi + Col2 (92%)

3066fin: Erw + Pep (94%) Myriapoda -- 8 taxa (74%) Onychophora + Myriapoda -- 10 taxa (70%) Lpo + Cro2 (100%) Hari + Hsp (100%) Tor + Col2 (88%) Arg2 + Aar (85%) Lem + Avu3 + Neo + Nhe (100%) Lem + Avu3 (87%) Lyn + Lle2 (83%) A369 + Eaf (97%) Oim + Tom2 (73%) May + Ein (90%) Cpo + Pqu (100%) Fau + Ado + Pam (96%) Fau + Ado (93%) Ive + Lly (99%)

3070fin: Thul + Mtd (100%) Lpo + Cro2 (98%) Asa3 + ufs (97%) Cfr + Lox (98%) Hari + Hsp (84%) Tom2 + Paq + Oim (87%) Tlo + Lyn + Dma + Lle2 (84%) Lyn + Dma + Lle2 (92%) Fau + Ado (77%) Ive + Lly (98%) Apauk + Cpo (94%)

3089fin: Thul + Mtd (100%) Hapa + Skle (94%) Meso + A369 (99%) Mga + Stp (80%) Asa3 + ufs (100%) Ive + Lly (76%) Col2 + Ele (74%) Nam + Ama (74%) Oim + Tom2 (80%) Bba + Cfr + Lean (100%) Stu + Apauk + Cpo + Pqu (87%) Apauk + Cpo + Pqu (100%)

3094fin: Meso + Eaf (71%) Asa3 + ufs (82%) Lem + Neo (92%) Hapa + Skle (79%) Erw + Pep (79%) Bba + Cfr + Lean + Lox (78%)

3114fin: Nam + Pge2 (73%) Cpo + Pqu (72%) May + Ein (88%) Ive + Lly (96%) Pno2 + Erw (100%) Spo + Lfo + Ctas (94%) Lfo + Ctas (76%) Bba + Cfr + Lean (70%) Tor + Aeli + Ahi + Ele (95%)

3121fin: Thul +Mtd (77%) Meso + A369 (98%) Apauk + Pqu (99%) Asa3 + ufs (99%) May + Ein (89%) Ive + Lly (78%) Dma + Lle2 (86%) Pep + Pno2 + Erw (82%) Pno2 + Erw (99%) Avu3 + Nhe + Lem + Neo (96%) Nhe + Lem + Neo (90%) Lem + Neo (92%) Ahi + Tor + Aeli + Ele (94%)

3136fin: Thul + Mtd (99%) Lpo + Cro2 (100%) Asa3 + ufs (100%) Hari + Hsp (100%) Jap + Efr (73%) Erw + Pep (99%) Nhe + Neo + Lem + Avu3 (78%) Lean + Lox + Bba + Cfr (82%) Bba + Cfr (78%) Tor + Col2 + Ele +Aeli + Ahi (96%) Insecta -- 14 taxa (100%) May + Ein (99%) Ive + Lly (80%) Neoptera -- 6 taxa (79%) Pam + Ado (91%) Apauk + Cpo + Pqu (100%)

3152fin: Arg2 + Aar (74%) Bba + Lean (82%) Hari + Hsp (91%) May + Ein (92%)

3153fin: Lpo + Cro2 (72%) Meso + A369 (97%) Asa3 + ufs (77%) Hari + Hsp (99%) Psa + Mba (86%) Ive + Lly (78%) Han2 + Scu3 (98%) Cpo + Apauk + Pqu (86%) Cfr + Bba + Lean (92%) Pno2 + Erw + Pep (92%) Col2 + Ele + Tor + Aeli + Ahi (74%) Tor + Aeli + Ahi (75%)

3196fin1 3: Thul + Mtd (99%) Meso + A369 (96%) Asa3 + ufs (70%) Hari + Hsp (95%) May + Ein (93%) Psa + Mba (95%) Paq + Oim + Tom2 (94%) Oim + Tom2 (76%) Lox + Bba + Cfr (100%) Bba + Cfr (94%) Lem + Avu3 + Nhe + Neo (100%) Tor + Ahi + Col2 + Aeli + Ele (91%) Aeli + Ele (71%)

3196fin5_6: Lpo + Cro2 (100%) Hari + Hsp (98%) Pno2 + Pep (100%) Pycnogonida -- 5 taxa (100%) Meso + Eaf (98%) Asa3 + ufs (100%) Pam + Ado (74%) Psa + Mba (100%) Ive + Lly (73%) Paq + Oim + Tom2 (71%) Oim + Tom2 (70%) Pqu + Apauk + Cpo (99%) Apauk + Cpo (74%) Lem + Nhe + Neo + Avu3 (100%) Nhe + Neo + Avu3 (77%) Dma + Lle2 + Tlo + Lyn (72%) Bba + Cfr + Lean + Lox (98%) Bba + Cfr (72%)

3202fin: Thul + Mtd (99%) Lpo + Cro2 (100%) Meso + Eaf (99%) May + Ein (90%) Psa + Mba (96%) Ive + Lly (100%) Han2 + Scu3 (94%) Nhe + Lem + Avu3 (100%) Paq + Oim + Tom2 (100%) Apauk + Cpo + Pqu (94%) Lox + Bba + Lean (91%) Bba + Lean (81%) Pep + Pno2 + Erw (88%) Pno2 + Erw (100%) Ama + Pge2 (74%) Col2 + Aeli + Tor + Ahi (90%)

8018fin: Lpo + Cro2 (98%) Asa3 + ufs (93%) Cfr + Lean (94%) Hari + Hsp (99%) May + Ein (84%) Oim + Tom2 (100%) Ive + Lly (90%) Pqu + Apauk + Cpo (98%) Apauk + Cpo (96%)

8028fin: Tlo + Lle2 (76%) Bba + Cfr (95%) Hari + Hsp (93%) Hapa + Skle (93%) Pep + Pno2 + Erw (94%) Pno2 + Erw (80%) Ahi + Col2 + Tor + Aeli + Ele (75%) Tor + Aeli + Ele (72%) Aeli + Ele (72%)

8029fin: Cpo + Pqu (98%) Arg2 + Aar (82%) Asa3 + ufs (100%) May + Ein (98%) Psa + Mba (82%) Ive + Lly (86%) Paq + Oim Tom2 (98%) Oim + Tom2 (99%) Pep + Pno2 + Erw (72%) Pno2 + Erw (98%) Meso + A369 (100%) Tor + Aeli + Ahi + Col2 + Ele (99%)

8053fin: Pno2 + Erw + Pep (100%) Pno2 + Erw (97%) Han2 + Scu3 (100%) Ahi + Ele + Col2 + Tor + Aeli (98%) Lpo + Cro2 (96%) Jap + Efr (86%) Asa3 + ufs (100%) Apauk + Cpo + Pqu (100%) Apauk + Cpo (76%) Ive + Lly (100%) May + Ein (100%)

8070fin: Lpo + Cro2 (99%) Meso + A369 (99%) Nhe + Lem (96%) Cli + Nme (78%) Hari + Hsp (95%) May + Ein (98%) Psa + Mba (80%) Ive + Lly (97%) Apauk + Cpo + Pqu (99%) Bba + Cfr + Lean + Lox (96%)

8091fin: Lpo + Cro2 (99%) Nam + Pge2 (81%) Tor + Ahi (100%) Asa3 + ufs (94%) Hari + Hsp (100%) Psa + Mba (96%) Ive + Lly (97%) Eaf + Meso + A369 (82%) Meso + A369 (100%) Apauk + Cpo + Pqu (96%)

acc: Asa3 + ufs (100%) Hari + Hsp (92%) Eaf + Meso + A369 (77%) Meso + A369 (100%) Pqu + Apauk + Cpo (98%) Apauk + Cpo (75%) Lean + Bba + Cfr (100%) Pep + Pno2 + Erw (100%) Pno2 + Erw (81%) Lem + Neo + Nhe + Avu3 (100%) Tor + Ahi + Aeli + Col2 + Ele (100%) Col2 + Ele (70%)

aspec2_6: Lpo + Cro2 (98%) Hari + Hsp (97%) Paq + Oim + Tom2 (98%) Lean + Bba + Cfr (97%)

aspec19_21: Thul + Mtd (100%) Pep + Pno2 + Erw (83%) Pno2 + Erw (94%) Thul + Mtd + Pep + Pno2 + Erw (70%) Fau + Pam (86%) Asa3 + ufs (95%) Dma + Lle2 (85%) Paq + Oim + Tom2 (95%) Bba + Cfr + Lean (80%) Cfr + Lean (71%) Nhe + Lem + Neo + Avu3 (72%) Col2 + Aeli + Ele + Tor + Ahi (91%) Aeli + Ele + Tor + Ahi (73%)

aspec11_12: Lpo + Cro2 (100%) Amb2 + Pwh (82%) Lfo + Ctas (83%) Lfo + Ctas2 + Scol + Spo (70%) Tor + Aeli (74%) Tor + Aeli + Ahi + Ele + Col2 (98%) Neo + Avu3 + Nhe + Lem (99%) Bba + Lean (89%) Bba + Lean + Cfr (100%) Paq + Tom2 (71%) Paq + Tom2 + Oim (100%) Dma + Lle2 (72%) Asa3 + ufs (93%) Apauk + Cpo + Pqu (100%) Meso + Eaf (79%) Thul + Mtd (100%)

ef2: May + Ein (98%) Psa + Mba (99%) Paq + Tom2 (70%) Paq + Tom2 + Oim (93%) Stu + Hma (73%) Asa3 + ufs (100%) Dma + Lle2 (73%) Branchiopoda -- 5 taxa (83%) Arg2 + Aar (86%) Hapa + Ost (97%) Neo + Avu3 + Lem (70%) Neo + Avu3 + Lem + Nhe (100%) Bba + Lean (90%) Bba + Lean + Cfr (84%) Bba + Lean + Cfr + Lox (100%) Hari + Hsp (99%) Euchelcerata -- 15 taxa (95%) Lpo + Cro2 (100%) Pycnogonida -- 5 taxa (99%) Tor + Aeli (93%) Tor + Aeli + Ahi + Ele (96%) Myriapoda -- 11 taxa (87%) Han2 + Scu3 (100%) Ama + Pge2 (84%) Ama + Pge2 + Nam (77%) Thul + Mtd (100%) Erw + Pep (99%)

polii: Ive + Lly (99%) May + Ein (100%) Fau + Ado + Pam (76%) Psa + Mba (100%) Paq + Tom2 + Oim (92%) Asa3 + ufs (100%) Dma + Lle2 (89%) Branchipoda -- 6 taxa (91%) Malacostraca -- 4 taxa (100%) Thecostraca -- 4 taxa (100%) Copepoda -- 3 taxa (100%) Meso + A369 (100%) Arg2 + Aar (87%) Hapa + Skle (100%) Pancrustacea -- 40 taxa (100%) Mandibulata -- 51 taxa (70%) Ama + Pge2 (76%) Lfo + Spo (96%) Han2 + Scu3 (100%) Mga + Stp (91%) Hari + Hsp (100%) Lpo + Cro2 (100%) Din2 + Ipum (90%) Euchelicerata -- 15 taxa (94%) Chelicerata -- 20 taxa (90%) Pycnogonida -- 5 taxa (100%) Aeli + Col2 (78%) Pno2 + Erw (84%) Pno2 + Erw + Pep (100%) Thul + Mtd (95%)

ef1a: Lpo + Cro2 (100%) Euchelicerata -- 15 taxa (97%) Hari + Hsp (93%) Copepoda -- 3 taxa (93%) Meso + A369 (95%) Diplopoda -- 4 taxa (78%) Malacostraca + Thecostraca -- 8 taxa (76%) Malacostraca -- 4 taxa (100%) Lem + Neo + Avu3 (88%) Neo + Avu3 (74%) Thecostraca -- 4 taxa (100%) Bba + Cfr + Lean (96%) Bba + Cfr (97%) Paq + Tom2 (72%) Branchiopoda -- 6 taxa (71%) Asa3 + ufs (82%) Pycnogonida -- 5 taxa (99%) Col2 + Ele (82%) Apauk + Cpo + Pqu (100%) Cli + Nme (94%) Psa + Mba (96%) May + Ein (94%) Hapa + Skle (100%) Ive + Lly (99%) Han2 + Scu3 (86%) Onychophora -- 3 taxa (96%) Pno2 + Erw (92%) Thul + Mtd (100%)

SUMMARY

- Total number of groups listed that have BP ≥ 70% = 899.
- Total number of groups listed that have BP ≥ 70% and that are present in combined result with BP ≥ 80% = 854. (854/899 = 0.95)
- Total number of groups in single-gene results that have BP ≥ 70% and that conflict with nodes that are strongly (BP ≥ 80%) supported in the combined result = 39. Note that missing taxa are taken into account in tabulating this statistic.
- Of the 39 distinct, strongly conflicting groups, 30 occur once, three occur three times (Lem + Neo, Bba + Lean, Col + Ele), and one occurs four times (Paq + Tom2).
- Of the 30 distinct, strongly conflicting groups, 7 include >2 terminal taxa, but only one of these (Stu + Apauk + Cpo + Pqu) has BP ≥ 80%.

Number of single genes supporting newly named groups (in bold) and other higher-level groups with BP ≥ 70% that are also present in combined result:

- **Xenocarida:** 1 (ef2 -- 73%)
- **Altocrustacea:** 0
- **Miracrustacea:** 0
- **Vericrustacea:** 0
- **Multicrustacea:** 0
- **Communostraca:** 1 (ef1a -- 76%)
- Arthropoda: 6 (This is a minimum estimate since only those cases in which there were representatives of Onychophora and Tardigrada were included.)
- Mandibulata: 1 (Pol II -- 70%)
- Pancrustacea: 2
- Myriapoda: 2
- Hexapoda: 0
- Insecta: 2
- Arachnida: 2
- Eucheliceratа: 8
- Pycnogonida: 40

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*, 500 bootstrap replicates (1 search replicate / bootstrap replicate) were performed for each individual gene segment, using a degen1 data set that was analyzed under a GTR + gamma + invariant model of nucleotide change. Groups in black are present in the single-gene-region results and in the combined-gene results. Groups highlighted in red are not present in the combined result; instead, groups present in the combined result strongly (≥ 80% BP) support an alternative grouping. Groups highlighted in blue are not present in the combined result, but BP support for the combined alternative is low. Proper interpretation of this table requires knowing which taxa failed to yield sequences for particular genes (available in Supplementary Table 2).

Supplementary Table 4. GenBank accession numbers for 80 taxa.

2fin3_4:

A369COPE	GQ886751
AarPENTA	GQ886752
AchARACH	GQ886753
AdoNEOPT	GQ886754
AeliPYCNO	GQ886755
AhiPYCNO	GQ886756
AmaDIPLO	GQ886757
Amb2ARACH	GQ886758
Arg2BIURA	GQ886759
Asa3BRANCH	GQ886760
Avu3MALA	GQ886761
BbaTHECOS	GQ886762
CfrTHECOS	GQ886763
CliZYGEN	GQ886764
Col2PYCNO	GQ886765
Cro2XIPHOS	GQ886766
Crp2ARACH	GQ886767
Ctas2CHILO	GQ886768
Din2ARACH	GQ886769
DmaBRANCH	GQ886770
DtyMYSTACO	GQ886771
EafCOPE	GQ886772
EfrDIPLUR	GQ886773
EgigARACH	GQ886774
EinEPHEM	GQ886775
ElePYCNO	GQ886776
ErwONYCH	GQ886777
EuryPAURO	GQ886778
Han2SYMPH	GQ886779
HapaOST	GQ886780
HariARACH	GQ886781
HmaCEPHAL	GQ886782
HspARACH	GQ886783
IpumARACH	GQ886784
IveODONAT	GQ886785
JapDIPLUR	GQ886786
LeanTHECOS	GQ886787
LemMALA	GQ886788
Lle2BRANCH	GQ886789
LlyODONAT	GQ886790
LnigARACH	GQ886791
LoxTHECOS	GQ886792
LynBRANCH	GQ886793
MbaARCHEO	GQ886794
MtdTARD	GQ886795
NeoMALA	GQ886796
NmeZYGEN	GQ886797
OimCOLL	GQ886798
PamNEOPT	GQ886799
PepONYCH	GQ886800
Pge2DIPLO	GQ886801
Pma2ARACH	GQ886802
Pno2ONYCH	GQ886803
Pol2DIPLO	GQ886804
PsaARCHEO	GQ886805
PwhARACH	GQ886806
ScolCHILO	GQ886807
Scu3SYMPH	GQ886808
SkleOST	GQ886809
SpoCHILO	GQ886810
StpARACH	GQ886811
Tom2COLL	GQ886812
UfsBRANCH	GQ886813

```
2fin7_8:
    AarPENTA       GQ886814
    AchARACH       GQ886815
    AdoNEOPT       GQ886816
    AhiPYCNO       GQ886817
    AmaDIPLO       GQ886818
    Amb2ARACH      GQ886819
    Arg2BIURA      GQ886820
    Asa3BRANCH     GQ886821
    Avu3MALA       GQ886822
    BbaTHECOS      GQ886823
    CliZYGEN       GQ886824
    Crp2ARACH      GQ886825
    Ctas2CHILO     GQ886826
    Din2ARACH      GQ886827
    EafCOPE        GQ886828
    EfrDIPLUR      GQ886829
    EinEPHEM       GQ886830
    ErwONYCH       GQ886831
    EuryPAURO      GQ886832
    Han2SYMPH      GQ886833
    HariARACH      GQ886834
    HspARACH       GQ886835
    IpumARACH      GQ886836
    IveODONAT      GQ886837
    LemMALA        GQ886838
    LlyODONAT      GQ886839
    LnigARACH      GQ886840
    LoxTHECOS      GQ886841
    LynBRANCH      GQ886842
    MayEPHEM       GQ886843
    MbaARCHEO      GQ886844
    NeoMALA        GQ886845
    NmeZYGEN       GQ886846
    PamNEOPT       GQ886847
    PepONYCH       GQ886848
    Pma2ARACH      GQ886849
    Pno2ONYCH      GQ886850
    Pol2DIPLO      GQ886851
    PsaARCHEO      GQ886852
    ScolCHILO      GQ886853
    Scu3SYMPH      GQ886854
    SkleOST        GQ886855
    SpoCHILO       GQ886856
    UfsBRANCH      GQ886857
```

6fin:

AarPENTA	GQ886858
AchARACH	GQ886859
AhiPYCNO	GQ886860
AmaDIPLO	GQ886861
Amb2ARACH	GQ886862
Arg2BIURA	GQ886863
Avu3MALA	GQ886864
BbaTHECOS	GQ886865
CfrTHECOS	GQ886866
Col2PYCNO	GQ886867
Cro2XIPHOS	GQ886868
Crp2ARACH	GQ886869
Ctas2CHILO	GQ886870
DmaBRANCH	GQ886871
DtyMYSTACO	GQ886872
EfrDIPLUR	GQ886873
EinEPHEM	GQ886874
ErwONYCH	GQ886875
EuryPAURO	GQ886876
Han2SYMPH	GQ886877
HariARACH	GQ886878
HspARACH	GQ886879
IpumARACH	GQ886880
LemMALA	GQ886881
LnigARACH	GQ886882
LoxTHECOS	GQ886883
MbaARCHEO	GQ886884
MtdTARD	GQ886885
NeoMALA	GQ886886
OimCOLL	GQ886887
PamNEOPT	GQ886888
PepONYCH	GQ886889
Pma2ARACH	GQ886890
Pol2DIPLO	GQ886891
PsaARCHEO	GQ886892
ScolCHILO	GQ886893
Scu3SYMPH	GQ886894
Tom2COLL	GQ886895
UfsBRANCH	GQ886896

```
25fin:
    A369COPE        GQ886897
    AdoNEOPT        GQ886898
    AeliPYCNO       GQ886899
    AhiPYCNO        GQ886900
    AmaDIPLO        GQ886901
    Amb2ARACH       GQ886902
    Arg2BIURA       GQ886903
    Asa3BRANCH      GQ886904
    BbaTHECOS       GQ886905
    CliZYGEN        GQ886906
    Col2PYCNO       GQ886907
    Cro2XIPHOS      GQ886908
    Crp2ARACH       GQ886909
    Ctas2CHILO      GQ886910
    Din2ARACH       GQ886911
    DmaBRANCH       GQ886912
    DtyMYSTACO      GQ886913
    EafCOPE         GQ886914
    EfrDIPLUR       GQ886915
    EgigARACH       GQ886916
    EinEPHEM        GQ886917
    ElePYCNO        GQ886918
    ErwONYCH        GQ886919
    EuryPAURO       GQ886920
    Han2SYMPH       GQ886921
    HariARACH       GQ886922
    HspARACH        GQ886923
    IpumARACH       GQ886924
    IveODONAT       GQ886925
    JapDIPLUR       GQ886926
    LemMALA         GQ886927
    Lle2BRANCH      GQ886928
    LlyODONAT       GQ886929
    LnigARACH       GQ886930
    LoxTHECOS       GQ886931
    LynBRANCH       GQ886932
    MayEPHEM        GQ886933
    MbaARCHEO       GQ886934
    MtdTARD         GQ886935
    NmeZYGEN        GQ886936
    OimCOLL         GQ886937
    PamNEOPT        GQ886938
    PepONYCH        GQ886939
    Pge2DIPLO       GQ886940
    Pma2ARACH       GQ886941
    Pno2ONYCH       GQ886942
    Pol2DIPLO       GQ886943
    PsaARCHEO       GQ886944
    PwhARACH        GQ886945
    ScolCHILO       GQ886946
    Scu3SYMPH       GQ886947
    SpoCHILO        GQ886948
    StpARACH        GQ886949
    Tom2COLL        GQ886950
    UfsBRANCH       GQ886951
```

```
26fin:
    A369COPE        GQ886952
    AarPENTA        GQ886953
    AchARACH        GQ886954
    AdoNEOPT        GQ886955
    AeliPYCNO       GQ886956
    AhiPYCNO        GQ886957
    AmaDIPLO        GQ886958
    Amb2ARACH       GQ886959
    Arg2BIURA       GQ886960
    Asa3BRANCH      GQ886961
    Avu3MALA        GQ886962
    BbaTHECOS       GQ886963
    CliZYGEN        GQ886964
    Col2PYCNO       GQ886965
    Cro2XIPHOS      GQ886966
    Crp2ARACH       GQ886967
    Ctas2CHILO      GQ886968
    Din2ARACH       GQ886969
    DmaBRANCH       GQ886970
    DtyMYSTACO      GQ886971
    EafCOPE         GQ886972
    EgigARACH       GQ886973
    EinEPHEM        GQ886974
    ElePYCNO        GQ886975
    ErwONYCH        GQ886976
    EuryPAURO       GQ886977
    Han2SYMPH       GQ886978
    HapaOST         GQ886979
    HariARACH       GQ886980
    HspARACH        GQ886981
    IpumARACH       GQ886982
    IveODONAT       GQ886983
    LeanTHECOS      GQ886984
    LemMALA         GQ886985
    Lle2BRANCH      GQ886986
    LlyODONAT       GQ886987
    LnigARACH       GQ886988
    LoxTHECOS       GQ886989
    LynBRANCH       GQ886990
    MayEPHEM        GQ886991
    MbaARCHEO       GQ886992
    NmeZYGEN        GQ886993
    PamNEOPT        GQ886994
    PepONYCH        GQ886995
    Pge2DIPLO       GQ886996
    Pma2ARACH       GQ886997
    Pno2ONYCH       GQ886998
    Pol2DIPLO       GQ886999
    PwhARACH        GQ887000
    ScolCHILO       GQ887001
    Scu3SYMPH       GQ887002
    SkleOST         GQ887003
    SpoCHILO        GQ887004
    StpARACH        GQ887005
    Tom2COLL        GQ887006
    UfsBRANCH       GQ887007
```

```
36fin:
    AdoNEOPT       GQ887008
    AeliPYCNO      GQ887009
    AhiPYCNO       GQ887010
    AmaDIPLO       GQ887011
    Amb2ARACH      GQ887012
    Asa3BRANCH     GQ887013
    Avu3MALA       GQ887014
    BbaTHECOS      GQ887015
    CliZYGEN       GQ887016
    Col2PYCNO      GQ887017
    Cro2XIPHOS     GQ887018
    Ctas2CHILO     GQ887019
    Din2ARACH      GQ887020
    DmaBRANCH      GQ887021
    EafCOPE        GQ887022
    EinEPHEM       GQ887023
    ErwONYCH       GQ887024
    EuryPAURO      GQ887025
    Han2SYMPH      GQ887026
    HariARACH      GQ887027
    IpumARACH      GQ887028
    IveODONAT      GQ887029
    JapDIPLUR      GQ887030
    LeanTHECOS     GQ887031
    LemMALA        GQ887032
    Lle2BRANCH     GQ887033
    LlyODONAT      GQ887034
    LnigARACH      GQ887035
    LoxTHECOS      GQ887036
    LynBRANCH      GQ887037
    MayEPHEM       GQ887038
    MbaARCHEO      GQ887039
    NeoMALA        GQ887040
    NmeZYGEN       GQ887041
    PamNEOPT       GQ887042
    PepONYCH       GQ887043
    Pge2DIPLO      GQ887044
    Pma2ARACH      GQ887045
    Pno2ONYCH      GQ887046
    Pol2DIPLO      GQ887047
    PsaARCHEO      GQ887048
    PwhARACH       GQ887049
    ScolCHILO      GQ887050
    Scu3SYMPH      GQ887051
    SkleOST        GQ887052
    SpoCHILO       GQ887053
    StpARACH       GQ887054
    Tom2COLL       GQ887055
    UfsBRANCH      GQ887056
```

```
40fin:
    A369COPE        GQ887057
    AarPENTA        GQ887058
    AchARACH        GQ887059
    AdoNEOPT        GQ887060
    AhiPYCNO        GQ887061
    AmaDIPLO        GQ887062
    Amb2ARACH       GQ887063
    Arg2BIURA       GQ887064
    Asa3BRANCH      GQ887065
    Avu3MALA        GQ887066
    BbaTHECOS       GQ887067
    CliZYGEN        GQ887068
    Col2PYCNO       GQ887069
    Cro2XIPHOS      GQ887070
    Crp2ARACH       GQ887071
    Ctas2CHILO      GQ887072
    Din2ARACH       GQ887073
    DmaBRANCH       GQ887074
    EafCOPE         GQ887075
    EfrDIPLUR       GQ887076
    EgigARACH       GQ887077
    EinEPHEM        GQ887078
    ErwONYCH        GQ887079
    EuryPAURO       GQ887080
    Han2SYMPH       GQ887081
    HariARACH       GQ887082
    HmaCEPHAL       GQ887083
    HspARACH        GQ887084
    IpumARACH       GQ887085
    IveODONAT       GQ887086
    JapDIPLUR       GQ887087
    LeanTHECOS      GQ887088
    LemMALA         GQ887089
    Lle2BRANCH      GQ887090
    LlyODONAT       GQ887091
    LnigARACH       GQ887092
    LoxTHECOS       GQ887093
    LynBRANCH       GQ887094
    MayEPHEM        GQ887095
    MbaARCHEO       GQ887096
    MtdTARD         GQ887097
    NeoMALA         GQ887098
    NmeZYGEN        GQ887099
    OimCOLL         GQ887100
    PamNEOPT        GQ887101
    PepONYCH        GQ887102
    Pge2DIPLO       GQ887103
    Pma2ARACH       GQ887104
    Pno2ONYCH       GQ887105
    Pol2DIPLO       GQ887106
    PsaARCHEO       GQ887107
    PwhARACH        GQ887108
    ScolCHILO       GQ887109
    Scu3SYMPH       GQ887110
    SkleOST         GQ887111
    SpoCHILO        GQ887112
    StpARACH        GQ887113
    UfsBRANCH       GQ887114
```

```
42fin:
    A369COPE        GQ887115
    AarPENTA        GQ887116
    AchARACH        GQ887117
    AdoNEOPT        GQ887118
    AeliPYCNO       GQ887119
    AhiPYCNO        GQ887120
    AmaDIPLO        GQ887121
    Amb2ARACH       GQ887122
    Arg2BIURA       GQ887123
    Asa3BRANCH      GQ887124
    Avu3MALA        GQ887125
    BbaTHECOS       GQ887126
    CfrTHECOS       GQ887127
    CliZYGEN        GQ887128
    Col2PYCNO       GQ887129
    Cro2XIPHOS      GQ887130
    Crp2ARACH       GQ887131
    Ctas2CHILO      GQ887132
    Din2ARACH       GQ887133
    DmaBRANCH       GQ887134
    DtyMYSTACO      GQ887135
    EafCOPE         GQ887136
    EgigARACH       GQ887137
    EinEPHEM        GQ887138
    ElePYCNO        GQ887139
    ErwONYCH        GQ887140
    Han2SYMPH       GQ887141
    HariARACH       GQ887142
    HspARACH        GQ887143
    IveODONAT       GQ887144
    JapDIPLUR       GQ887145
    LeanTHECOS      GQ887146
    LemMALA         GQ887147
    Lle2BRANCH      GQ887148
    LlyODONAT       GQ887149
    LoxTHECOS       GQ887150
    LynBRANCH       GQ887151
    MayEPHEM        GQ887152
    MbaARCHEO       GQ887153
    NeoMALA         GQ887154
    NmeZYGEN        GQ887155
    OimCOLL         GQ887156
    PamNEOPT        GQ887157
    PepONYCH        GQ887158
    Pge2DIPLO       GQ887159
    Pma2ARACH       GQ887160
    Pol2DIPLO       GQ887161
    PsaARCHEO       GQ887162
    PwhARACH        GQ887163
    ScolCHILO       GQ887164
    Scu3SYMPH       GQ887165
    SkleOST         GQ887166
    SpoCHILO        GQ887167
    StpARACH        GQ887168
    Tom2COLL        GQ887169
    UfsBRANCH       GQ887170
```

```
44fin:
    AchARACH       GQ887171
    AdoNEOPT       GQ887172
    AeliPYCNO      GQ887173
    AhiPYCNO       GQ887174
    AmaDIPLO       GQ887175
    Amb2ARACH      GQ887176
    Asa3BRANCH     GQ887177
    Avu3MALA       GQ887178
    BbaTHECOS      GQ887179
    CfrTHECOS      GQ887180
    CliZYGEN       GQ887181
    Col2PYCNO      GQ887182
    Cro2XIPHOS     GQ887183
    Crp2ARACH      GQ887184
    Ctas2CHILO     GQ887185
    Din2ARACH      GQ887186
    DmaBRANCH      GQ887187
    EafCOPE        GQ887188
    EinEPHEM       GQ887189
    Han2SYMPH      GQ887190
    HapaOST        GQ887191
    HariARACH      GQ887192
    HspARACH       GQ887193
    IpumARACH      GQ887194
    IveODONAT      GQ887195
    JapDIPLUR      GQ887196
    LemMALA        GQ887197
    Lle2BRANCH     GQ887198
    LlyODONAT      GQ887199
    LnigARACH      GQ887200
    LoxTHECOS      GQ887201
    LynBRANCH      GQ887202
    MayEPHEM       GQ887203
    MbaARCHEO      GQ887204
    MtdTARD        GQ887205
    NeoMALA        GQ887206
    NmeZYGEN       GQ887207
    PamNEOPT       GQ887208
    PepONYCH       GQ887209
    Pge2DIPLO      GQ887210
    Pma2ARACH      GQ887211
    Pol2DIPLO      GQ887212
    PwhARACH       GQ887213
    ScolCHILO      GQ887214
    Scu3SYMPH      GQ887215
    SkleOST        GQ887216
    SpoCHILO       GQ887217
    StpARACH       GQ887218
    Tom2COLL       GQ887219
    UfsBRANCH      GQ887220
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```
58fin3_6:
    AarPENTA       GQ887221
    AchARACH       GQ887222
    AdoNEOPT       GQ887223
    AeliPYCNO      GQ887224
    AhiPYCNO       GQ887225
    AmaDIPLO       GQ887226
    Amb2ARACH      GQ887227
    Avu3MALA       GQ887228
    BbaTHECOS      GQ887229
    CliZYGEN       GQ887230
    Col2PYCNO      GQ887231
    Crp2ARACH      GQ887232
    Ctas2CHILO     GQ887233
    Din2ARACH      GQ887234
    DmaBRANCH      GQ887235
    DtyMYSTACO     GQ887236
    EafCOPE        GQ887237
    EfrDIPLUR      GQ887238
    EgigARACH      GQ887239
    EinEPHEM       GQ887240
    ElePYCNO       GQ887241
    ErwONYCH       GQ887242
    EuryPAURO      GQ887243
    Han2SYMPH      GQ887244
    HapaOST        GQ887245
    HariARACH      GQ887246
    HspARACH       GQ887247
    IveODONAT      GQ887248
    LeanTHECOS     GQ887249
    LemMALA        GQ887250
    Lle2BRANCH     GQ887251
    LlyODONAT      GQ887252
    LnigARACH      GQ887253
    LoxTHECOS      GQ887254
    LynBRANCH      GQ887255
    MayEPHEM       GQ887256
    MbaARCHEO      GQ887257
    MtdTARD        GQ887258
    NeoMALA        GQ887259
    NmeZYGEN       GQ887260
    PamNEOPT       GQ887261
    Pge2DIPLO      GQ887262
    Pma2ARACH      GQ887263
    Pol2DIPLO      GQ887264
    PsaARCHEO      GQ887265
    PwhARACH       GQ887266
    ScolCHILO      GQ887267
    Scu3SYMPH      GQ887268
    SkleOST        GQ887269
    SpoCHILO       GQ887270
    StpARACH       GQ887271
    Tom2COLL       GQ887272
    UfsBRANCH      GQ887273
```

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58fin7_9:
    A369COPE        GQ887274
    AchARACH        GQ887275
    AdoNEOPT        GQ887276
    AeliPYCNO       GQ887277
    AhiPYCNO        GQ887278
    AmaDIPLO        GQ887279
    Amb2ARACH       GQ887280
    Arg2BIURA       GQ887281
    Avu3MALA        GQ887282
    BbaTHECOS       GQ887283
    CfrTHECOS       GQ887284
    CliZYGEN        GQ887285
    Col2PYCNO       GQ887286
    Crp2ARACH       GQ887287
    Ctas2CHILO      GQ887288
    Din2ARACH       GQ887289
    DmaBRANCH       GQ887290
    DtyMYSTACO      GQ887291
    EafCOPE         GQ887292
    EinEPHEM        GQ887293
    ElePYCNO        GQ887294
    ErwONYCH        GQ887295
    EuryPAURO       GQ887296
    Han2SYMPH       GQ887297
    HmaCEPHAL       GQ887298
    IveODONAT       GQ887299
    JapDIPLUR       GQ887300
    LeanTHECOS      GQ887301
    LemMALA         GQ887302
    Lle2BRANCH      GQ887303
    LlyODONAT       GQ887304
    LnigARACH       GQ887305
    LoxTHECOS       GQ887306
    MayEPHEM        GQ887307
    MbaARCHEO       GQ887308
    NeoMALA         GQ887309
    NmeZYGEN        GQ887310
    OimCOLL         GQ887311
    PamNEOPT        GQ887312
    PepONYCH        GQ887313
    Pge2DIPLO       GQ887314
    Pno2ONYCH       GQ887315
    Pol2DIPLO       GQ887316
    PsaARCHEO       GQ887317
    PwhARACH        GQ887318
    ScolCHILO       GQ887319
    Scu3SYMPH       GQ887320
    SkleOST         GQ887321
    SpoCHILO        GQ887322
    StpARACH        GQ887323
    Tom2COLL        GQ887324
    UfsBRANCH       GQ887325
```

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62fin:
    A369COPE        GQ887326
    AarPENTA        GQ887327
    AchARACH        GQ887328
    AeliPYCNO       GQ887329
    AhiPYCNO        GQ887330
    AmaDIPLO        GQ887331
    Amb2ARACH       GQ887332
    Arg2BIURA       GQ887333
    Asa3BRANCH      GQ887334
    Avu3MALA        GQ887335
    CliZYGEN        GQ887336
    Col2PYCNO       GQ887337
    Cro2XIPHOS      GQ887338
    Crp2ARACH       GQ887339
    Ctas2CHILO      GQ887340
    Din2ARACH       GQ887341
    DmaBRANCH       GQ887342
    DtyMYSTACO      GQ887343
    EafCOPE         GQ887344
    EgigARACH       GQ887345
    EinEPHEM        GQ887346
    ElePYCNO        GQ887347
    ErwONYCH        GQ887348
    EuryPAURO       GQ887349
    Han2SYMPH       GQ887350
    IpumARACH       GQ887351
    IveODONAT       GQ887352
    LemMALA         GQ887353
    Lle2BRANCH      GQ887354
    LlyODONAT       GQ887355
    LnigARACH       GQ887356
    LynBRANCH       GQ887357
    MayEPHEM        GQ887358
    MbaARCHEO       GQ887359
    MtdTARD         GQ887360
    NeoMALA         GQ887361
    NmeZYGEN        GQ887362
    OimCOLL         GQ887363
    PamNEOPT        GQ887364
    PepONYCH        GQ887365
    Pge2DIPLO       GQ887366
    Pol2DIPLO       GQ887367
    PsaARCHEO       GQ887368
    PwhARACH        GQ887369
    ScolCHILO       GQ887370
    SkleOST         GQ887371
    SpoCHILO        GQ887372
    Tom2COLL        GQ887373
    UfsBRANCH       GQ887374
```

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63fin:
    A369COPE       GQ887375
    AarPENTA       GQ887376
    AchARACH       GQ887377
    AdoNEOPT       GQ887378
    AeliPYCNO      GQ887379
    AhiPYCNO       GQ887380
    AmaDIPLO       GQ887381
    Arg2BIURA      GQ887382
    Asa3BRANCH     GQ887383
    Avu3MALA       GQ887384
    BbaTHECOS      GQ887385
    CfrTHECOS      GQ887386
    CliZYGEN       GQ887387
    Col2PYCNO      GQ887388
    Cro2XIPHOS     GQ887389
    Crp2ARACH      GQ887390
    Ctas2CHILO     GQ887391
    Din2ARACH      GQ887392
    DmaBRANCH      GQ887393
    DtyMYSTACO     GQ887394
    EafCOPE        GQ887395
    EgigARACH      GQ887396
    EinEPHEM       GQ887397
    ElePYCNO       GQ887398
    ErwONYCH       GQ887399
    EuryPAURO      GQ887400
    Han2SYMPH      GQ887401
    HapaOST        GQ887402
    HmaCEPHAL      GQ887403
    IpumARACH      GQ887404
    IveODONAT      GQ887405
    JapDIPLUR      GQ887406
    LeanTHECOS     GQ887407
    LemMALA        GQ887408
    Lle2BRANCH     GQ887409
    LlyODONAT      GQ887410
    LnigARACH      GQ887411
    LoxTHECOS      GQ887412
    LynBRANCH      GQ887413
    MayEPHEM       GQ887414
    MbaARCHEO      GQ887415
    MtdTARD        GQ887416
    NeoMALA        GQ887417
    NmeZYGEN       GQ887418
    OimCOLL        GQ887419
    PamNEOPT       GQ887420
    PepONYCH       GQ887421
    Pge2DIPLO      GQ887422
    Pma2ARACH      GQ887423
    Pno2ONYCH      GQ887424
    Pol2DIPLO      GQ887425
    PsaARCHEO      GQ887426
    PwhARACH       GQ887427
    ScolCHILO      GQ887428
    Scu3SYMPH      GQ887429
    SpoCHILO       GQ887430
    StpARACH       GQ887431
    Tom2COLL       GQ887432
    UfsBRANCH      GQ887433
```

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69fin:
    A369COPE        GQ887434
    AarPENTA        GQ887435
    AchARACH        GQ887436
    AdoNEOPT        GQ887437
    AeliPYCNO       GQ887438
    AhiPYCNO        GQ887439
    AmaDIPLO        GQ887440
    Amb2ARACH       GQ887441
    Arg2BIURA       GQ887442
    Asa3BRANCH      GQ887443
    Avu3MALA        GQ887444
    BbaTHECOS       GQ887445
    CfrTHECOS       GQ887446
    CliZYGEN        GQ887447
    Col2PYCNO       GQ887448
    Cro2XIPHOS      GQ887449
    Crp2ARACH       GQ887450
    Ctas2CHILO      GQ887451
    Din2ARACH       GQ887452
    DtyMYSTACO      GQ887453
    EafCOPE         GQ887454
    EgigARACH       GQ887455
    EinEPHEM        GQ887456
    ElePYCNO        GQ887457
    ErwONYCH        GQ887458
    EuryPAURO       GQ887459
    Han2SYMPH       GQ887460
    HariARACH       GQ887461
    HspARACH        GQ887462
    IveODONAT       GQ887463
    JapDIPLUR       GQ887464
    LeanTHECOS      GQ887465
    LemMALA         GQ887466
    Lle2BRANCH      GQ887467
    LlyODONAT       GQ887468
    LnigARACH       GQ887469
    LoxTHECOS       GQ887470
    MayEPHEM        GQ887471
    MtdTARD         GQ887472
    NeoMALA         GQ887473
    NmeZYGEN        GQ887474
    OimCOLL         GQ887475
    PamNEOPT        GQ887476
    PepONYCH        GQ887477
    Pge2DIPLO       GQ887478
    Pma2ARACH       GQ887479
    Pno2ONYCH       GQ887480
    Pol2DIPLO       GQ887481
    PsaARCHEO       GQ887482
    ScolCHILO       GQ887483
    Scu3SYMPH       GQ887484
    SkleOST         GQ887485
    SpoCHILO        GQ887486
    StpARACH        GQ887487
    Tom2COLL        GQ887488
    UfsBRANCH       GQ887489
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73fin:
    A369COPE        GQ887490
    AarPENTA        GQ887491
    AchARACH        GQ887492
    AdoNEOPT        GQ887493
    AeliPYCNO       GQ887494
    AhiPYCNO        GQ887495
    AmaDIPLO        GQ887496
    Amb2ARACH       GQ887497
    Arg2BIURA       GQ887498
    Asa3BRANCH      GQ887499
    Avu3MALA        GQ887500
    BbaTHECOS       GQ887501
    CfrTHECOS       GQ887502
    CliZYGEN        GQ887503
    Col2PYCNO       GQ887504
    Cro2XIPHOS      GQ887505
    Crp2ARACH       GQ887506
    Ctas2CHILO      GQ887507
    Din2ARACH       GQ887508
    DmaBRANCH       GQ887509
    EafCOPE         GQ887510
    EgigARACH       GQ887511
    EinEPHEM        GQ887512
    ElePYCNO        GQ887513
    ErwONYCH        GQ887514
    EuryPAURO       GQ887515
    Han2SYMPH       GQ887516
    HariARACH       GQ887517
    HspARACH        GQ887518
    IpumARACH       GQ887519
    IveODONAT       GQ887520
    LemMALA         GQ887521
    LlyODONAT       GQ887522
    LnigARACH       GQ887523
    LynBRANCH       GQ887524
    MayEPHEM        GQ887525
    MbaARCHEO       GQ887526
    NeoMALA         GQ887527
    NmeZYGEN        GQ887528
    PamNEOPT        GQ887529
    PepONYCH        GQ887530
    Pge2DIPLO       GQ887531
    Pma2ARACH       GQ887532
    Pol2DIPLO       GQ887533
    PsaARCHEO       GQ887534
    PwhARACH        GQ887535
    ScolCHILO       GQ887536
    Scu3SYMPH       GQ887537
    SkleOST         GQ887538
    SpoCHILO        GQ887539
    StpARACH        GQ887540
    Tom2COLL        GQ887541
    UfsBRANCH       GQ887542
```

96fin:

A369COPE	GQ887543
AarPENTA	GQ887544
AchARACH	GQ887545
AdoNEOPT	GQ887546
AhiPYCNO	GQ887547
AmaDIPLO	GQ887548
Amb2ARACH	GQ887549
Arg2BIURA	GQ887550
Asa3BRANCH	GQ887551
Avu3MALA	GQ887552
BbaTHECOS	GQ887553
CfrTHECOS	GQ887554
CliZYGEN	GQ887555
Col2PYCNO	GQ887556
Crp2ARACH	GQ887557
Ctas2CHILO	GQ887558
Din2ARACH	GQ887559
DmaBRANCH	GQ887560
EafCOPE	GQ887561
EfrDIPLUR	GQ887562
EgigARACH	GQ887563
EinEPHEM	GQ887564
ErwONYCH	GQ887565
EuryPAURO	GQ887566
Han2SYMPH	GQ887567
HapaOST	GQ887568
HariARACH	GQ887569
HmaCEPHAL	GQ887570
HspARACH	GQ887571
IveODONAT	GQ887572
JapDIPLUR	GQ887573
LeanTHECOS	GQ887574
LemMALA	GQ887575
LlyODONAT	GQ887576
LnigARACH	GQ887577
LoxTHECOS	GQ887578
LynBRANCH	GQ887579
MayEPHEM	GQ887580
MbaARCHEO	GQ887581
MtdTARD	GQ887582
NeoMALA	GQ887583
NmeZYGEN	GQ887584
OimCOLL	GQ887585
PamNEOPT	GQ887586
PepONYCH	GQ887587
Pge2DIPLO	GQ887588
Pma2ARACH	GQ887589
Pno2ONYCH	GQ887590
PsaARCHEO	GQ887591
PwhARACH	GQ887592
ScolCHILO	GQ887593
Scu3SYMPH	GQ887594
StpARACH	GQ887595
Tom2COLL	GQ887596
UfsBRANCH	GQ887597

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109fin:
    AarPENTA       GQ887598
    AchARACH       GQ887599
    AdoNEOPT       GQ887600
    AeliPYCNO      GQ887601
    AmaDIPLO       GQ887602
    Amb2ARACH      GQ887603
    Arg2BIURA      GQ887604
    Asa3BRANCH     GQ887605
    Avu3MALA       GQ887606
    CliZYGEN       GQ887607
    Col2PYCNO      GQ887608
    Cro2XIPHOS     GQ887609
    Crp2ARACH      GQ887610
    Ctas2CHILO     GQ887611
    Din2ARACH      GQ887612
    DtyMYSTACO     GQ887613
    EafCOPE        GQ887614
    EgigARACH      GQ887615
    EinEPHEM       GQ887616
    ElePYCNO       GQ887617
    ErwONYCH       GQ887618
    EuryPAURO      GQ887619
    Han2SYMPH      GQ887620
    HapaOST        GQ887621
    HariARACH      GQ887622
    HspARACH       GQ887623
    IveODONAT      GQ887624
    JapDIPLUR      GQ887625
    LeanTHECOS     GQ887626
    LemMALA        GQ887627
    Lle2BRANCH     GQ887628
    LnigARACH      GQ887629
    LoxTHECOS      GQ887630
    MayEPHEM       GQ887631
    MbaARCHEO      GQ887632
    MtdTARD        GQ887633
    NeoMALA        GQ887634
    OimCOLL        GQ887635
    PamNEOPT       GQ887636
    PepONYCH       GQ887637
    Pge2DIPLO      GQ887638
    Pma2ARACH      GQ887639
    Pno2ONYCH      GQ887640
    Pol2DIPLO      GQ887641
    PsaARCHEO      GQ887642
    PwhARACH       GQ887643
    ScolCHILO      GQ887644
    Scu3SYMPH      GQ887645
    SpoCHILO       GQ887646
    StpARACH       GQ887647
    Tom2COLL       GQ887648
    UfsBRANCH      GQ887649
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113fin:
    A369COPE        GQ887650
    AarPENTA        GQ887651
    AchARACH        GQ887652
    AdoNEOPT        GQ887653
    AeliPYCNO       GQ887654
    AmaDIPLO        GQ887655
    Arg2BIURA       GQ887656
    Avu3MALA        GQ887657
    BbaTHECOS       GQ887658
    CfrTHECOS       GQ887659
    CliZYGEN        GQ887660
    Col2PYCNO       GQ887661
    Cro2XIPHOS      GQ887662
    Crp2ARACH       GQ887663
    Ctas2CHILO      GQ887664
    Din2ARACH       GQ887665
    DmaBRANCH       GQ887666
    DtyMYSTACO      GQ887667
    EafCOPE         GQ887668
    EfrDIPLUR       GQ887669
    EinEPHEM        GQ887670
    ElePYCNO        GQ887671
    ErwONYCH        GQ887672
    EuryPAURO       GQ887673
    Han2SYMPH       GQ887674
    HariARACH       GQ887675
    HspARACH        GQ887676
    IpumARACH       GQ887677
    IveODONAT       GQ887678
    JapDIPLUR       GQ887679
    LeanTHECOS      GQ887680
    LemMALA         GQ887681
    Lle2BRANCH      GQ887682
    LlyODONAT       GQ887683
    LnigARACH       GQ887684
    LoxTHECOS       GQ887685
    LynBRANCH       GQ887686
    MbaARCHEO       GQ887687
    MtdTARD         GQ887688
    NeoMALA         GQ887689
    NmeZYGEN        GQ887690
    OimCOLL         GQ887691
    PamNEOPT        GQ887692
    PepONYCH        GQ887693
    Pge2DIPLO       GQ887694
    Pma2ARACH       GQ887695
    PsaARCHEO       GQ887696
    PwhARACH        GQ887697
    ScolCHILO       GQ887698
    Scu3SYMPH       GQ887699
    SkleOST         GQ887700
    SpoCHILO        GQ887701
    StpARACH        GQ887702
    UfsBRANCH       GQ887703
```

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127fin:
    AchARACH       GQ887704
    AdoNEOPT       GQ887705
    AeliPYCNO      GQ887706
    AhiPYCNO       GQ887707
    AmaDIPLO       GQ887708
    Amb2ARACH      GQ887709
    Arg2BIURA      GQ887710
    Asa3BRANCH     GQ887711
    Avu3MALA       GQ887712
    BbaTHECOS      GQ887713
    CliZYGEN       GQ887714
    Col2PYCNO      GQ887715
    Cro2XIPHOS     GQ887716
    Crp2ARACH      GQ887717
    DmaBRANCH      GQ887718
    EfrDIPLUR      GQ887719
    EgigARACH      GQ887720
    EinEPHEM       GQ887721
    ElePYCNO       GQ887722
    ErwONYCH       GQ887723
    EuryPAURO      GQ887724
    Han2SYMPH      GQ887725
    HariARACH      GQ887726
    HspARACH       GQ887727
    IveODONAT      GQ887728
    JapDIPLUR      GQ887729
    Lle2BRANCH     GQ887730
    LlyODONAT      GQ887731
    LnigARACH      GQ887732
    LoxTHECOS      GQ887733
    LynBRANCH      GQ887734
    MayEPHEM       GQ887735
    MbaARCHEO      GQ887736
    MtdTARD        GQ887737
    NeoMALA        GQ887738
    NmeZYGEN       GQ887739
    OimCOLL        GQ887740
    PamNEOPT       GQ887741
    PepONYCH       GQ887742
    Pge2DIPLO      GQ887743
    Pma2ARACH      GQ887744
    Pol2DIPLO      GQ887745
    PsaARCHEO      GQ887746
    ScolCHILO      GQ887747
    Scu3SYMPH      GQ887748
    Tom2COLL       GQ887749
    UfsBRANCH      GQ887750
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149fin:
    A369COPE        GQ887751
    AarPENTA        GQ887752
    AchARACH        GQ887753
    AdoNEOPT        GQ887754
    AeliPYCNO       GQ887755
    AhiPYCNO        GQ887756
    AmaDIPLO        GQ887757
    Amb2ARACH       GQ887758
    Arg2BIURA       GQ887759
    Asa3BRANCH      GQ887760
    Avu3MALA        GQ887761
    BbaTHECOS       GQ887762
    CfrTHECOS       GQ887763
    CliZYGEN        GQ887764
    Col2PYCNO       GQ887765
    Cro2XIPHOS      GQ887766
    Crp2ARACH       GQ887767
    Ctas2CHILO      GQ887768
    Din2ARACH       GQ887769
    DmaBRANCH       GQ887770
    DtyMYSTACO      GQ887771
    EafCOPE         GQ887772
    EfrDIPLUR       GQ887773
    EgigARACH       GQ887774
    ElePYCNO        GQ887775
    EuryPAURO       GQ887776
    Han2SYMPH       GQ887777
    HariARACH       GQ887778
    HspARACH        GQ887779
    IpumARACH       GQ887780
    IveODONAT       GQ887781
    LeanTHECOS      GQ887782
    LemMALA         GQ887783
    Lle2BRANCH      GQ887784
    LlyODONAT       GQ887785
    LnigARACH       GQ887786
    LoxTHECOS       GQ887787
    LynBRANCH       GQ887788
    MayEPHEM        GQ887789
    MbaARCHEO       GQ887790
    NeoMALA         GQ887791
    NmeZYGEN        GQ887792
    OimCOLL         GQ887793
    PamNEOPT        GQ887794
    Pma2ARACH       GQ887795
    Pol2DIPLO       GQ887796
    PsaARCHEO       GQ887797
    PwhARACH        GQ887798
    Scu3SYMPH       GQ887799
    SkleOST         GQ887800
    SpoCHILO        GQ887801
    StpARACH        GQ887802
    Tom2COLL        GQ887803
    UfsBRANCH       GQ887804
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166fin:

A369COPE	GQ887805
AarPENTA	GQ887806
AchARACH	GQ887807
AdoNEOPT	GQ887808
AeliPYCNO	GQ887809
AhiPYCNO	GQ887810
AmaDIPLO	GQ887811
Amb2ARACH	GQ887812
Arg2BIURA	GQ887813
Asa3BRANCH	GQ887814
Avu3MALA	GQ887815
BbaTHECOS	GQ887816
CfrTHECOS	GQ887817
CliZYGEN	GQ887818
Col2PYCNO	GQ887819
Cro2XIPHOS	GQ887820
Crp2ARACH	GQ887821
Ctas2CHILO	GQ887822
Din2ARACH	GQ887823
DmaBRANCH	GQ887824
DtyMYSTACO	GQ887825
EafCOPE	GQ887826
EfrDIPLUR	GQ887827
EgigARACH	GQ887828
EinEPHEM	GQ887829
ElePYCNO	GQ887830
ErwONYCH	GQ887831
EuryPAURO	GQ887832
Han2SYMPH	GQ887833
HapaOST	GQ887834
HariARACH	GQ887835
HmaCEPHAL	GQ887836
HspARACH	GQ887837
IpumARACH	GQ887838
IveODONAT	GQ887839
JapDIPLUR	GQ887840
LeanTHECOS	GQ887841
LemMALA	GQ887842
Lle2BRANCH	GQ887843
LlyODONAT	GQ887844
LnigARACH	GQ887845
LoxTHECOS	GQ887846
LynBRANCH	GQ887847
MayEPHEM	GQ887848
MbaARCHEO	GQ887849
MtdTARD	GQ887850
NeoMALA	GQ887851
NmeZYGEN	GQ887852
OimCOLL	GQ887853
PamNEOPT	GQ887854
PepONYCH	GQ887855
Pge2DIPLO	GQ887856
Pma2ARACH	GQ887857
Pno2ONYCH	GQ887858
Pol2DIPLO	GQ887859
PwhARACH	GQ887860
ScolCHILO	GQ887861
Scu3SYMPH	GQ887862
SkleOST	GQ887863
SpoCHILO	GQ887864
StpARACH	GQ887865
Tom2COLL	GQ887866
UfsBRANCH	GQ887867

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192fin:
    AchARACH       GQ887868
    AeliPYCNO      GQ887869
    AhiPYCNO       GQ887870
    Amb2ARACH      GQ887871
    Arg2BIURA      GQ887872
    Asa3BRANCH     GQ887873
    BbaTHECOS      GQ887874
    CfrTHECOS      GQ887875
    CliZYGEN       GQ887876
    Cro2XIPHOS     GQ887877
    Crp2ARACH      GQ887878
    Ctas2CHILO     GQ887879
    Din2ARACH      GQ887880
    DmaBRANCH      GQ887881
    DtyMYSTACO     GQ887882
    EafCOPE        GQ887883
    EfrDIPLUR      GQ887884
    EgigARACH      GQ887885
    EinEPHEM       GQ887886
    ElePYCNO       GQ887887
    ErwONYCH       GQ887888
    EuryPAURO      GQ887889
    Han2SYMPH      GQ887890
    HapaOST        GQ887891
    HariARACH      GQ887892
    HspARACH       GQ887893
    IpumARACH      GQ887894
    JapDIPLUR      GQ887895
    LemMALA        GQ887896
    Lle2BRANCH     GQ887897
    LnigARACH      GQ887898
    LoxTHECOS      GQ887899
    LynBRANCH      GQ887900
    MayEPHEM       GQ887901
    MbaARCHEO      GQ887902
    NeoMALA        GQ887903
    NmeZYGEN       GQ887904
    PamNEOPT       GQ887905
    PepONYCH       GQ887906
    Pge2DIPLO      GQ887907
    Pma2ARACH      GQ887908
    Pol2DIPLO      GQ887909
    PsaARCHEO      GQ887910
    PwhARACH       GQ887911
    ScolCHILO      GQ887912
    Scu3SYMPH      GQ887913
    SkleOST        GQ887914
    SpoCHILO       GQ887915
    StpARACH       GQ887916
    Tom2COLL       GQ887917
    UfsBRANCH      GQ887918
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197fin:
    A369COPE        GQ887919
    AarPENTA        GQ887920
    AchARACH        GQ887921
    AdoNEOPT        GQ887922
    AeliPYCNO       GQ887923
    AhiPYCNO        GQ887924
    Amb2ARACH       GQ887925
    Arg2BIURA       GQ887926
    Avu3MALA        GQ887927
    BbaTHECOS       GQ887928
    CliZYGEN        GQ887929
    Col2PYCNO       GQ887930
    Cro2XIPHOS      GQ887931
    Crp2ARACH       GQ887932
    Ctas2CHILO      GQ887933
    Din2ARACH       GQ887934
    DmaBRANCH       GQ887935
    EafCOPE         GQ887936
    EfrDIPLUR       GQ887937
    EgigARACH       GQ887938
    EinEPHEM        GQ887939
    ErwONYCH        GQ887940
    EuryPAURO       GQ887941
    Han2SYMPH       GQ887942
    HariARACH       GQ887943
    HmaCEPHAL       GQ887944
    HspARACH        GQ887945
    IveODONAT       GQ887946
    JapDIPLUR       GQ887947
    LeanTHECOS      GQ887948
    LemMALA         GQ887949
    Lle2BRANCH      GQ887950
    LlyODONAT       GQ887951
    LnigARACH       GQ887952
    LynBRANCH       GQ887953
    MayEPHEM        GQ887954
    MbaARCHEO       GQ887955
    NeoMALA         GQ887956
    NmeZYGEN        GQ887957
    OimCOLL         GQ887958
    PepONYCH        GQ887959
    Pge2DIPLO       GQ887960
    Pma2ARACH       GQ887961
    Pol2DIPLO       GQ887962
    PsaARCHEO       GQ887963
    ScolCHILO       GQ887964
    Scu3SYMPH       GQ887965
    SpoCHILO        GQ887966
    StpARACH        GQ887967
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220fin:
    AchARACH        GQ887968
    AdoNEOPT        GQ887969
    AeliPYCNO       GQ887970
    AhiPYCNO        GQ887971
    AmaDIPLO        GQ887972
    Amb2ARACH       GQ887973
    Arg2BIURA       GQ887974
    Asa3BRANCH      GQ887975
    Avu3MALA        GQ887976
    BbaTHECOS       GQ887977
    CfrTHECOS       GQ887978
    Col2PYCNO       GQ887979
    Crp2ARACH       GQ887980
    Ctas2CHILO      GQ887981
    Din2ARACH       GQ887982
    DmaBRANCH       GQ887983
    DtyMYSTACO      GQ887984
    EfrDIPLUR       GQ887985
    EgigARACH       GQ887986
    EinEPHEM        GQ887987
    ElePYCNO        GQ887988
    ErwONYCH        GQ887989
    EuryPAURO       GQ887990
    Han2SYMPH       GQ887991
    HariARACH       GQ887992
    HspARACH        GQ887993
    IveODONAT       GQ887994
    LeanTHECOS      GQ887995
    LemMALA         GQ887996
    Lle2BRANCH      GQ887997
    LlyODONAT       GQ887998
    LnigARACH       GQ887999
    MayEPHEM        GQ888000
    MbaARCHEO       GQ888001
    NeoMALA         GQ888002
    NmeZYGEN        GQ888003
    OimCOLL         GQ888004
    PamNEOPT        GQ888005
    PepONYCH        GQ888006
    Pge2DIPLO       GQ888007
    Pma2ARACH       GQ888008
    Pol2DIPLO       GQ888009
    PsaARCHEO       GQ888010
    PwhARACH        GQ888011
    ScolCHILO       GQ888012
    Scu3SYMPH       GQ888013
    SpoCHILO        GQ888014
    StpARACH        GQ888015
    Tom2COLL        GQ888016
    UfsBRANCH       GQ888017
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226fin:
    A369COPE        GQ888018
    AarPENTA        GQ888019
    AchARACH        GQ888020
    AeliPYCNO       GQ888021
    AhiPYCNO        GQ888022
    AmaDIPLO        GQ888023
    Amb2ARACH       GQ888024
    Arg2BIURA       GQ888025
    Asa3BRANCH      GQ888026
    Avu3MALA        GQ888027
    BbaTHECOS       GQ888028
    CliZYGEN        GQ888029
    Col2PYCNO       GQ888030
    Cro2XIPHOS      GQ888031
    Crp2ARACH       GQ888032
    Ctas2CHILO      GQ888033
    Din2ARACH       GQ888034
    DmaBRANCH       GQ888035
    DtyMYSTACO      GQ888036
    EafCOPE         GQ888037
    EfrDIPLUR       GQ888038
    EgigARACH       GQ888039
    EinEPHEM        GQ888040
    ElePYCNO        GQ888041
    ErwONYCH        GQ888042
    EuryPAURO       GQ888043
    Han2SYMPH       GQ888044
    HariARACH       GQ888045
    HspARACH        GQ888046
    IpumARACH       GQ888047
    IveODONAT       GQ888048
    JapDIPLUR       GQ888049
    LeanTHECOS      GQ888050
    LemMALA         GQ888051
    Lle2BRANCH      GQ888052
    LlyODONAT       GQ888053
    LnigARACH       GQ888054
    LoxTHECOS       GQ888055
    LynBRANCH       GQ888056
    MayEPHEM        GQ888057
    MbaARCHEO       GQ888058
    MtdTARD         GQ888059
    NeoMALA         GQ888060
    NmeZYGEN        GQ888061
    OimCOLL         GQ888062
    PamNEOPT        GQ888063
    PepONYCH        GQ888064
    Pge2DIPLO       GQ888065
    Pma2ARACH       GQ888066
    Pol2DIPLO       GQ888067
    PsaARCHEO       GQ888068
    PwhARACH        GQ888069
    ScolCHILO       GQ888070
    Scu3SYMPH       GQ888071
    SkleOST         GQ888072
    SpoCHILO        GQ888073
    StpARACH        GQ888074
    Tom2COLL        GQ888075
    UfsBRANCH       GQ888076
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247fin:
    A369COPE        GQ888077
    AchARACH        GQ888078
    AdoNEOPT        GQ888079
    AeliPYCNO       GQ888080
    AhiPYCNO        GQ888081
    AmaDIPLO        GQ888082
    Asa3BRANCH      GQ888083
    Avu3MALA        GQ888084
    CfrTHECOS       GQ888085
    CliZYGEN        GQ888086
    Ctas2CHILO      GQ888087
    Din2ARACH       GQ888088
    DmaBRANCH       GQ888089
    EafCOPE         GQ888090
    EfrDIPLUR       GQ888091
    EinEPHEM        GQ888092
    ElePYCNO        GQ888093
    ErwONYCH        GQ888094
    EuryPAURO       GQ888095
    Han2SYMPH       GQ888096
    HariARACH       GQ888097
    HmaCEPHAL       GQ888098
    HspARACH        GQ888099
    IpumARACH       GQ888100
    IveODONAT       GQ888101
    JapDIPLUR       GQ888102
    LeanTHECOS      GQ888103
    LlyODONAT       GQ888104
    LnigARACH       GQ888105
    LoxTHECOS       GQ888106
    MayEPHEM        GQ888107
    NeoMALA         GQ888108
    NmeZYGEN        GQ888109
    OimCOLL         GQ888110
    PamNEOPT        GQ888111
    PepONYCH        GQ888112
    Pma2ARACH       GQ888113
    Pol2DIPLO       GQ888114
    PsaARCHEO       GQ888115
    PwhARACH        GQ888116
    ScolCHILO       GQ888117
    Scu3SYMPH       GQ888118
    SpoCHILO        GQ888119
    Tom2COLL        GQ888120
    UfsBRANCH       GQ888121
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262fin:
    A369COPE        GQ888122
    AarPENTA        GQ888123
    AchARACH        GQ888124
    AdoNEOPT        GQ888125
    AeliPYCNO       GQ888126
    AhiPYCNO        GQ888127
    AmaDIPLO        GQ888128
    Arg2BIURA       GQ888129
    Asa3BRANCH      GQ888130
    Avu3MALA        GQ888131
    CfrTHECOS       GQ888132
    CliZYGEN        GQ888133
    Col2PYCNO       GQ888134
    Cro2XIPHOS      GQ888135
    Crp2ARACH       GQ888136
    Din2ARACH       GQ888137
    DmaBRANCH       GQ888138
    DtyMYSTACO      GQ888139
    EafCOPE         GQ888140
    EgigARACH       GQ888141
    EinEPHEM        GQ888142
    ElePYCNO        GQ888143
    ErwONYCH        GQ888144
    EuryPAURO       GQ888145
    Han2SYMPH       GQ888146
    HariARACH       GQ888147
    HmaCEPHAL       GQ888148
    HspARACH        GQ888149
    IpumARACH       GQ888150
    IveODONAT       GQ888151
    JapDIPLUR       GQ888152
    LeanTHECOS      GQ888153
    LemMALA         GQ888154
    Lle2BRANCH      GQ888155
    LlyODONAT       GQ888156
    LnigARACH       GQ888157
    LoxTHECOS       GQ888158
    LynBRANCH       GQ888159
    MbaARCHEO       GQ888160
    NeoMALA         GQ888161
    NmeZYGEN        GQ888162
    OimCOLL         GQ888163
    PamNEOPT        GQ888164
    PepONYCH        GQ888165
    Pge2DIPLO       GQ888166
    Pma2ARACH       GQ888167
    Pno2ONYCH       GQ888168
    Pol2DIPLO       GQ888169
    PsaARCHEO       GQ888170
    PwhARACH        GQ888171
    ScolCHILO       GQ888172
    Scu3SYMPH       GQ888173
    SkleOST         GQ888174
    SpoCHILO        GQ888175
    StpARACH        GQ888176
    Tom2COLL        GQ888177
    UfsBRANCH       GQ888178
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265fin:
    A369COPE        GQ888179
    AeliPYCNO       GQ888180
    AhiPYCNO        GQ888181
    AmaDIPLO        GQ888182
    Arg2BIURA       GQ888183
    Asa3BRANCH      GQ888184
    Avu3MALA        GQ888185
    BbaTHECOS       GQ888186
    CliZYGEN        GQ888187
    Crp2ARACH       GQ888188
    Ctas2CHILO      GQ888189
    Din2ARACH       GQ888190
    DmaBRANCH       GQ888191
    EafCOPE         GQ888192
    EfrDIPLUR       GQ888193
    EgigARACH       GQ888194
    EinEPHEM        GQ888195
    ErwONYCH        GQ888196
    EuryPAURO       GQ888197
    Han2SYMPH       GQ888198
    HariARACH       GQ888199
    HmaCEPHAL       GQ888200
    HspARACH        GQ888201
    IveODONAT       GQ888202
    JapDIPLUR       GQ888203
    LeanTHECOS      GQ888204
    LemMALA         GQ888205
    LlyODONAT       GQ888206
    LnigARACH       GQ888207
    LoxTHECOS       GQ888208
    LynBRANCH       GQ888209
    MayEPHEM        GQ888210
    MbaARCHEO       GQ888211
    MtdTARD         GQ888212
    NeoMALA         GQ888213
    NmeZYGEN        GQ888214
    OimCOLL         GQ888215
    PamNEOPT        GQ888216
    PepONYCH        GQ888217
    Pge2DIPLO       GQ888218
    Pma2ARACH       GQ888219
    Pno2ONYCH       GQ888220
    Pol2DIPLO       GQ888221
    PsaARCHEO       GQ888222
    PwhARACH        GQ888223
    Scu3SYMPH       GQ888224
    SkleOST         GQ888225
    StpARACH        GQ888226
    Tom2COLL        GQ888227
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267fin:
    A369COPE        GQ888228
    AchARACH        GQ888229
    AdoNEOPT        GQ888230
    AeliPYCNO       GQ888231
    AhiPYCNO        GQ888232
    AmaDIPLO        GQ888233
    Amb2ARACH       GQ888234
    Arg2BIURA       GQ888235
    Asa3BRANCH      GQ888236
    Avu3MALA        GQ888237
    BbaTHECOS       GQ888238
    CfrTHECOS       GQ888239
    CliZYGEN        GQ888240
    Col2PYCNO       GQ888241
    Cro2XIPHOS      GQ888242
    Crp2ARACH       GQ888243
    Ctas2CHILO      GQ888244
    Din2ARACH       GQ888245
    DmaBRANCH       GQ888246
    EafCOPE         GQ888247
    EfrDIPLUR       GQ888248
    EgigARACH       GQ888249
    EinEPHEM        GQ888250
    ElePYCNO        GQ888251
    ErwONYCH        GQ888252
    EuryPAURO       GQ888253
    Han2SYMPH       GQ888254
    HmaCEPHAL       GQ888255
    HspARACH        GQ888256
    IpumARACH       GQ888257
    IveODONAT       GQ888258
    JapDIPLUR       GQ888259
    LeanTHECOS      GQ888260
    LemMALA         GQ888261
    Lle2BRANCH      GQ888262
    LnigARACH       GQ888263
    LoxTHECOS       GQ888264
    LynBRANCH       GQ888265
    MayEPHEM        GQ888266
    MbaARCHEO       GQ888267
    MtdTARD         GQ888268
    NeoMALA         GQ888269
    NmeZYGEN        GQ888270
    OimCOLL         GQ888271
    PamNEOPT        GQ888272
    PepONYCH        GQ888273
    Pge2DIPLO       GQ888274
    Pma2ARACH       GQ888275
    Pno2ONYCH       GQ888276
    Pol2DIPLO       GQ888277
    PsaARCHEO       GQ888278
    PwhARACH        GQ888279
    ScolCHILO       GQ888280
    Scu3SYMPH       GQ888281
    SkleOST         GQ888282
    SpoCHILO        GQ888283
    StpARACH        GQ888284
    Tom2COLL        GQ888285
    UfsBRANCH       GQ888286
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268fin:
    A369COPE       GQ888287
    AdoNEOPT       GQ888288
    AeliPYCNO      GQ888289
    AhiPYCNO       GQ888290
    AmaDIPLO       GQ888291
    Amb2ARACH      GQ888292
    Arg2BIURA      GQ888293
    Col2PYCNO      GQ888294
    Cro2XIPHOS     GQ888295
    Crp2ARACH      GQ888296
    Ctas2CHILO     GQ888297
    Din2ARACH      GQ888298
    DmaBRANCH      GQ888299
    EafCOPE        GQ888300
    EgigARACH      GQ888301
    EinEPHEM       GQ888302
    ErwONYCH       GQ888303
    Han2SYMPH      GQ888304
    IpumARACH      GQ888305
    IveODONAT      GQ888306
    Lle2BRANCH     GQ888307
    LlyODONAT      GQ888308
    LnigARACH      GQ888309
    LoxTHECOS      GQ888310
    LynBRANCH      GQ888311
    MayEPHEM       GQ888312
    MbaARCHEO      GQ888313
    NmeZYGEN       GQ888314
    OimCOLL        GQ888315
    PamNEOPT       GQ888316
    PepONYCH       GQ888317
    Pge2DIPLO      GQ888318
    Pol2DIPLO      GQ888319
    PsaARCHEO      GQ888320
    PwhARACH       GQ888321
    ScolCHILO      GQ888322
    Scu3SYMPH      GQ888323
    SkleOST        GQ888324
    StpARACH       GQ888325
    Tom2COLL       GQ888326
    UfsBRANCH      GQ888327
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270fin:
    AchARACH        GQ888328
    AdoNEOPT        GQ888329
    Amb2ARACH       GQ888330
    Avu3MALA        GQ888331
    BbaTHECOS       GQ888332
    CfrTHECOS       GQ888333
    CliZYGEN        GQ888334
    Col2PYCNO       GQ888335
    Cro2XIPHOS      GQ888336
    Crp2ARACH       GQ888337
    Ctas2CHILO      GQ888338
    Din2ARACH       GQ888339
    DmaBRANCH       GQ888340
    DtyMYSTACO      GQ888341
    EafCOPE         GQ888342
    EgigARACH       GQ888343
    ElePYCNO        GQ888344
    ErwONYCH        GQ888345
    Han2SYMPH       GQ888346
    HariARACH       GQ888347
    HspARACH        GQ888348
    IveODONAT       GQ888349
    JapDIPLUR       GQ888350
    LeanTHECOS      GQ888351
    LemMALA         GQ888352
    LlyODONAT       GQ888353
    LnigARACH       GQ888354
    LoxTHECOS       GQ888355
    LynBRANCH       GQ888356
    MayEPHEM        GQ888357
    MbaARCHEO       GQ888358
    NeoMALA         GQ888359
    NmeZYGEN        GQ888360
    OimCOLL         GQ888361
    PamNEOPT        GQ888362
    Pma2ARACH       GQ888363
    PsaARCHEO       GQ888364
    ScolCHILO       GQ888365
    SkleOST         GQ888366
    SpoCHILO        GQ888367
    StpARACH        GQ888368
    Tom2COLL        GQ888369
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274fin:
    A369COPE        GQ888370
    AarPENTA        GQ888371
    AchARACH        GQ888372
    AdoNEOPT        GQ888373
    AmaDIPLO        GQ888374
    Amb2ARACH       GQ888375
    Arg2BIURA       GQ888376
    Asa3BRANCH      GQ888377
    BbaTHECOS       GQ888378
    CfrTHECOS       GQ888379
    Crp2ARACH       GQ888380
    Ctas2CHILO      GQ888381
    Din2ARACH       GQ888382
    DmaBRANCH       GQ888383
    DtyMYSTACO      GQ888384
    EinEPHEM        GQ888385
    EuryPAURO       GQ888386
    Han2SYMPH       GQ888387
    HmaCEPHAL       GQ888388
    HspARACH        GQ888389
    IveODONAT       GQ888390
    LeanTHECOS      GQ888391
    LemMALA         GQ888392
    Lle2BRANCH      GQ888393
    LlyODONAT       GQ888394
    LoxTHECOS       GQ888395
    LynBRANCH       GQ888396
    MayEPHEM        GQ888397
    PamNEOPT        GQ888398
    PepONYCH        GQ888399
    Pge2DIPLO       GQ888400
    Pol2DIPLO       GQ888401
    PwhARACH        GQ888402
    ScolCHILO       GQ888403
    Scu3SYMPH       GQ888404
    SkleOST         GQ888405
    SpoCHILO        GQ888406
    UfsBRANCH       GQ888407
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3006fin:
    A369COPE        GQ888408
    AarPENTA        GQ888409
    AchARACH        GQ888410
    AdoNEOPT        GQ888411
    AeliPYCNO       GQ888412
    AhiPYCNO        GQ888413
    AmaDIPLO        GQ888414
    Amb2ARACH       GQ888415
    Arg2BIURA       GQ888416
    Avu3MALA        GQ888417
    BbaTHECOS       GQ888418
    CfrTHECOS       GQ888419
    CliZYGEN        GQ888420
    Col2PYCNO       GQ888421
    Crp2ARACH       GQ888422
    Ctas2CHILO      GQ888423
    EafCOPE         GQ888424
    EfrDIPLUR       GQ888425
    EinEPHEM        GQ888426
    ElePYCNO        GQ888427
    ErwONYCH        GQ888428
    EuryPAURO       GQ888429
    Han2SYMPH       GQ888430
    HapaOST         GQ888431
    HariARACH       GQ888432
    HmaCEPHAL       GQ888433
    HspARACH        GQ888434
    IveODONAT       GQ888435
    JapDIPLUR       GQ888436
    LeanTHECOS      GQ888437
    LemMALA         GQ888438
    LlyODONAT       GQ888439
    LnigARACH       GQ888440
    LoxTHECOS       GQ888441
    MayEPHEM        GQ888442
    MbaARCHEO       GQ888443
    NeoMALA         GQ888444
    NmeZYGEN        GQ888445
    OimCOLL         GQ888446
    PamNEOPT        GQ888447
    PepONYCH        GQ888448
    Pge2DIPLO       GQ888449
    Pno2ONYCH       GQ888450
    Pol2DIPLO       GQ888451
    PsaARCHEO       GQ888452
    ScolCHILO       GQ888453
    Scu3SYMPH       GQ888454
    SkleOST         GQ888455
    SpoCHILO        GQ888456
    Tom2COLL        GQ888457
    UfsBRANCH       GQ888458
```

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3007fin:
    A369COPE        GQ888459
    AchARACH        GQ888460
    AdoNEOPT        GQ888461
    AhiPYCNO        GQ888462
    AmaDIPLO        GQ888463
    Amb2ARACH       GQ888464
    Arg2BIURA       GQ888465
    Avu3MALA        GQ888466
    BbaTHECOS       GQ888467
    CfrTHECOS       GQ888468
    Crp2ARACH       GQ888469
    Ctas2CHILO      GQ888470
    Din2ARACH       GQ888471
    DmaBRANCH       GQ888472
    DtyMYSTACO      GQ888473
    EafCOPE         GQ888474
    EfrDIPLUR       GQ888475
    EgigARACH       GQ888476
    ErwONYCH        GQ888477
    EuryPAURO       GQ888478
    Han2SYMPH       GQ888479
    HapaOST         GQ888480
    HspARACH        GQ888481
    IpumARACH       GQ888482
    IveODONAT       GQ888483
    JapDIPLUR       GQ888484
    LemMALA         GQ888485
    Lle2BRANCH      GQ888486
    LlyODONAT       GQ888487
    LnigARACH       GQ888488
    LoxTHECOS       GQ888489
    LynBRANCH       GQ888490
    MayEPHEM        GQ888491
    MbaARCHEO       GQ888492
    NeoMALA         GQ888493
    NmeZYGEN        GQ888494
    OimCOLL         GQ888495
    PamNEOPT        GQ888496
    PepONYCH        GQ888497
    Pge2DIPLO       GQ888498
    Pma2ARACH       GQ888499
    PsaARCHEO       GQ888500
    PwhARACH        GQ888501
    ScolCHILO       GQ888502
    Scu3SYMPH       GQ888503
    SpoCHILO        GQ888504
    Tom2COLL        GQ888505
    UfsBRANCH       GQ888506
```

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3009fin:
    A369COPE        GQ885174
    AarPENTA        GQ885175
    AchARACH        GQ885176
    AdoNEOPT        GQ885177
    AeliPYCNO       GQ885178
    AhiPYCNO        GQ885179
    Arg2BIURA       GQ885180
    Asa3BRANCH      GQ885181
    Avu3MALA        GQ885182
    CliZYGEN        GQ885183
    Col2PYCNO       GQ885184
    Crp2ARACH       GQ885185
    Ctas2CHILO      GQ885186
    Din2ARACH       GQ885187
    DmaBRANCH       GQ885188
    DtyMYSTACO      GQ885189
    EafCOPE         GQ885190
    EfrDIPLUR       GQ885191
    EgigARACH       GQ885192
    EinEPHEM        GQ885193
    ElePYCNO        GQ885194
    ErwONYCH        GQ885195
    Han2SYMPH       GQ885196
    HariARACH       GQ885197
    HmaCEPHAL       GQ885198
    HspARACH        GQ885199
    IpumARACH       GQ885200
    IveODONAT       GQ885201
    JapDIPLUR       GQ885202
    LemMALA         GQ885203
    LnigARACH       GQ885204
    MayEPHEM        GQ885205
    MbaARCHEO       GQ885206
    MtdTARD         GQ885207
    NeoMALA         GQ885208
    NmeZYGEN        GQ885209
    OimCOLL         GQ885210
    PepONYCH        GQ885211
    Pge2DIPLO       GQ885212
    Pma2ARACH       GQ885213
    PsaARCHEO       GQ885214
    PwhARACH        GQ885215
    ScolCHILO       GQ885216
    Scu3SYMPH       GQ885217
    SkleOST         GQ885218
    SpoCHILO        GQ885219
    StpARACH        GQ885220
    Tom2COLL        GQ885221
    UfsBRANCH       GQ885222
```

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3012fin:
    A369COPE        GQ885223
    AdoNEOPT        GQ885224
    AeliPYCNO       GQ885225
    AhiPYCNO        GQ885226
    AmaDIPLO        GQ885227
    Amb2ARACH       GQ885228
    Arg2BIURA       GQ885229
    Asa3BRANCH      GQ885230
    Avu3MALA        GQ885231
    BbaTHECOS       GQ885232
    CfrTHECOS       GQ885233
    CliZYGEN        GQ885234
    Col2PYCNO       GQ885235
    Cro2XIPHOS      GQ885236
    Ctas2CHILO      GQ885237
    Din2ARACH       GQ885238
    DmaBRANCH       GQ885239
    EafCOPE         GQ885240
    EfrDIPLUR       GQ885241
    EinEPHEM        GQ885242
    ElePYCNO        GQ885243
    ErwONYCH        GQ885244
    EuryPAURO       GQ885245
    Han2SYMPH       GQ885246
    HapaOST         GQ885247
    HariARACH       GQ885248
    HmaCEPHAL       GQ885249
    HspARACH        GQ885250
    IpumARACH       GQ885251
    JapDIPLUR       GQ885252
    LemMALA         GQ885253
    Lle2BRANCH      GQ885254
    LoxTHECOS       GQ885255
    LynBRANCH       GQ885256
    MbaARCHEO       GQ885257
    MtdTARD         GQ885258
    NeoMALA         GQ885259
    NmeZYGEN        GQ885260
    OimCOLL         GQ885261
    PepONYCH        GQ885262
    Pma2ARACH       GQ885263
    Pol2DIPLO       GQ885264
    PsaARCHEO       GQ885265
    PwhARACH        GQ885266
    ScolCHILO       GQ885267
    Scu3SYMPH       GQ885268
    SkleOST         GQ885269
    SpoCHILO        GQ885270
    StpARACH        GQ885271
    Tom2COLL        GQ885272
    UfsBRANCH       GQ885273
```

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3017fin:
    A369COPE        GQ885274
    AchARACH        GQ885275
    AdoNEOPT        GQ885276
    AeliPYCNO       GQ885277
    AmaDIPLO        GQ885278
    Arg2BIURA       GQ885279
    Asa3BRANCH      GQ885280
    Avu3MALA        GQ885281
    Cro2XIPHOS      GQ885282
    Crp2ARACH       GQ885283
    Ctas2CHILO      GQ885284
    DmaBRANCH       GQ885285
    DtyMYSTACO      GQ885286
    EafCOPE         GQ885287
    EfrDIPLUR       GQ885288
    EgigARACH       GQ885289
    EinEPHEM        GQ885290
    ElePYCNO        GQ885291
    ErwONYCH        GQ885292
    EuryPAURO       GQ885293
    HariARACH       GQ885294
    HspARACH        GQ885295
    IpumARACH       GQ885296
    IveODONAT       GQ885297
    JapDIPLUR       GQ885298
    LemMALA         GQ885299
    LlyODONAT       GQ885300
    LnigARACH       GQ885301
    LoxTHECOS       GQ885302
    MayEPHEM        GQ885303
    MbaARCHEO       GQ885304
    NeoMALA         GQ885305
    NmeZYGEN        GQ885306
    PamNEOPT        GQ885307
    PepONYCH        GQ885308
    Pge2DIPLO       GQ885309
    Pma2ARACH       GQ885310
    Pol2DIPLO       GQ885311
    PsaARCHEO       GQ885312
    PwhARACH        GQ885313
    ScolCHILO       GQ885314
    Scu3SYMPH       GQ885315
    SkleOST         GQ885316
    SpoCHILO        GQ885317
    StpARACH        GQ885318
    Tom2COLL        GQ885319
    UfsBRANCH       GQ885320
```

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3031fin2_3:
    AarPENTA        GQ885321
    AhiPYCNO        GQ885322
    AmaDIPLO        GQ885323
    Amb2ARACH       GQ885324
    Arg2BIURA       GQ885325
    Asa3BRANCH      GQ885326
    Avu3MALA        GQ885327
    BbaTHECOS       GQ885328
    CfrTHECOS       GQ885329
    CliZYGEN        GQ885330
    Col2PYCNO       GQ885331
    Crp2ARACH       GQ885332
    Ctas2CHILO      GQ885333
    Din2ARACH       GQ885334
    DmaBRANCH       GQ885335
    DtyMYSTACO      GQ885336
    EfrDIPLUR       GQ885337
    EgigARACH       GQ885338
    ElePYCNO        GQ885339
    EuryPAURO       GQ885340
    Han2SYMPH       GQ885341
    HariARACH       GQ885342
    HspARACH        GQ885343
    IpumARACH       GQ885344
    IveODONAT       GQ885345
    JapDIPLUR       GQ885346
    LeanTHECOS      GQ885347
    LemMALA         GQ885348
    Lle2BRANCH      GQ885349
    LlyODONAT       GQ885350
    LnigARACH       GQ885351
    LoxTHECOS       GQ885352
    LynBRANCH       GQ885353
    MbaARCHEO       GQ885354
    NeoMALA         GQ885355
    NmeZYGEN        GQ885356
    OimCOLL         GQ885357
    PamNEOPT        GQ885358
    Pge2DIPLO       GQ885359
    Pma2ARACH       GQ885360
    PsaARCHEO       GQ885361
    ScolCHILO       GQ885362
    Scu3SYMPH       GQ885363
    SpoCHILO        GQ885364
    StpARACH        GQ885365
    Tom2COLL        GQ885366
    UfsBRANCH       GQ885367
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3031fin4_5:
    AarPENTA        GQ885368
    AchARACH        GQ885369
    AdoNEOPT        GQ885370
    AeliPYCNO       GQ885371
    AhiPYCNO        GQ885372
    AmaDIPLO        GQ885373
    Amb2ARACH       GQ885374
    Asa3BRANCH      GQ885375
    Avu3MALA        GQ885376
    BbaTHECOS       GQ885377
    CfrTHECOS       GQ885378
    CliZYGEN        GQ885379
    Col2PYCNO       GQ885380
    Crp2ARACH       GQ885381
    Ctas2CHILO      GQ885382
    Din2ARACH       GQ885383
    DmaBRANCH       GQ885384
    DtyMYSTACO      GQ885385
    EafCOPE         GQ885386
    EfrDIPLUR       GQ885387
    EgigARACH       GQ885388
    ElePYCNO        GQ885389
    ErwONYCH        GQ885390
    EuryPAURO       GQ885391
    Han2SYMPH       GQ885392
    HapaOST         GQ885393
    HariARACH       GQ885394
    HspARACH        GQ885395
    IpumARACH       GQ885396
    IveODONAT       GQ885397
    JapDIPLUR       GQ885398
    LeanTHECOS      GQ885399
    Lle2BRANCH      GQ885400
    LlyODONAT       GQ885401
    LnigARACH       GQ885402
    LoxTHECOS       GQ885403
    LynBRANCH       GQ885404
    MbaARCHEO       GQ885405
    NeoMALA         GQ885406
    OimCOLL         GQ885407
    PamNEOPT        GQ885408
    PepONYCH        GQ885409
    Pma2ARACH       GQ885410
    Pno2ONYCH       GQ885411
    Pol2DIPLO       GQ885412
    PsaARCHEO       GQ885413
    ScolCHILO       GQ885414
    Scu3SYMPH       GQ885415
    SpoCHILO        GQ885416
    StpARACH        GQ885417
    Tom2COLL        GQ885418
```

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3044fin:
    AarPENTA        GQ885419
    AchARACH        GQ885420
    AdoNEOPT        GQ885421
    AhiPYCNO        GQ885422
    AmaDIPLO        GQ885423
    Amb2ARACH       GQ885424
    Arg2BIURA       GQ885425
    Asa3BRANCH      GQ885426
    Avu3MALA        GQ885427
    CfrTHECOS       GQ885428
    CliZYGEN        GQ885429
    Col2PYCNO       GQ885430
    Cro2XIPHOS      GQ885431
    Crp2ARACH       GQ885432
    Ctas2CHILO      GQ885433
    Din2ARACH       GQ885434
    DmaBRANCH       GQ885435
    EafCOPE         GQ885436
    EfrDIPLUR       GQ885437
    EinEPHEM        GQ885438
    ElePYCNO        GQ885439
    ErwONYCH        GQ885440
    Han2SYMPH       GQ885441
    HmaCEPHAL       GQ885442
    IpumARACH       GQ885443
    IveODONAT       GQ885444
    JapDIPLUR       GQ885445
    LemMALA         GQ885446
    Lle2BRANCH      GQ885447
    LlyODONAT       GQ885448
    LnigARACH       GQ885449
    LoxTHECOS       GQ885450
    LynBRANCH       GQ885451
    MayEPHEM        GQ885452
    MbaARCHEO       GQ885453
    MtdTARD         GQ885454
    NeoMALA         GQ885455
    NmeZYGEN        GQ885456
    OimCOLL         GQ885457
    PepONYCH        GQ885458
    Pge2DIPLO       GQ885459
    Pno2ONYCH       GQ885460
    Pol2DIPLO       GQ885461
    PsaARCHEO       GQ885462
    PwhARACH        GQ885463
    ScolCHILO       GQ885464
    Scu3SYMPH       GQ885465
    SkleOST         GQ885466
    SpoCHILO        GQ885467
    StpARACH        GQ885468
    Tom2COLL        GQ885469
    UfsBRANCH       GQ885470
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3055fin:
    A369COPE        GQ885471
    AchARACH        GQ885472
    AdoNEOPT        GQ885473
    AeliPYCNO       GQ885474
    AhiPYCNO        GQ885475
    AmaDIPLO        GQ885476
    Amb2ARACH       GQ885477
    Arg2BIURA       GQ885478
    Avu3MALA        GQ885479
    BbaTHECOS       GQ885480
    CfrTHECOS       GQ885481
    CliZYGEN        GQ885482
    Col2PYCNO       GQ885483
    Cro2XIPHOS      GQ885484
    Crp2ARACH       GQ885485
    Ctas2CHILO      GQ885486
    Din2ARACH       GQ885487
    DmaBRANCH       GQ885488
    EafCOPE         GQ885489
    EfrDIPLUR       GQ885490
    EinEPHEM        GQ885491
    ElePYCNO        GQ885492
    ErwONYCH        GQ885493
    EuryPAURO       GQ885494
    Han2SYMPH       GQ885495
    HariARACH       GQ885496
    HmaCEPHAL       GQ885497
    HspARACH        GQ885498
    IveODONAT       GQ885499
    JapDIPLUR       GQ885500
    LeanTHECOS      GQ885501
    LemMALA         GQ885502
    LnigARACH       GQ885503
    LynBRANCH       GQ885504
    MayEPHEM        GQ885505
    MtdTARD         GQ885506
    NeoMALA         GQ885507
    NmeZYGEN        GQ885508
    OimCOLL         GQ885509
    PamNEOPT        GQ885510
    PepONYCH        GQ885511
    Pma2ARACH       GQ885512
    Pno2ONYCH       GQ885513
    PsaARCHEO       GQ885514
    PwhARACH        GQ885515
    ScolCHILO       GQ885516
    Scu3SYMPH       GQ885517
    SkleOST         GQ885518
    StpARACH        GQ885519
    Tom2COLL        GQ885520
```

```
3059fin:
    A369COPE        GQ885521
    AarPENTA        GQ885522
    AchARACH        GQ885523
    AdoNEOPT        GQ885524
    AeliPYCNO       GQ885525
    AhiPYCNO        GQ885526
    AmaDIPLO        GQ885527
    Amb2ARACH       GQ885528
    Arg2BIURA       GQ885529
    Asa3BRANCH      GQ885530
    Avu3MALA        GQ885531
    BbaTHECOS       GQ885532
    CfrTHECOS       GQ885533
    CliZYGEN        GQ885534
    Col2PYCNO       GQ885535
    Crp2ARACH       GQ885536
    Ctas2CHILO      GQ885537
    Din2ARACH       GQ885538
    DmaBRANCH       GQ885539
    DtyMYSTACO      GQ885540
    EafCOPE         GQ885541
    EfrDIPLUR       GQ885542
    EgigARACH       GQ885543
    EinEPHEM        GQ885544
    ErwONYCH        GQ885545
    EuryPAURO       GQ885546
    HariARACH       GQ885547
    HmaCEPHAL       GQ885548
    HspARACH        GQ885549
    IpumARACH       GQ885550
    IveODONAT       GQ885551
    JapDIPLUR       GQ885552
    LeanTHECOS      GQ885553
    LemMALA         GQ885554
    Lle2BRANCH      GQ885555
    LlyODONAT       GQ885556
    LnigARACH       GQ885557
    MtdTARD         GQ885558
    NeoMALA         GQ885559
    NmeZYGEN        GQ885560
    OimCOLL         GQ885561
    PamNEOPT        GQ885562
    PepONYCH        GQ885563
    Pma2ARACH       GQ885564
    PsaARCHEO       GQ885565
    PwhARACH        GQ885566
    ScolCHILO       GQ885567
    SkleOST         GQ885568
    SpoCHILO        GQ885569
    StpARACH        GQ885570
    Tom2COLL        GQ885571
    UfsBRANCH       GQ885572
```

```
3064fin:
    A369COPE        GQ885573
    AarPENTA        GQ885574
    AchARACH        GQ885575
    AdoNEOPT        GQ885576
    AeliPYCNO       GQ885577
    AhiPYCNO        GQ885578
    AmaDIPLO        GQ885579
    Amb2ARACH       GQ885580
    Arg2BIURA       GQ885581
    Asa3BRANCH      GQ885582
    Avu3MALA        GQ885583
    BbaTHECOS       GQ885584
    CfrTHECOS       GQ885585
    CliZYGEN        GQ885586
    Col2PYCNO       GQ885587
    Crp2ARACH       GQ885588
    Ctas2CHILO      GQ885589
    Din2ARACH       GQ885590
    DmaBRANCH       GQ885591
    EafCOPE         GQ885592
    EfrDIPLUR       GQ885593
    EgigARACH       GQ885594
    EinEPHEM        GQ885595
    ElePYCNO        GQ885596
    ErwONYCH        GQ885597
    EuryPAURO       GQ885598
    Han2SYMPH       GQ885599
    HapaOST         GQ885600
    HariARACH       GQ885601
    HmaCEPHAL       GQ885602
    HspARACH        GQ885603
    IpumARACH       GQ885604
    IveODONAT       GQ885605
    JapDIPLUR       GQ885606
    LeanTHECOS      GQ885607
    Lle2BRANCH      GQ885608
    LlyODONAT       GQ885609
    LnigARACH       GQ885610
    LoxTHECOS       GQ885611
    LynBRANCH       GQ885612
    MayEPHEM        GQ885613
    MtdTARD         GQ885614
    NeoMALA         GQ885615
    NmeZYGEN        GQ885616
    OimCOLL         GQ885617
    PamNEOPT        GQ885618
    PepONYCH        GQ885619
    Pge2DIPLO       GQ885620
    Pma2ARACH       GQ885621
    Pno2ONYCH       GQ885622
    Pol2DIPLO       GQ885623
    PsaARCHEO       GQ885624
    PwhARACH        GQ885625
    ScolCHILO       GQ885626
    Scu3SYMPH       GQ885627
    SkleOST         GQ885628
    SpoCHILO        GQ885629
    StpARACH        GQ885630
    Tom2COLL        GQ885631
    UfsBRANCH       GQ885632
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3066fin:
    A369COPE        GQ885633
    AarPENTA        GQ885634
    AchARACH        GQ885635
    AdoNEOPT        GQ885636
    AmaDIPLO        GQ885637
    Amb2ARACH       GQ885638
    Arg2BIURA       GQ885639
    Avu3MALA        GQ885640
    CliZYGEN        GQ885641
    Col2PYCNO       GQ885642
    Cro2XIPHOS      GQ885643
    Crp2ARACH       GQ885644
    Ctas2CHILO      GQ885645
    EafCOPE         GQ885646
    EfrDIPLUR       GQ885647
    EgigARACH       GQ885648
    EinEPHEM        GQ885649
    ErwONYCH        GQ885650
    HariARACH       GQ885651
    HspARACH        GQ885652
    IpumARACH       GQ885653
    IveODONAT       GQ885654
    LemMALA         GQ885655
    Lle2BRANCH      GQ885656
    LlyODONAT       GQ885657
    LnigARACH       GQ885658
    LynBRANCH       GQ885659
    MayEPHEM        GQ885660
    MtdTARD         GQ885661
    NeoMALA         GQ885662
    NmeZYGEN        GQ885663
    OimCOLL         GQ885664
    PamNEOPT        GQ885665
    PepONYCH        GQ885666
    Pge2DIPLO       GQ885667
    Pma2ARACH       GQ885668
    Pol2DIPLO       GQ885669
    PsaARCHEO       GQ885670
    PwhARACH        GQ885671
    ScolCHILO       GQ885672
    SkleOST         GQ885673
    SpoCHILO        GQ885674
    StpARACH        GQ885675
    Tom2COLL        GQ885676
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3070fin:
    A369COPE        GQ885677
    AarPENTA        GQ885678
    AchARACH        GQ885679
    AdoNEOPT        GQ885680
    AmaDIPLO        GQ885681
    Arg2BIURA       GQ885682
    Asa3BRANCH      GQ885683
    Avu3MALA        GQ885684
    CfrTHECOS       GQ885685
    CliZYGEN        GQ885686
    Cro2XIPHOS      GQ885687
    Crp2ARACH       GQ885688
    Din2ARACH       GQ885689
    DmaBRANCH       GQ885690
    EafCOPE         GQ885691
    EgigARACH       GQ885692
    ErwONYCH        GQ885693
    EuryPAURO       GQ885694
    Han2SYMPH       GQ885695
    HariARACH       GQ885696
    HspARACH        GQ885697
    IpumARACH       GQ885698
    IveODONAT       GQ885699
    LemMALA         GQ885700
    Lle2BRANCH      GQ885701
    LlyODONAT       GQ885702
    LnigARACH       GQ885703
    LoxTHECOS       GQ885704
    LynBRANCH       GQ885705
    MayEPHEM        GQ885706
    MtdTARD         GQ885707
    NeoMALA         GQ885708
    OimCOLL         GQ885709
    PamNEOPT        GQ885710
    PepONYCH        GQ885711
    Pge2DIPLO       GQ885712
    Pma2ARACH       GQ885713
    PsaARCHEO       GQ885714
    PwhARACH        GQ885715
    ScolCHILO       GQ885716
    Scu3SYMPH       GQ885717
    SkleOST         GQ885718
    SpoCHILO        GQ885719
    StpARACH        GQ885720
    Tom2COLL        GQ885721
    UfsBRANCH       GQ885722
```

```
3089fin:
    A369COPE        GQ885723
    AarPENTA        GQ885724
    AchARACH        GQ885725
    AdoNEOPT        GQ885726
    AeliPYCNO       GQ885727
    AhiPYCNO        GQ885728
    AmaDIPLO        GQ885729
    Amb2ARACH       GQ885730
    Arg2BIURA       GQ885731
    Asa3BRANCH      GQ885732
    Avu3MALA        GQ885733
    BbaTHECOS       GQ885734
    CfrTHECOS       GQ885735
    CliZYGEN        GQ885736
    Col2PYCNO       GQ885737
    Cro2XIPHOS      GQ885738
    Crp2ARACH       GQ885739
    Ctas2CHILO      GQ885740
    Din2ARACH       GQ885741
    DtyMYSTACO      GQ885742
    EafCOPE         GQ885743
    EfrDIPLUR       GQ885744
    EgigARACH       GQ885745
    EinEPHEM        GQ885746
    ElePYCNO        GQ885747
    ErwONYCH        GQ885748
    EuryPAURO       GQ885749
    Han2SYMPH       GQ885750
    HapaOST         GQ885751
    HariARACH       GQ885752
    HmaCEPHAL       GQ885753
    HspARACH        GQ885754
    IpumARACH       GQ885755
    IveODONAT       GQ885756
    JapDIPLUR       GQ885757
    LeanTHECOS      GQ885758
    LemMALA         GQ885759
    Lle2BRANCH      GQ885760
    LlyODONAT       GQ885761
    LnigARACH       GQ885762
    LynBRANCH       GQ885763
    MayEPHEM        GQ885764
    MtdTARD         GQ885765
    NeoMALA         GQ885766
    NmeZYGEN        GQ885767
    OimCOLL         GQ885768
    PepONYCH        GQ885769
    Pge2DIPLO       GQ885770
    Pma2ARACH       GQ885771
    Pno2ONYCH       GQ885772
    PsaARCHEO       GQ885773
    PwhARACH        GQ885774
    ScolCHILO       GQ885775
    Scu3SYMPH       GQ885776
    SkleOST         GQ885777
    SpoCHILO        GQ885778
    StpARACH        GQ885779
    Tom2COLL        GQ885780
    UfsBRANCH       GQ885781
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3094fin:
    AchARACH       GQ885782
    AdoNEOPT       GQ885783
    AeliPYCNO      GQ885784
    AhiPYCNO       GQ885785
    AmaDIPLO       GQ885786
    Amb2ARACH      GQ885787
    Arg2BIURA      GQ885788
    Asa3BRANCH     GQ885789
    BbaTHECOS      GQ885790
    CfrTHECOS      GQ885791
    CliZYGEN       GQ885792
    Col2PYCNO      GQ885793
    Cro2XIPHOS     GQ885794
    Crp2ARACH      GQ885795
    Ctas2CHILO     GQ885796
    Din2ARACH      GQ885797
    DmaBRANCH      GQ885798
    DtyMYSTACO     GQ885799
    EafCOPE        GQ885800
    EfrDIPLUR      GQ885801
    EgigARACH      GQ885802
    ElePYCNO       GQ885803
    ErwONYCH       GQ885804
    EuryPAURO      GQ885805
    Han2SYMPH      GQ885806
    HapaOST        GQ885807
    HariARACH      GQ885808
    HmaCEPHAL      GQ885809
    HspARACH       GQ885810
    IpumARACH      GQ885811
    IveODONAT      GQ885812
    JapDIPLUR      GQ885813
    LeanTHECOS     GQ885814
    LemMALA        GQ885815
    Lle2BRANCH     GQ885816
    LlyODONAT      GQ885817
    LnigARACH      GQ885818
    LoxTHECOS      GQ885819
    LynBRANCH      GQ885820
    MtdTARD        GQ885821
    NeoMALA        GQ885822
    NmeZYGEN       GQ885823
    OimCOLL        GQ885824
    PamNEOPT       GQ885825
    PepONYCH       GQ885826
    Pge2DIPLO      GQ885827
    Pma2ARACH      GQ885828
    Pol2DIPLO      GQ885829
    PsaARCHEO      GQ885830
    PwhARACH       GQ885831
    ScolCHILO      GQ885832
    Scu3SYMPH      GQ885833
    SkleOST        GQ885834
    SpoCHILO       GQ885835
    StpARACH       GQ885836
    UfsBRANCH      GQ885837
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3114fin:
    A369COPE        GQ885838
    AdoNEOPT        GQ885839
    AeliPYCNO       GQ885840
    AhiPYCNO        GQ885841
    Arg2BIURA       GQ885842
    Asa3BRANCH      GQ885843
    Avu3MALA        GQ885844
    BbaTHECOS       GQ885845
    CfrTHECOS       GQ885846
    CliZYGEN        GQ885847
    Crp2ARACH       GQ885848
    Ctas2CHILO      GQ885849
    Din2ARACH       GQ885850
    EafCOPE         GQ885851
    EfrDIPLUR       GQ885852
    EgigARACH       GQ885853
    EinEPHEM        GQ885854
    ElePYCNO        GQ885855
    ErwONYCH        GQ885856
    EuryPAURO       GQ885857
    Han2SYMPH       GQ885858
    IpumARACH       GQ885859
    IveODONAT       GQ885860
    JapDIPLUR       GQ885861
    LeanTHECOS      GQ885862
    LemMALA         GQ885863
    Lle2BRANCH      GQ885864
    LlyODONAT       GQ885865
    LnigARACH       GQ885866
    LoxTHECOS       GQ885867
    MayEPHEM        GQ885868
    NeoMALA         GQ885869
    NmeZYGEN        GQ885870
    PamNEOPT        GQ885871
    Pge2DIPLO       GQ885872
    Pno2ONYCH       GQ885873
    PsaARCHEO       GQ885874
    PwhARACH        GQ885875
    ScolCHILO       GQ885876
    Scu3SYMPH       GQ885877
    SpoCHILO        GQ885878
    Tom2COLL        GQ885879
    UfsBRANCH       GQ885880
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3121fin:
    A369COPE        GQ885881
    AarPENTA        GQ885882
    AchARACH        GQ885883
    AdoNEOPT        GQ885884
    AeliPYCNO       GQ885885
    AhiPYCNO        GQ885886
    Amb2ARACH       GQ885887
    Arg2BIURA       GQ885888
    Asa3BRANCH      GQ885889
    Avu3MALA        GQ885890
    CliZYGEN        GQ885891
    Crp2ARACH       GQ885892
    Ctas2CHILO      GQ885893
    Din2ARACH       GQ885894
    DmaBRANCH       GQ885895
    EfrDIPLUR       GQ885896
    EgigARACH       GQ885897
    EinEPHEM        GQ885898
    ElePYCNO        GQ885899
    ErwONYCH        GQ885900
    EuryPAURO       GQ885901
    Han2SYMPH       GQ885902
    HariARACH       GQ885903
    HmaCEPHAL       GQ885904
    IpumARACH       GQ885905
    IveODONAT       GQ885906
    JapDIPLUR       GQ885907
    LemMALA         GQ885908
    Lle2BRANCH      GQ885909
    LlyODONAT       GQ885910
    LnigARACH       GQ885911
    LynBRANCH       GQ885912
    MayEPHEM        GQ885913
    MtdTARD         GQ885914
    NeoMALA         GQ885915
    PamNEOPT        GQ885916
    PepONYCH        GQ885917
    Pge2DIPLO       GQ885918
    Pma2ARACH       GQ885919
    Pno2ONYCH       GQ885920
    PsaARCHEO       GQ885921
    PwhARACH        GQ885922
    ScolCHILO       GQ885923
    Scu3SYMPH       GQ885924
    SkleOST         GQ885925
    SpoCHILO        GQ885926
    StpARACH        GQ885927
    UfsBRANCH       GQ885928
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3136fin:
    A369COPE        GQ885929
    AarPENTA        GQ885930
    AchARACH        GQ885931
    AdoNEOPT        GQ885932
    AeliPYCNO       GQ885933
    AhiPYCNO        GQ885934
    AmaDIPLO        GQ885935
    Amb2ARACH       GQ885936
    Arg2BIURA       GQ885937
    Asa3BRANCH      GQ885938
    Avu3MALA        GQ885939
    BbaTHECOS       GQ885940
    CfrTHECOS       GQ885941
    CliZYGEN        GQ885942
    Col2PYCNO       GQ885943
    Cro2XIPHOS      GQ885944
    Crp2ARACH       GQ885945
    Ctas2CHILO      GQ885946
    Din2ARACH       GQ885947
    DmaBRANCH       GQ885948
    EafCOPE         GQ885949
    EfrDIPLUR       GQ885950
    EgigARACH       GQ885951
    EinEPHEM        GQ885952
    ElePYCNO        GQ885953
    ErwONYCH        GQ885954
    EuryPAURO       GQ885955
    Han2SYMPH       GQ885956
    HariARACH       GQ885957
    HmaCEPHAL       GQ885958
    HspARACH        GQ885959
    IpumARACH       GQ885960
    IveODONAT       GQ885961
    JapDIPLUR       GQ885962
    LeanTHECOS      GQ885963
    LemMALA         GQ885964
    Lle2BRANCH      GQ885965
    LlyODONAT       GQ885966
    LnigARACH       GQ885967
    LoxTHECOS       GQ885968
    LynBRANCH       GQ885969
    MayEPHEM        GQ885970
    MbaARCHEO       GQ885971
    MtdTARD         GQ885972
    NeoMALA         GQ885973
    NmeZYGEN        GQ885974
    OimCOLL         GQ885975
    PamNEOPT        GQ885976
    PepONYCH        GQ885977
    Pge2DIPLO       GQ885978
    Pma2ARACH       GQ885979
    Pol2DIPLO       GQ885980
    PsaARCHEO       GQ885981
    PwhARACH        GQ885982
    ScolCHILO       GQ885983
    SkleOST         GQ885984
    SpoCHILO        GQ885985
    StpARACH        GQ885986
    Tom2COLL        GQ885987
    UfsBRANCH       GQ885988
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3152fin:
    A369COPE        GQ885989
    AarPENTA        GQ885990
    AchARACH        GQ885991
    AdoNEOPT        GQ885992
    AmaDIPLO        GQ885993
    Amb2ARACH       GQ885994
    Arg2BIURA       GQ885995
    Asa3BRANCH      GQ885996
    Avu3MALA        GQ885997
    BbaTHECOS       GQ885998
    Col2PYCNO       GQ885999
    Cro2XIPHOS      GQ886000
    Crp2ARACH       GQ886001
    Ctas2CHILO      GQ886002
    Din2ARACH       GQ886003
    DmaBRANCH       GQ886004
    EafCOPE         GQ886005
    EfrDIPLUR       GQ886006
    EgigARACH       GQ886007
    EinEPHEM        GQ886008
    ErwONYCH        GQ886009
    Han2SYMPH       GQ886010
    HariARACH       GQ886011
    HmaCEPHAL       GQ886012
    HspARACH        GQ886013
    IpumARACH       GQ886014
    IveODONAT       GQ886015
    JapDIPLUR       GQ886016
    LeanTHECOS      GQ886017
    Lle2BRANCH      GQ886018
    LlyODONAT       GQ886019
    LnigARACH       GQ886020
    LynBRANCH       GQ886021
    MayEPHEM        GQ886022
    MtdTARD         GQ886023
    NeoMALA         GQ886024
    NmeZYGEN        GQ886025
    OimCOLL         GQ886026
    PamNEOPT        GQ886027
    PepONYCH        GQ886028
    Pge2DIPLO       GQ886029
    Pma2ARACH       GQ886030
    Pno2ONYCH       GQ886031
    Pol2DIPLO       GQ886032
    PsaARCHEO       GQ886033
    ScolCHILO       GQ886034
    Scu3SYMPH       GQ886035
    SkleOST         GQ886036
    SpoCHILO        GQ886037
    Tom2COLL        GQ886038
    UfsBRANCH       GQ886039
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3153fin:
    A369COPE        GQ886040
    AarPENTA        GQ886041
    AchARACH        GQ886042
    AdoNEOPT        GQ886043
    AeliPYCNO       GQ886044
    AhiPYCNO        GQ886045
    AmaDIPLO        GQ886046
    Amb2ARACH       GQ886047
    Arg2BIURA       GQ886048
    Asa3BRANCH      GQ886049
    Avu3MALA        GQ886050
    BbaTHECOS       GQ886051
    CfrTHECOS       GQ886052
    CliZYGEN        GQ886053
    Col2PYCNO       GQ886054
    Cro2XIPHOS      GQ886055
    Ctas2CHILO      GQ886056
    Din2ARACH       GQ886057
    DmaBRANCH       GQ886058
    EafCOPE         GQ886059
    EgigARACH       GQ886060
    EinEPHEM        GQ886061
    ElePYCNO        GQ886062
    ErwONYCH        GQ886063
    EuryPAURO       GQ886064
    Han2SYMPH       GQ886065
    HapaOST         GQ886066
    HariARACH       GQ886067
    HspARACH        GQ886068
    IpumARACH       GQ886069
    IveODONAT       GQ886070
    LeanTHECOS      GQ886071
    LemMALA         GQ886072
    Lle2BRANCH      GQ886073
    LlyODONAT       GQ886074
    LoxTHECOS       GQ886075
    LynBRANCH       GQ886076
    MayEPHEM        GQ886077
    MbaARCHEO       GQ886078
    NeoMALA         GQ886079
    NmeZYGEN        GQ886080
    OimCOLL         GQ886081
    PamNEOPT        GQ886082
    PepONYCH        GQ886083
    Pge2DIPLO       GQ886084
    Pma2ARACH       GQ886085
    Pno2ONYCH       GQ886086
    Pol2DIPLO       GQ886087
    PsaARCHEO       GQ886088
    ScolCHILO       GQ886089
    Scu3SYMPH       GQ886090
    SkleOST         GQ886091
    SpoCHILO        GQ886092
    StpARACH        GQ886093
    Tom2COLL        GQ886094
    UfsBRANCH       GQ886095
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3196fin1_3:
    A369COPE        GQ886096
    AarPENTA        GQ886097
    AchARACH        GQ886098
    AdoNEOPT        GQ886099
    AeliPYCNO       GQ886100
    AhiPYCNO        GQ886101
    AmaDIPLO        GQ886102
    Amb2ARACH       GQ886103
    Arg2BIURA       GQ886104
    Asa3BRANCH      GQ886105
    Avu3MALA        GQ886106
    BbaTHECOS       GQ886107
    CfrTHECOS       GQ886108
    CliZYGEN        GQ886109
    Col2PYCNO       GQ886110
    Crp2ARACH       GQ886111
    Ctas2CHILO      GQ886112
    Din2ARACH       GQ886113
    DmaBRANCH       GQ886114
    DtyMYSTACO      GQ886115
    EafCOPE         GQ886116
    EfrDIPLUR       GQ886117
    EinEPHEM        GQ886118
    ElePYCNO        GQ886119
    EuryPAURO       GQ886120
    Han2SYMPH       GQ886121
    HariARACH       GQ886122
    HmaCEPHAL       GQ886123
    HspARACH        GQ886124
    IpumARACH       GQ886125
    IveODONAT       GQ886126
    JapDIPLUR       GQ886127
    LemMALA         GQ886128
    Lle2BRANCH      GQ886129
    LlyODONAT       GQ886130
    LnigARACH       GQ886131
    LoxTHECOS       GQ886132
    LynBRANCH       GQ886133
    MayEPHEM        GQ886134
    MbaARCHEO       GQ886135
    MtdTARD         GQ886136
    NeoMALA         GQ886137
    NmeZYGEN        GQ886138
    OimCOLL         GQ886139
    PamNEOPT        GQ886140
    Pge2DIPLO       GQ886141
    Pma2ARACH       GQ886142
    Pno2ONYCH       GQ886143
    Pol2DIPLO       GQ886144
    PsaARCHEO       GQ886145
    PwhARACH        GQ886146
    ScolCHILO       GQ886147
    Scu3SYMPH       GQ886148
    SkleOST         GQ886149
    SpoCHILO        GQ886150
    StpARACH        GQ886151
    Tom2COLL        GQ886152
    UfsBRANCH       GQ886153
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3196fin5_6:
    AarPENTA        GQ886154
    AchARACH        GQ886155
    AdoNEOPT        GQ886156
    AeliPYCNO       GQ886157
    AhiPYCNO        GQ886158
    AmaDIPLO        GQ886159
    Amb2ARACH       GQ886160
    Arg2BIURA       GQ886161
    Asa3BRANCH      GQ886162
    Avu3MALA        GQ886163
    BbaTHECOS       GQ886164
    CfrTHECOS       GQ886165
    CliZYGEN        GQ886166
    Col2PYCNO       GQ886167
    Cro2XIPHOS      GQ886168
    Crp2ARACH       GQ886169
    Ctas2CHILO      GQ886170
    Din2ARACH       GQ886171
    DmaBRANCH       GQ886172
    DtyMYSTACO      GQ886173
    EafCOPE         GQ886174
    EfrDIPLUR       GQ886175
    EgigARACH       GQ886176
    EinEPHEM        GQ886177
    ElePYCNO        GQ886178
    EuryPAURO       GQ886179
    Han2SYMPH       GQ886180
    HariARACH       GQ886181
    HmaCEPHAL       GQ886182
    HspARACH        GQ886183
    IpumARACH       GQ886184
    IveODONAT       GQ886185
    JapDIPLUR       GQ886186
    LeanTHECOS      GQ886187
    LemMALA         GQ886188
    Lle2BRANCH      GQ886189
    LlyODONAT       GQ886190
    LnigARACH       GQ886191
    LoxTHECOS       GQ886192
    LynBRANCH       GQ886193
    MayEPHEM        GQ886194
    MbaARCHEO       GQ886195
    NeoMALA         GQ886196
    NmeZYGEN        GQ886197
    OimCOLL         GQ886198
    PamNEOPT        GQ886199
    PepONYCH        GQ886200
    Pge2DIPLO       GQ886201
    Pma2ARACH       GQ886202
    Pno2ONYCH       GQ886203
    Pol2DIPLO       GQ886204
    PsaARCHEO       GQ886205
    PwhARACH        GQ886206
    ScolCHILO       GQ886207
    Scu3SYMPH       GQ886208
    SkleOST         GQ886209
    SpoCHILO        GQ886210
    StpARACH        GQ886211
    Tom2COLL        GQ886212
    UfsBRANCH       GQ886213
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3202fin:
    AarPENTA        GQ886214
    AchARACH        GQ886215
    AdoNEOPT        GQ886216
    AeliPYCNO       GQ886217
    AhiPYCNO        GQ886218
    AmaDIPLO        GQ886219
    Amb2ARACH       GQ886220
    Arg2BIURA       GQ886221
    Avu3MALA        GQ886222
    BbaTHECOS       GQ886223
    CliZYGEN        GQ886224
    Col2PYCNO       GQ886225
    Cro2XIPHOS      GQ886226
    Crp2ARACH       GQ886227
    Ctas2CHILO      GQ886228
    DmaBRANCH       GQ886229
    DtyMYSTACO      GQ886230
    EafCOPE         GQ886231
    EfrDIPLUR       GQ886232
    EinEPHEM        GQ886233
    ErwONYCH        GQ886234
    EuryPAURO       GQ886235
    Han2SYMPH       GQ886236
    HmaCEPHAL       GQ886237
    IveODONAT       GQ886238
    JapDIPLUR       GQ886239
    LeanTHECOS      GQ886240
    LemMALA         GQ886241
    Lle2BRANCH      GQ886242
    LlyODONAT       GQ886243
    LnigARACH       GQ886244
    LoxTHECOS       GQ886245
    LynBRANCH       GQ886246
    MayEPHEM        GQ886247
    MbaARCHEO       GQ886248
    MtdTARD         GQ886249
    NmeZYGEN        GQ886250
    OimCOLL         GQ886251
    PamNEOPT        GQ886252
    PepONYCH        GQ886253
    Pge2DIPLO       GQ886254
    Pma2ARACH       GQ886255
    Pno2ONYCH       GQ886256
    Pol2DIPLO       GQ886257
    PsaARCHEO       GQ886258
    PwhARACH        GQ886259
    ScolCHILO       GQ886260
    Scu3SYMPH       GQ886261
    SkleOST         GQ886262
    SpoCHILO        GQ886263
    StpARACH        GQ886264
    Tom2COLL        GQ886265
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8018fin:
    AchARACH       GQ886266
    AmaDIPLO       GQ886267
    Amb2ARACH      GQ886268
    Arg2BIURA      GQ886269
    Asa3BRANCH     GQ886270
    CfrTHECOS      GQ886271
    CliZYGEN       GQ886272
    Col2PYCNO      GQ886273
    Cro2XIPHOS     GQ886274
    Crp2ARACH      GQ886275
    Ctas2CHILO     GQ886276
    Din2ARACH      GQ886277
    DmaBRANCH      GQ886278
    EafCOPE        GQ886279
    EgigARACH      GQ886280
    EinEPHEM       GQ886281
    HapaOST        GQ886282
    HariARACH      GQ886283
    HmaCEPHAL      GQ886284
    HspARACH       GQ886285
    IpumARACH      GQ886286
    IveODONAT      GQ886287
    JapDIPLUR      GQ886288
    LeanTHECOS     GQ886289
    Lle2BRANCH     GQ886290
    LlyODONAT      GQ886291
    LnigARACH      GQ886292
    LynBRANCH      GQ886293
    MayEPHEM       GQ886294
    NmeZYGEN       GQ886295
    OimCOLL        GQ886296
    PamNEOPT       GQ886297
    PepONYCH       GQ886298
    Pma2ARACH      GQ886299
    Pno2ONYCH      GQ886300
    PsaARCHEO      GQ886301
    PwhARACH       GQ886302
    ScolCHILO      GQ886303
    Scu3SYMPH      GQ886304
    SkleOST        GQ886305
    SpoCHILO       GQ886306
    StpARACH       GQ886307
    Tom2COLL       GQ886308
    UfsBRANCH      GQ886309
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8028fin:
    AchARACH        GQ886310
    AdoNEOPT        GQ886311
    AeliPYCNO       GQ886312
    AhiPYCNO        GQ886313
    AmaDIPLO        GQ886314
    Amb2ARACH       GQ886315
    BbaTHECOS       GQ886316
    CfrTHECOS       GQ886317
    Col2PYCNO       GQ886318
    Crp2ARACH       GQ886319
    Ctas2CHILO      GQ886320
    DtyMYSTACO      GQ886321
    EafCOPE         GQ886322
    ElePYCNO        GQ886323
    ErwONYCH        GQ886324
    Han2SYMPH       GQ886325
    HapaOST         GQ886326
    HariARACH       GQ886327
    HmaCEPHAL       GQ886328
    HspARACH        GQ886329
    IveODONAT       GQ886330
    JapDIPLUR       GQ886331
    LemMALA         GQ886332
    Lle2BRANCH      GQ886333
    LlyODONAT       GQ886334
    LoxTHECOS       GQ886335
    MtdTARD         GQ886336
    OimCOLL         GQ886337
    PepONYCH        GQ886338
    Pge2DIPLO       GQ886339
    Pma2ARACH       GQ886340
    Pno2ONYCH       GQ886341
    PsaARCHEO       GQ886342
    PwhARACH        GQ886343
    ScolCHILO       GQ886344
    Scu3SYMPH       GQ886345
    SkleOST         GQ886346
    SpoCHILO        GQ886347
    StpARACH        GQ886348
```

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8029fin:
    A369COPE        GQ886349
    AarPENTA        GQ886350
    AchARACH        GQ886351
    AdoNEOPT        GQ886352
    AeliPYCNO       GQ886353
    AhiPYCNO        GQ886354
    AmaDIPLO        GQ886355
    Amb2ARACH       GQ886356
    Arg2BIURA       GQ886357
    Asa3BRANCH      GQ886358
    Avu3MALA        GQ886359
    BbaTHECOS       GQ886360
    CliZYGEN        GQ886361
    Col2PYCNO       GQ886362
    Crp2ARACH       GQ886363
    Ctas2CHILO      GQ886364
    Din2ARACH       GQ886365
    DmaBRANCH       GQ886366
    DtyMYSTACO      GQ886367
    EafCOPE         GQ886368
    EfrDIPLUR       GQ886369
    EgigARACH       GQ886370
    EinEPHEM        GQ886371
    ElePYCNO        GQ886372
    ErwONYCH        GQ886373
    EuryPAURO       GQ886374
    Han2SYMPH       GQ886375
    HapaOST         GQ886376
    HariARACH       GQ886377
    HmaCEPHAL       GQ886378
    HspARACH        GQ886379
    IpumARACH       GQ886380
    IveODONAT       GQ886381
    JapDIPLUR       GQ886382
    LemMALA         GQ886383
    Lle2BRANCH      GQ886384
    LlyODONAT       GQ886385
    LnigARACH       GQ886386
    LoxTHECOS       GQ886387
    MayEPHEM        GQ886388
    MbaARCHEO       GQ886389
    NeoMALA         GQ886390
    NmeZYGEN        GQ886391
    OimCOLL         GQ886392
    PamNEOPT        GQ886393
    PepONYCH        GQ886394
    Pge2DIPLO       GQ886395
    Pma2ARACH       GQ886396
    Pno2ONYCH       GQ886397
    Pol2DIPLO       GQ886398
    PsaARCHEO       GQ886399
    PwhARACH        GQ886400
    ScolCHILO       GQ886401
    Scu3SYMPH       GQ886402
    SpoCHILO        GQ886403
    StpARACH        GQ886404
    Tom2COLL        GQ886405
    UfsBRANCH       GQ886406
```

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8053fin:
    AarPENTA        GQ886407
    AchARACH        GQ886408
    AdoNEOPT        GQ886409
    AeliPYCNO       GQ886410
    AhiPYCNO        GQ886411
    AmaDIPLO        GQ886412
    Amb2ARACH       GQ886413
    Asa3BRANCH      GQ886414
    Avu3MALA        GQ886415
    BbaTHECOS       GQ886416
    CfrTHECOS       GQ886417
    CliZYGEN        GQ886418
    Col2PYCNO       GQ886419
    Cro2XIPHOS      GQ886420
    Crp2ARACH       GQ886421
    Din2ARACH       GQ886422
    DtyMYSTACO      GQ886423
    EfrDIPLUR       GQ886424
    EgigARACH       GQ886425
    EinEPHEM        GQ886426
    ElePYCNO        GQ886427
    ErwONYCH        GQ886428
    EuryPAURO       GQ886429
    Han2SYMPH       GQ886430
    HariARACH       GQ886431
    HmaCEPHAL       GQ886432
    HspARACH        GQ886433
    IpumARACH       GQ886434
    IveODONAT       GQ886435
    JapDIPLUR       GQ886436
    LeanTHECOS      GQ886437
    LemMALA         GQ886438
    LlyODONAT       GQ886439
    LnigARACH       GQ886440
    LoxTHECOS       GQ886441
    LynBRANCH       GQ886442
    MayEPHEM        GQ886443
    NeoMALA         GQ886444
    NmeZYGEN        GQ886445
    OimCOLL         GQ886446
    PamNEOPT        GQ886447
    PepONYCH        GQ886448
    Pma2ARACH       GQ886449
    Pno2ONYCH       GQ886450
    Pol2DIPLO       GQ886451
    PsaARCHEO       GQ886452
    PwhARACH        GQ886453
    ScolCHILO       GQ886454
    Scu3SYMPH       GQ886455
    SkleOST         GQ886456
    SpoCHILO        GQ886457
    Tom2COLL        GQ886458
    UfsBRANCH       GQ886459
```

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8070fin:
    A369COPE        GQ886460
    AarPENTA        GQ886461
    AchARACH        GQ886462
    AdoNEOPT        GQ886463
    AhiPYCNO        GQ886464
    AmaDIPLO        GQ886465
    Amb2ARACH       GQ886466
    BbaTHECOS       GQ886467
    CfrTHECOS       GQ886468
    CliZYGEN        GQ886469
    Cro2XIPHOS      GQ886470
    Crp2ARACH       GQ886471
    Ctas2CHILO      GQ886472
    Din2ARACH       GQ886473
    DmaBRANCH       GQ886474
    EafCOPE         GQ886475
    EfrDIPLUR       GQ886476
    EinEPHEM        GQ886477
    EuryPAURO       GQ886478
    HariARACH       GQ886479
    HmaCEPHAL       GQ886480
    HspARACH        GQ886481
    IpumARACH       GQ886482
    IveODONAT       GQ886483
    JapDIPLUR       GQ886484
    LeanTHECOS      GQ886485
    LemMALA         GQ886486
    Lle2BRANCH      GQ886487
    LlyODONAT       GQ886488
    LnigARACH       GQ886489
    LoxTHECOS       GQ886490
    LynBRANCH       GQ886491
    MayEPHEM        GQ886492
    MbaARCHEO       GQ886493
    NmeZYGEN        GQ886494
    PamNEOPT        GQ886495
    PepONYCH        GQ886496
    Pge2DIPLO       GQ886497
    Pma2ARACH       GQ886498
    Pol2DIPLO       GQ886499
    PsaARCHEO       GQ886500
    PwhARACH        GQ886501
    ScolCHILO       GQ886502
    Scu3SYMPH       GQ886503
    SpoCHILO        GQ886504
```

```
8091fin:
    A369COPE        GQ886505
    AarPENTA        GQ886506
    AchARACH        GQ886507
    AhiPYCNO        GQ886508
    Amb2ARACH       GQ886509
    Asa3BRANCH      GQ886510
    Avu3MALA        GQ886511
    Cro2XIPHOS      GQ886512
    Din2ARACH       GQ886513
    EafCOPE         GQ886514
    EgigARACH       GQ886515
    EinEPHEM        GQ886516
    Han2SYMPH       GQ886517
    HariARACH       GQ886518
    HspARACH        GQ886519
    IveODONAT       GQ886520
    JapDIPLUR       GQ886521
    LemMALA         GQ886522
    Lle2BRANCH      GQ886523
    LlyODONAT       GQ886524
    LnigARACH       GQ886525
    LoxTHECOS       GQ886526
    LynBRANCH       GQ886527
    MbaARCHEO       GQ886528
    NeoMALA         GQ886529
    NmeZYGEN        GQ886530
    PamNEOPT        GQ886531
    PepONYCH        GQ886532
    Pge2DIPLO       GQ886533
    Pno2ONYCH       GQ886534
    Pol2DIPLO       GQ886535
    PsaARCHEO       GQ886536
    PwhARACH        GQ886537
    StpARACH        GQ886538
    UfsBRANCH       GQ886539
```

```
acc:
    A369COPE       GQ886540
    AeliPYCNO      GQ886541
    AhiPYCNO       GQ886542
    Amb2ARACH      GQ886543
    Arg2BIURA      GQ886544
    Asa3BRANCH     GQ886545
    Avu3MALA       GQ886546
    BbaTHECOS      GQ886547
    CfrTHECOS      GQ886548
    CliZYGEN       GQ886549
    Col2PYCNO      GQ886550
    Cro2XIPHOS     GQ886551
    Crp2ARACH      GQ886552
    Ctas2CHILO     GQ886553
    Din2ARACH      GQ886554
    DmaBRANCH      GQ886555
    DtyMYSTACO     GQ886556
    EafCOPE        GQ886557
    EgigARACH      GQ886558
    ElePYCNO       GQ886559
    ErwONYCH       GQ886560
    EuryPAURO      GQ886561
    HariARACH      GQ886562
    HmaCEPHAL      GQ886563
    HspARACH       GQ886564
    IpumARACH      GQ886565
    LeanTHECOS     GQ886566
    LemMALA        GQ886567
    Lle2BRANCH     GQ886568
    MtdTARD        GQ886569
    NeoMALA        GQ886570
    OimCOLL        GQ886571
    PamNEOPT       GQ886572
    PepONYCH       GQ886573
    Pma2ARACH      GQ886574
    Pno2ONYCH      GQ886575
    PsaARCHEO      GQ886576
    PwhARACH       GQ886577
    ScolCHILO      GQ886578
    SpoCHILO       GQ886579
    StpARACH       GQ886580
    Tom2COLL       GQ886581
    UfsBRANCH      GQ886582
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aspec2_6:
    AeliPYCNO       GQ886583
    AhiPYCNO        GQ886584
    Amb2ARACH       GQ886585
    Arg2BIURA       GQ886586
    Avu3MALA        GQ886587
    BbaTHECOS       GQ886588
    CfrTHECOS       GQ886589
    CliZYGEN        GQ886590
    Col2PYCNO       GQ886591
    Cro2XIPHOS      GQ886592
    Crp2ARACH       GQ886593
    Ctas2CHILO      GQ886594
    DmaBRANCH       GQ886595
    EgigARACH       GQ886596
    ElePYCNO        GQ886597
    ErwONYCH        GQ886598
    HariARACH       GQ886599
    HmaCEPHAL       GQ886600
    HspARACH        GQ886601
    JapDIPLUR       GQ886602
    LeanTHECOS      GQ886603
    LemMALA         GQ886604
    MayEPHEM        GQ886605
    NeoMALA         GQ886606
    OimCOLL         GQ886607
    PamNEOPT        GQ886608
    PsaARCHEO       GQ886609
    ScolCHILO       GQ886610
    SpoCHILO        GQ886611
    Tom2COLL        GQ886612
    UfsBRANCH       GQ886613
```

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aspec11_12:
    AeliPYCNO       GQ886614
    AhiPYCNO        GQ886615
    Amb2ARACH       GQ886616
    Arg2BIURA       GQ886617
    Asa3BRANCH      GQ886618
    Avu3MALA        GQ886619
    BbaTHECOS       GQ886620
    CfrTHECOS       GQ886621
    CliZYGEN        GQ886622
    Col2PYCNO       GQ886623
    Cro2XIPHOS      GQ886624
    Crp2ARACH       GQ886625
    Ctas2CHILO      GQ886626
    Din2ARACH       GQ886627
    DmaBRANCH       GQ886628
    DtyMYSTACO      GQ886629
    EafCOPE         GQ886630
    EgigARACH       GQ886631
    ElePYCNO        GQ886632
    HariARACH       GQ886633
    HmaCEPHAL       GQ886634
    JapDIPLUR       GQ886635
    LeanTHECOS      GQ886636
    LemMALA         GQ886637
    Lle2BRANCH      GQ886638
    MayEPHEM        GQ886639
    MtdTARD         GQ886640
    NeoMALA         GQ886641
    OimCOLL         GQ886642
    PamNEOPT        GQ886643
    PepONYCH        GQ886644
    PsaARCHEO       GQ886645
    PwhARACH        GQ886646
    ScolCHILO       GQ886647
    SpoCHILO        GQ886648
    Tom2COLL        GQ886649
    UfsBRANCH       GQ886650
```

```
aspec19_21:
    AeliPYCNO       GQ886651
    AhiPYCNO        GQ886652
    Amb2ARACH       GQ886653
    Arg2BIURA       GQ886654
    Asa3BRANCH      GQ886655
    Avu3MALA        GQ886656
    BbaTHECOS       GQ886657
    CfrTHECOS       GQ886658
    CliZYGEN        GQ886659
    Col2PYCNO       GQ886660
    Crp2ARACH       GQ886661
    Ctas2CHILO      GQ886662
    Din2ARACH       GQ886663
    DmaBRANCH       GQ886664
    DtyMYSTACO      GQ886665
    EafCOPE         GQ886666
    EgigARACH       GQ886667
    ElePYCNO        GQ886668
    ErwONYCH        GQ886669
    EuryPAURO       GQ886670
    Han2SYMPH       GQ886671
    HmaCEPHAL       GQ886672
    IpumARACH       GQ886673
    JapDIPLUR       GQ886674
    LeanTHECOS      GQ886675
    LemMALA         GQ886676
    Lle2BRANCH      GQ886677
    MayEPHEM        GQ886678
    MtdTARD         GQ886679
    NeoMALA         GQ886680
    OimCOLL         GQ886681
    PamNEOPT        GQ886682
    PepONYCH        GQ886683
    Pno2ONYCH       GQ886684
    PsaARCHEO       GQ886685
    PwhARACH        GQ886686
    ScolCHILO       GQ886687
    SpoCHILO        GQ886688
    Tom2COLL        GQ886689
    UfsBRANCH       GQ886690
```

```
ef1a:
    AarPENTA        GQ886691
    AdoNEOPT        GQ886692
    AeliPYCNO       GQ886693
    AhiPYCNO        GQ886694
    DmaBRANCH       GQ886695
    DtyMYSTACO      GQ886696
    EgigARACH       GQ886697
    EinEPHEM        GQ886698
    ErwONYCH        GQ886699
    IpumARACH       GQ886700
    IveODONAT       GQ886701
    LlyODONAT       GQ886702
    LnigARACH       GQ886703
    PepONYCH        GQ886704
    Pno2ONYCH       GQ886705
    PwhARACH        GQ886706
```

```
ef2:
    AarPENTA        GQ886707
    AchARACH        GQ886708
    AdoNEOPT        GQ886709
    AeliPYCNO       GQ886710
    AhiPYCNO        GQ886711
    Amb2ARACH       GQ886712
    Crp2ARACH       GQ886713
    Din2ARACH       GQ886714
    DmaBRANCH       GQ886715
    DtyMYSTACO      GQ886716
    EgigARACH       GQ886717
    EinEPHEM        GQ886718
    ErwONYCH        GQ886719
    HariARACH       GQ886720
    HspARACH        GQ886721
    IpumARACH       GQ886722
    LlyODONAT       GQ886723
    LnigARACH       GQ886724
    PepONYCH        GQ886725
    Pma2ARACH       GQ886726
    PwhARACH        GQ886727
    StpARACH        GQ886728
```

polii:

AarPENTA	GQ886729
AchARACH	GQ886730
AdoNEOPT	GQ886731
AeliPYCNO	GQ886732
AhiPYCNO	GQ886733
Amb2ARACH	GQ886734
Crp2ARACH	GQ886735
Ctas2CHILO	GQ886736
Din2ARACH	GQ886737
DmaBRANCH	GQ886738
EgigARACH	GQ886739
EinEPHEM	GQ886740
ErwONYCH	GQ886741
IpumARACH	GQ886742
IveODONAT	GQ886743
LlyODONAT	GQ886744
LnigARACH	GQ886745
PepONYCH	GQ886746
Pma2ARACH	GQ886747
Pno2ONYCH	GQ886748
PwhARACH	GQ886749
StpARACH	GQ886750

Previously cited GenBank accession numbers for all genes except EF-1alpha, EF-2 and PolII can be found in:

Ref. 16 (Regier, J.C., Shultz, J.W., Ganley, A.R.D., Hussey, A., Shi, D., Ball, B. Stajich, J.E., Cummings, M.P., Martin, J.W., and Cunningham, C.W. 2008. Resolving Arthropod Phylogeny: Exploring Phylogenetic Signal within 41kb of Protein-coding Nuclear Gene Sequence. Syst. Biol. 57: 920-938.)

Previously cited GenBank accession numbers for EF-1alpha, EF-2 and PolII can be found in:

Regier, J.C., J.W. Shultz, and R.E. Kambic. 2005. Pancrustacean phylogeny: Hexapods are terrestrial crustaceans and maxillopods are not monophyletic. Proc. R. Soc. Lond. B 272:305-401.

Regier, J.C., H.M. Wilson, and J.W. Shultz. 2005. Phylogenetic analysis of Myriapoda using three nuclear protein-coding genes. Mol. Phylog. Evol. 34:147-158.

Supplementary Table 5. Expanded outgroup sampling.

To extend our outgroup sampling beyond the Onychophora and Tardigrada, we retrieved orthologous sequences for five distantly related taxa (*Priapulus caudatus* (Priapulida), *Caenorhabditis elegans* (Nematoda), *Brugia malayi* (Nematoda), *Lottia gigantea* (Mollusca) and *Homo sapiens* (Deuterostomia)) from whole genome databases (*C. elegans, B. malayi, H. sapiens*) and an EST database (*P. caudatus*) at Genbank, and from an EST database (*L. gigantea*) at the DOE Joint Genome Institute. Orthologous sequences were identified by blasting each gene as a translated nucleotide query against the translated nucleotide database (NCBI tblastx). Only those sequences were included that matched significantly better over almost the entire query length than any of the other blast hits. The amino acid translations of the selected nucleotide sequences were downloaded and aligned against our existing, masked alignment by using MAFFT (version 6.603b; Ref. 35) with default settings. Masked areas of the existing alignment, and occasionally short stretches of unalignable individual sequences that bordered the mask, were subsequently deleted from the alignment in Geneious (version 4.7.6; www.geneious.com).

Accession numbers:

***Brugia malayi*:** XP_001893622.1, XP_001901506.1, XP_001895617.1, XP_001895919.1, XP_001894567.1, XP_001897269.1, XP_001901913.1, XP_001900309.1, XP_001896500.1, XP_001895013.1, XP_001897611.1, XP_001895791.1, XP_001902388.1, XP_001902446.1, XP_001898682.1, XP_001899038.1, XP_001899767.1, XP_001899767.1, XP_001891813.1, XP_001898798.1, XP_001900869.1, XP_001897626.1, XP_001897627.1, XP_001901951.1, XP_001896639.1, XP_001898305.1, XP_001896237.1, XP_001899825.1, XP_001894503.1, XP_001901400.1, XP_001894060.1, XP_001899288.1, XP_001894336.1, XP_001898894.1, XP_001900677.1, XP_001900562.1, XP_001900562.1, XP_001901105.1, XP_001894202.1, XP_001902057.1, XP_001901357.1, XP_001895763.1, XP_001895763.1, XP_001896149.1, XP_001892909.1, XP_001897606.1, XP_001901433.1, XP_001891856.1, XP_001897999.1, XP_001899519.1, XP_001896989.1, XP_001895649.1, XP_001900986.1, XP_001893872.1, XP_001899464.1, XP_001897022.1, XP_001897022.1, XP_001897022.1, XP_001896880.1, XP_001897144.1, XP_001898310.1

***Caenorhabditis elegans*:** NP_498913.2, NP_496736.1, NP_001022078.1, NP_497139.1, NP_492303.1, NP_001022778.1, NP_496563.1, NP_504661.1, NP_001076631.1, NP_497837.1, NP_501507.1, NP_501064.1, NP_001023374.1, NP_495838.2, NP_494974.2, NP_497853.1, NP_491248.1, NP_502997.1, NP_498785.1, NP_498785.1, NP_001024331.1, NP_502129.1, NP_497235.2, NP_001022416.1, NP_509361.1, NP_508420.1, NP_508420.1, NP_001023732.1, NP_507909.1, NP_509429.1, NP_498260.2, NP_491281.1, NP_501392.1, NP_491165.2, NP_502812.1, NP_001024842.1, NP_741148.2, NP_498047.1, NP_498047.1, NP_491515.2, NP_001022614.1, NP_501998.1, NP_493349.1, NP_499758.1, NP_499260.1, NP_499260.1, NP_492591.1, NP_509572.1, NP_508184.2, NP_492811.1, NP_001040861.1, NP_001021838.1, NP_508711.1, NP_508537.1, NP_508537.1, NP_508537.1, NP_498520.1, NP_492457.1, NP_500523.3

***Homo sapiens*:** NP_002009.1, NP_005580.1, NP_001014794.1, NP_001244.1, NP_004437.2, NP_036299.1, NP_003866.1, NP_064502.9, NP_003127.1, NP_002100.2, NP_004332.2, NP_631895.1, NP_036565.2, NP_079094.1, NP_006436.3, NP_006436.3, NP_001005360.1, NP_000393.4, NP_001610.2, NP_004517.2, NP_000251.3, NP_000251.3, NP_002585.2, NP_004791.1, NP_001596.2, NP_116082.1, NP_005042.1, NP_001349.2, NP_000929.1, NP_000929.1, NP_004682.2, NP_005462.1, NP_004850.1, NP_004850.1, NP_060931.2, NP_858058.1, NP_002798.2, NP_055302.1, NP_001035957.1, NP_060895.1, NP_055448.1, NP_000166.2, NP_001684.2, NP_001084.3, NP_001123910.1, NP_001123910.1, NP_001123910.1, NP_001952.1, NP_000928.1

***Lottia gigantea*:** 202563, 191244, 166805, 104768, 206571, 183856, 207720, 189484, 207454, 205661, 93207, 206258, 205645, 178633, 224575, 137856, 207258, 63809, 217351, 217351, 109709, 186757, 175153, 207293,

207807, 158839, 178090, 206057, 92440, 205596, 184781, 91712, 207403, 86084, 194060, 153655, 53097, 206585, 91606, 192032, 91620, 91620, 205919, 52835, 62006, 239037, 234519, 178765, 178765, 206692, 228184, 206326, 205944, 111316, 117227, 132663, 225779, 177207, 178790, 178589, 199490, 91245, 91245, 91245, 239270, 180085, 180008

***Priapulus caudatus*:** AAT06252.1, ABM05772.1, AAT06193.1, ABB29633.1, ABM74385.1