**Supplementary Table S1.** Species names, accession numbers and genomic fragments used for the concatenated phylogenetic analysis.

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| --- | --- | --- |
| Species | 18S | 28S D2-D3 |
| *Aphelenchoides besseyi*  | AY508035 | AY508109 |
| *Bursaphelenchus abietinus*  | AY508011 | AY508074 |
| *B. abruptus*  | AY508010 | AY508073 |
| *B. africanus africanus*  | JF317266 | AM397024 |
| *B. africanus rossicus*  | – | AM623784 |
| *B. anamurius*  | – | FJ643489 |
| *B. anatolius*  | AY508025 | AY508093 |
| *B. andrassyi*  | KF164829 | KF164833 |
| *B. antoniae*  | AM279709 | AM279710 |
| *B. arthuri*  | AM397010 | AM396564 |
| *B. arthuroides*  | HQ599188 | HQ599190 |
| *B. braaschae*  | GQ845409 | GQ845408 |
| *B. burgermeisteri*  | JF317267 | EU159109 |
| *B. carpini* | LC425133 | LC425133 |
| *B. chengi*  | KT599480 | EU107359 |
| *B. clavicaudatus*  | AB299221 | AB299222 |
| *B. cocophilus*  | AY509153 | AY508076 |
| *B. conicaudatus*  | AB067757 | AM396565 |
| *B. corneolus corneolus*  | JQ765873 | JQ765871 |
| *B. corneolus taiwanensis*  | HQ407406 | HQ407405 |
| *B. crenati* | KU683736 | KU683737 |
| *B. cryphali okhotskensis* | LC425131 | LC425131 |
| *B. debrae*  | – | EF488813 |
| *B. decraemerae* | MF800855 | MF807220 |
| *B. doui*  | AB299224 | AM396567 |
| *B. eggersi*  | AY508013 | AY508078 |
| *B. eremus*  | – | AM396568 |
| *B. fagi*  | – | JX683686 |
| *B. firmae*  | AB650015 | AB650014 |
| *B. fraudulentus*  | AY508015 | AY508081 |
| *B. fuchsi*  | AY508012 | AY508075 |
| *B. fungivorus*  | AY508016 | AY508082 |
| *B. geraerti* | MG264562 | MG264565 |
| *B. gerberae*  | AY508024 | AY508092 |
| *B. gillanii*  | KJ653442 | KJ653443 |
| *B. hellenicus*  | AY508017 | AY508083 |
| *B. hildegardae*  | AM397013 | AM396569 |
| *B. hirsutae* | LC269966 | LC269966 |
| *B. hofmanni*  | AY508018 | AY508084 |
| *B. hylobianum*  | AY508019 | KT806476 |
| *B. irokophilus* | MK544843 | MK544842 |
| *B. kesiyae* | LC087116 | LC087116 |
| *B. kevini*  | AY753531 | AY753532 |
| *B. kiyoharai*  | AB597255 | AB597254 |
| *B. koreanus*  | JX154585 | JX154584 |
| *B. laciniatae* | LC425132 | LC425132 |
| *B. leoni* | MN419334 | MH457128 |
| *B. luxuriosae*  | AB097864 | AM396571 |
| *B. macromucronatus*  | – | EU256382 |
| *B. masseyi*  | – | JQ287495 |
| *B. mazandaranense*  | JN153102 | JN153103 |
| *B. michalskii* | – | MH457128 |
| *B. moensi* | MG205600 | MF952873 |
| *B. mucronatus*  | AY508023 | AM396573 |
| *B. niphades*  | AB849465 | AB849475 |
| *B. obeche*  | – | EU159108 |
| *B. okinawaensis*  | AB358983 | AB358982 |
| *B. paraburgeri*  | HQ727727 | HQ727725 |
| *B. paracorneolus*  | AY508027 | AY508095 |
| *B. paraleoni* n. sp. | MT990734 | MT990736 |
| *B. paraluxuriosae*  | JF966206 | JF966204 |
| *B. parantoniae*  | KT223041 | KT223042 |
| *B. paraparvispicularis*  | GQ421483 | GQ429010 |
| *B. parapinasteri* | KT878515 | KT878516 |
| *B. parathailandae*  | JN377724 | JN377722 |
| *B. parvispicularis*  | AB218829 | AB368537 |
| *B. penai*  | AB901293 | AB901292 |
| *B. piceae*  | KT315781 | KF772174 |
| *B. pinasteri*  | AM397016 | AM396574 |
| *B. platzeri*  | AY508026 | AY508094 |
| *B. poligraphi*  | AY508028 | AY508096 |
| *B. populi*  | HQ699855 | FJ998281 |
| *B. posterovulvus*  | KF314804 | KF314807 |
| *B. pterocarpus*  | MF800855 | MF807220 |
| *B. rainulfi*  | AM397017 | AM396575 |
| *B. ratzeburgii* | MG264564 | MG264569 |
| *B. rockyi* | MH393459 | MH396411 |
| *B. rufipennis*  | AB368529 | AB368530 |
| *B. sakishimanus*  | LC027461 | LC027462 |
| *B. saudi* | KT806480 | KT806482 |
| *B. seani*  | AY508029 | AY508098 |
| *B. sexdentati*  | AY508031 | AY508103 |
| *B. sinensis*  | AB232162 | EU752257 |
| *B. singaporensis*  | AM397018 | AM396576 |
| *B. sycophilus*  | AB901291 | AB901290 |
| *B. tadamiensis*  | AB635399 | AB635398 |
| *B. taphrorychi* | – | MF422692 |
| *B. thailandae*  | AM397019 | AM396577 |
| *B. tiliae*  | – | KF736955 |
| *B. tokyoensis*  | AB430445 | AB430446 |
| *B. trypophloei*  | – | FJ998283 |
| *B. tusciae*  | AY508033 | AY508104 |
| *B. ulmophilus*  | KR011752 | KP331049 |
| *B. vallesianus*  | AM397020 | AM396578 |
| *B. willibaldi*  | AM397021 | AM396579 |
| *B. wuae* | AB918706 | AB918707 |
| *B. xylophilus*  | AM397022 | AM396580 |
| *B. yongensis*  | AM397023 | AM396581 |