**Table S2.** The birch ITS sequenced by the authors and used in the study.

| **Species** | **Specimen voucher, ID\*** | **ITS marker** | **NCBI GenBank accession number** |
| --- | --- | --- | --- |
| *Betula borysthenica* Klokov | KW000006422  KW000006415  (holotype) | ITS1  ITS2 | MH238479  MH014808 |
| *B. klokovii* Zaverucha | KW000006415  KW000006422  (holotype) | ITS1  ITS2 | MH238480  MH014819 |
| *B. oycowiensis* Besser | LW032763 | ITS1 | MH238476 |
| *B. pubescens* var*. sibakademica* (Baranov) Kuzeneva (≡*B. pubescens* f*. sibakademica* (Baranov) Tarieiev)\*\* | LE01041130 (type) (contains 2 different samples on 1 sheet) | ITS1  ITS2 | MH178101 (R)  MH231206 (L) |
| KW128012 | ITS1  ITS2 | MH238471  MH014819 |
| KW128024 | ITS | MH178102  MH042911 |
| 031473 | ITS1 | MH238472  MH238473 |
| LWKS031322 | ITS1  ITS2 | MH231212  MH042915 |
| *B. kotulae* Zaverucha (= *B. pendula* Roth var. *obscura* (Kotula ex Fiek) Olšavská ≡ *B. pendula* Roth f. *obscura* (Kotula ex Fiek) Tarieiev\*\* | KW006426 (holotype) | ITS1  ITS2 | MH231207  MH042917 |
| KW008349 | ITS | MH178103  MH042912 |
| KW06427 | ITS | MH178104 |
| KW128013 | ITS | MH178105  MH042913 |
| KW128014 | ITS | MH178106 |
| KW128016 | ITS | MH178107 |
| KW128018 | ITS | MH178108 |
| KW128019 | ITS1 | MH231208 |
| KW128020 | ITS1 | MH231209 |
| KW128022 | ITS | MH178109 |
| KW128023 | ITS1  ITS2 | MH231210  MH300135 |
| 031472 | ITS1 | MH238474 |
| LW032758 | ITS1 | MH238475 |
| LW006898 | ITS1  ITS2 | MH231213  MH042916 |
| LWS27022 | ITS1 | MH238478 |
| LWS27026 | ITS1 | MH238477 |
| live specimen | ITS1  ITS2 | MH231214  MH042918 |
| *B. atrata* Domin | 031470 | ITS1  ITS2 | MH231211  MH042914 |
| *B. pubescens* subsp. *carpatica* (Waldst. & Kit. ex Willd.) Asch. & Graebn. | live specimen | ITS | MH014809 |

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\*\*These sequences were used to study the taxonomy of dark-barked birches (Tarieiev et al. 2019)