**Supplementary Table 1.** Intraspecific genetic divergence of A) *Diplolepis* and B) *Periclistus*.

|  |  |  |
| --- | --- | --- |
| **A** |  |  |
| **Species** | **Intraspecific Divergence (%)** | **Standard Deviation** |
| *D. eglanteriae* Palearctic | 2.44 | 0.58 |
| *D. rosae* Group | 1.86 | 0.37 |
| *Diplolepis* sp.2 | 0.12 | 0.11 |
| *D. spinosissimae* | 1.65 | 0.40 |
| *D. nervosa* | 0.35 | 0.20 |
| *D. oregonensis* | 1.66 | 0.35 |
| *D. bicolor* | 1.46 | 0.32 |
| *D. californica* | 1.10 | 0.26 |
| *D. rosaefolii* Group | 2.48 | 0.43 |
| *D. ignota* Group | 0.45 | 0.17 |
| *D. triforma* | 0.00 | 0.00 |
| *D. spinosa* | 1.76 | 0.36 |
| *D. polita* Group | 2.41 | 0.40 |
| *D. radicum* | 1.44 | 0.22 |
| *D. eglanteriae* Nearctic | 0.00 | 0.00 |
| *D. gracilis* | 0.04 | 0.04 |
| *D. nodulosa* | 0.23 | 0.10 |
|  |  |  |
|  |  |  |
| **B** |  |  |
| **Species** | **Intraspecific Divergence (%)** | **Standard Deviation** |
| *P. brandtii* | 0.28 | 0.22 |
| *P. caninae* | 1.46 | 0.60 |
| *P. arefactus* | 0.13 | 0.14 |
| *Periclistus* sp.1 | 2.16 | 0.66 |
| *P. piceus* | 0.64 | 0.22 |
| *P. pirata* | 1.47 | 0.49 |
| *Periclistus* sp.2 | 0.30 | 0.17 |

**Supplementary Table 2.** Interspecific genetic divergence of A) *Diplolepis* and B) *Periclistus*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Species** | *D.eglanteriae* Palearctic | *D.rosae* Group | *Diplolepis* sp.2 | *D. spinosissimae* | *D. nervosa* | *D. oregonensis* | *D. bicolor* | *D. californica* | *D. rosaefolii* Group | *D. ignota* Group | *D. triforma* | *D. spinosa* | *D. polita* Group | *D. radicum* | *D. eglanteriae* Nearctic | *D. gracilis* | *D. nodulosa* |
| *D.eglanteriae* Palearctic |  | 1.6 | 1.68 | 1.65 | 1.36 | 1.64 | 1.46 | 1.81 | 1.55 | 1.60 | 1.78 | 1.77 | 1.41 | 1.85 | 1.08 | 1.60 | 1.81 |
| *D.rosae* Group | 13.68 |  | 0.97 | 0.99 | 1.43 | 1.23 | 1.27 | 1.45 | 1.11 | 1.18 | 1.43 | 1.52 | 1.21 | 1.41 | 1.63 | 1.25 | 1.41 |
| *Diplolepis* sp.2 | 14.20 | 5.93 |  | 0.89 | 1.52 | 1.40 | 1.30 | 1.60 | 1.34 | 1.21 | 1.46 | 1.58 | 1.26 | 1.53 | 1.77 | 1.21 | 1.38 |
| *D. spinosissimae* | 14.17 | 6.28 | 4.60 |  | 1.32 | 1.52 | 1.23 | 1.61 | 1.22 | 1.19 | 1.51 | 1.62 | 1.13 | 1.57 | 1.64 | 1.34 | 1.47 |
| *D. nervosa* | 11.31 | 10.94 | 11.83 | 9.94 |  | 1.67 | 1.48 | 1.64 | 1.38 | 1.48 | 1.62 | 1.72 | 1.44 | 1.71 | 1.45 | 1.56 | 1.67 |
| *D. oregonensis* | 14.33 | 10.13 | 11.36 | 12.64 | 14.28 |  | 1.46 | 1.10 | 1.34 | 1.33 | 1.13 | 1.08 | 1.46 | 1.02 | 1.66 | 1.36 | 1.15 |
| *D. bicolor* | 12.87 | 10.24 | 10.29 | 9.33 | 11.90 | 12.67 |  | 1.75 | 1.39 | 1.39 | 1.63 | 1.72 | 0.84 | 1.67 | 1.55 | 1.44 | 1.67 |
| *D. californica* | 17.20 | 11.89 | 13.05 | 13.23 | 13.79 | 8.05 | 16.43 |  | 1.50 | 1.54 | 1.06 | 0.99 | 1.67 | 0.90 | 1.73 | 1.48 | 1.17 |
| *D. rosaefolii* Group | 13.74 | 8.92 | 10.43 | 9.11 | 10.51 | 12.00 | 11.22 | 12.85 |  | 1.27 | 1.38 | 1.43 | 1.30 | 1.47 | 1.65 | 1.30 | 1.43 |
| *D. ignota* Group | 13.97 | 8.98 | 8.51 | 8.20 | 11.87 | 10.45 | 11.49 | 13.09 | 10.39 |  | 1.42 | 1.50 | 1.43 | 1.51 | 1.56 | 0.94 | 1.45 |
| *D. triforma* | 17.01 | 11.52 | 11.75 | 12.25 | 13.54 | 8.37 | 15.14 | 6.95 | 12.31 | 11.29 |  | 1.00 | 1.56 | 1.05 | 1.68 | 1.50 | 0.97 |
| *D. spinosa* | 17.03 | 13.73 | 13.12 | 14.14 | 14.69 | 8.97 | 16.34 | 7.35 | 12.85 | 12.82 | 7.10 |  | 1.69 | 0.94 | 1.71 | 1.51 | 1.11 |
| *D. polita* Group | 12.99 | 9.59 | 9.89 | 8.73 | 11.88 | 12.83 | 6.08 | 15.61 | 10.40 | 12.16 | 14.06 | 15.97 |  | 1.65 | 1.54 | 1.36 | 1.61 |
| *D. radicum* | 17.76 | 12.16 | 12.76 | 13.36 | 14.70 | 6.91 | 15.89 | 6.09 | 13.44 | 12.77 | 7.03 | 6.92 | 15.56 |  | 1.81 | 1.57 | 1.15 |
| *D. eglanteriae* Nearctic | 7.16 | 13.73 | 14.61 | 13.75 | 10.90 | 14.18 | 13.58 | 15.78 | 14.05 | 12.80 | 15.21 | 15.73 | 13.97 | 16.79 |  | 1.54 | 1.77 |
| *D. gracilis* | 13.30 | 10.09 | 9.41 | 10.17 | 13.56 | 11.60 | 11.66 | 12.57 | 10.00 | 5.76 | 12.60 | 13.51 | 11.34 | 14.31 | 13.80 |  | 1.49 |
| *D. nodulosa* | 17.55 | 11.02 | 10.44 | 11.60 | 14.15 | 8.43 | 15.23 | 7.64 | 12.07 | 11.86 | 5.99 | 7.98 | 14.51 | 7.66 | 16.71 | 12.36 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Species** | *P. brandtii* | *P. caninae* | *P. arefactus* | *Periclistus* sp.1 | *P. piceus* | *P. pirata* | *Periclistus* sp.2 |  |  |  |  |  |  |  |  |  |  |
| *P. brandtii* |  | 1.33 | 2.40 | 2.86 | 2.41 | 2.92 | 2.92 |  |  |  |  |  |  |  |  |  |  |
| *P. caninae* | 4.28 |  | 2.26 | 2.44 | 2.00 | 2.53 | 2.42 |  |  |  |  |  |  |  |  |  |  |
| *P. arefactus* | 7.68 | 7.40 |  | 2.44 | 2.20 | 1.10 | 2.40 |  |  |  |  |  |  |  |  |  |  |
| *Periclistus* sp.1 | 9.05 | 7.92 | 7.96 |  | 2.53 | 2.74 | 1.14 |  |  |  |  |  |  |  |  |  |  |
| *P. piceus* | 7.87 | 6.57 | 7.09 | 7.96 |  | 2.33 | 2.69 |  |  |  |  |  |  |  |  |  |  |
| *P. pirata* | 9.30 | 8.23 | 3.55 | 8.92 | 7.64 |  | 2.74 |  |  |  |  |  |  |  |  |  |  |
| *Periclistus* sp.2 | 9.16 | 7.84 | 7.79 | 3.67 | 8.38 | 8.86 |  |  |  |  |  |  |  |  |  |  |  |