**Table S1** Pairwise *Φ*ST estimates among *Pontania* (below diagonal) and *Euura* (above diagonal) population samples collected from six different willow species in two locations, based on mitochondrial COI gene sequence data. Willow host names are abbreviated as follows: Smyr = *S. myrsinifolia*, Slap = *S. lapponum*, Sphy = *S. phylicifolia*, Sgla = *S. glauca*, Shas = *S. hastata*, Slan = *S. lanata*, collection sites are indicated by letters in parentheses (A = Abisko, K = Kilpisjärvi). All pairwise estimates are statistically significant at the *P* < 0.05 level, except for values in parentheses = n.s.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | *Euura* |  |  |  |  |  |  |
|  |  | Smyr (A) | Smyr (K) | Slap (A) | Slap (K) | Sphy (A) | Sphy (K) | Sgla (A) | Sgla (K) | Shas (A) | Shas (K) | Slan (A) | Slan (K) |
|  | Smyr (A) | **–** | 0.667 | 1.000 | 1.000 | 0.501 | 1.000 | (–0.075) | (0.000) | (0.000) | 0.697 | (0.000) | (0.000) |
|  | Smyr (K) | 0.324 | **–** | (0.055) | (0.161) | (–0.095) | (0.103) | 0.707 | 0.707 | 0.720 | 0.686 | 0.707 | 0.707 |
|  | Slap (A) | 0.856 | (0.132) | **–** | (0.092) | (0.237) | 0.978 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
|  | Slap (K) | 0.914 | (0.178) | (–0.187) | **–** | (0.312) | 0.972 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
|  | Sphy (A) | 0.719 | (0.081) | (0.136) | (0.328) | **–** | (0.275) | 0.545 | 0.555 | 0.557 | 0.520 | 0.555 | 0.555 |
| *Pontania* | Sphy (K) | 0.974 | 0.594 | 0.874 | 0.928 | 0.569 | **–** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
|  | Sgla (A) | 0.580 | (0.156) | 0.440 | 0.534 | 0.267 | 0.732 | **–** | (–0.038) | (–0.277) | 0.400 | (–0.038) | (–0.038) |
|  | Sgla (K) | 0.738 | 0.209 | 0.338 | 0.407 | (0.251) | 0.761 | (–0.062) | **–** | (0.000) | 0.743 | (0.000) | (0.000) |
|  | Shas (A) | 0.907 | 0.615 | 0.550 | 0.649 | 0.427 | 0.801 | 0.502 | 0.433 | **–** | 0.470 | (0.000) | (0.000) |
|  | Shas (K) | 0.881 | 0.503 | 0.551 | 0.654 | 0.354 | 0.769 | 0.441 | 0.400 | (–0.093) | **–** | 0.743 | 0.743 |
|  | Slan (A) | 0.715 | 0.301 | 0.458 | 0.618 | (0.129) | 0.537 | 0.438 | 0.511 | 0.534 | 0.406 | **–** | (0.000) |
|  | Slan (K) | 0.987 | 0.616 | 0.875 | 0.931 | 0.667 | 0.940 | 0.798 | 0.802 | 0.830 | 0.804 | 0.493 | **–** |