

**Supplementary Table S5** Results of divergence times, ancestral area estimates, and ancestral state reconstruction of habitat types for each node. The table lists the mean age of the most recent common ancestor with 95% highest posterior density (HPD) intervals, the most probable ancestral areas with inferred biogeographic events, and the relative likelihood ratios for habitat types. Mean ages and 95% HPDs were calculated using fossil calibration. Time scale are in millions of years ago (Mya). Ancestral areas were inferred using three probabilistic algorithms: Statistical Dispersal-Vicariance Analysis (S-DIVA), Statistical Dispersal-Extinction-Cladogenesis (S-DEC), and Bayesian Binary MCMC (BBM). Biogeographic events are based on the combined results of these three analyses. The geographical areas used were: East Asia (A), Southeast Asia (B), South Asia (C), Central and West Asia (D), Australia (E), Africa (F), North America (G), and South America (H). Ancestral state habitat types were classified as freshwater (FW), brackish water (BW), or freshwater/brackish water (FW/BW). For node numbers, see Supplementary Figure 1.

| Internal Node | Mean age | 95% HPD     | The most probable ancestral areas |          |          |                  | Biogeographic event  | Relative likelihood ratios of ancestral state habitat type |      |       |
|---------------|----------|-------------|-----------------------------------|----------|----------|------------------|----------------------|------------------------------------------------------------|------|-------|
|               |          |             | S-DIVA                            | S-DEC    | BBM      | Combined results |                      | BW                                                         | FW   | FW/BW |
| 28            | 201.5    | 148.0–260.5 | BC (44%)                          | B (23%)  | B (34%)  | B (33%)          | Dispersal            | 0.91                                                       | 0.06 | 0.03  |
| 29            | 162.2    | 122.3–207.3 | BC (51%)                          | B (53%)  | BC (23%) | BC (33%)         | Vicariance           | 0.77                                                       | 0.14 | 0.09  |
| 30            | 153.0    | 119.4–194.7 | B (60%)                           | B (87%)  | AB (65%) | B (53%)          | Dispersal            | 0.65                                                       | 0.25 | 0.1   |
| 31            | 104.2    | 100.6–109.3 | B (96%)                           | B (65%)  | AB (53%) | B (64%)          | Dispersal            | 0.1                                                        | 0.9  | 0     |
| 32            | 60.0     | 39.1–82.2   | AB (95%)                          | AB (37%) | A (57%)  | AB (55%)         | Dispersal/Vicariance | 0.1                                                        | 0.9  | 0     |
| 33            | 37.5     | 22.8–54.3   | BF (95%)                          | BF (67%) | A (44%)  | BF (54%)         | Vicariance           | 0                                                          | 1    | 0     |
| 34            | 18.1     | 11.7–25.4   | B (91%)                           | BF (62%) | AB (75%) | B (41%)          | Intra-area radiation | 0                                                          | 1    | 0     |
| 35            | 15.7     | 9.5–22.8    | B (60%)                           | BF (50%) | AB (48%) | B (43%)          | Dispersal            | 0                                                          | 1    | 0     |
| 36            | 11.2     | 7.2–15.7    | AB (68%)                          | B (72%)  | AB (58%) | AB (51%)         | Vicariance           | 0                                                          | 1    | 0     |
| 37            | 9.4      | 5.9–13.7    | A (100%)                          | AB (85%) | A (51%)  | A (55%)          | Intra-area radiation | 0                                                          | 1    | 0     |
| 38            | 6.0      | 4.8–7.3     | A (87%)                           | AB (88%) | A (68%)  | A (55%)          | Dispersal            | 0                                                          | 1    | 0     |
| 39            | 10.1     | 5.3–15.5    | B (100%)                          | B (99%)  | B (85%)  | B (95%)          | Dispersal            | 0                                                          | 1    | 0     |
| 40            | 15.2     | 8.6–22.8    | BF (33%)                          | BF (43%) | B (85%)  | B (39%)          | Dispersal/Vicariance | 0                                                          | 1    | 0     |
| 41            | 10.8     | 5.8–16.4    | CF (38%)                          | CF (27%) | F (38%)  | CF (22%)         | Dispersal/Vicariance | 0                                                          | 1    | 0     |
| 42            | 9.9      | 4.9–15.5    | CE (100%)                         | CE (35%) | C (48%)  | CE (47%)         | Vicariance           | 0                                                          | 1    | 0     |
| 43            | 9.6      | 3.2–18.0    | B (98%)                           | B (58%)  | AB (96%) | B (53%)          | Dispersal            | 0                                                          | 1    | 0     |
| 44            | 6.8      | 2.2–13.1    | B (99%)                           | B (81%)  | AB (85%) | B (65%)          | Dispersal            | 0                                                          | 1    | 0     |
| 45            | 92.0     | 74.7–108.0  | B (100%)                          | B (100%) | B (95%)  | B (98%)          | Intra-area radiation | 0.05                                                       | 0.94 | 0.01  |
| 46            | 29.6     | 16.4–43.4   | B (100%)                          | B (100%) | B (99%)  | B (99%)          | Intra-area radiation | 0                                                          | 1    | 0     |
| 47            | 7.4      | 2.4–13.6    | B (100%)                          | B (100%) | B (99%)  | B (99%)          | Intra-area radiation | 0                                                          | 1    | 0     |
| 48            | 190.9    | 122.6–260.5 | B (98%)                           | B (61%)  | AB (42%) | B (66%)          | Intra-area radiation | 0.95                                                       | 0.05 | 0     |
| 49            | 153.1    | 89.6–218.2  | BG (38%)                          | B (57%)  | B (36%)  | B (20%)          | Dispersal/Vicariance | 0.98                                                       | 0.02 | 0     |
| 50            | 114.9    | 61.8–169.6  | GH (100%)                         | GH (19%) | B (30%)  | GH (40%)         | Vicariance           | 0.94                                                       | 0.06 | 0     |
| 51            | 34.0     | 14.1–56.4   | B (76%)                           | B (15%)  | BC (43%) | B (36%)          | Dispersal            | 1                                                          | 0    | 0     |
| 52            | 144.3    | 79.3–213.9  | B (100%)                          | B (70%)  | AB (63%) | B (68%)          | Intra-area radiation | 0.96                                                       | 0.03 | 0.01  |
| 53            | 132.3    | 67.0–202.2  | B (100%)                          | B (57%)  | AB (99%) | B (52%)          | Dispersal            | 0.97                                                       | 0.03 | 0     |