**Supplementary Table S1.** Data matrix used for the morphology-based phylogenetic analysis. Inapplicable characters coded as (-), missing characters as (?).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **0**  **1** | **0 2** | **0 3** | **0 4** | **0 5** | **0 6** | **0 7** | **0 8** | **0 9** | **1 0** | **1 1** | **1 2** | **1 3** | **1 4** | **1 5** | **1 6** | **1 7** | **1 8** | **1 9** | **2 0** | **2 1** | **2 2** | **2 3** | **2 4** | **2 5** | **2 6** | **2 7** | **2 8** | **2 9** | **3 0** | **3 1** | **3 2** | **3 3** | **3 4** | **3 5** |
| *Cercyon lateralis* | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | - | 2 | 0 | 0 | 0 | 0 | - | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| *Cetiocyon incantatus* | 0 | 1 | 0 | 1 | 0 | 0 | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | - | 0 | - | 1 | 1 | 0 | 0 | 0 |
| *Cetiocyon goliathus* | 1 | 1 | 1 | 0 | 1 | 0 | - | - | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | ? | ? | ? | 1 | 1 | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? |
| *Cetiocyon traipela* | 0 | 1 | 2 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon hanseni* | 0 | 1 | 0 | 1 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 1 | 0 | 0 | 0 |
| *Cetiocyon papuensis* | 0 | 1 | 0 | 1 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | - | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon loksai* | 0 | 1 | 1 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon riedeli* | 1 | 1 | 1 | 0 | 1 | 0 | - | - | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon hebaueri* | 1 | 1 | 1 | 0 | 1 | 0 | - | - | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon cribripunctatus* | 1 | 1 | 1 | 0 | 1 | 0 | - | - | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon paweli* | 0 | 1 | 0 | 1 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | - | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| *Cetiocyon depilis* | 0 | 1 | 0 | 1 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | - | 0 | - | 1 | 0 | 1 | 0 | 0 |
| *Cetiocyon onyx* | 0 | 1 | 2 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon augai* | 1 | 1 | 2 | 0 | 1 | 0 | - | - | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon ibiscanus* | 0 | 1 | 0 | 1 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | - | 0 | - | 0 | 0 | 0 | 0 | 0 |
| *Cetiocyon jakli* | 1 | 1 | 1 | 0 | 1 | 0 | - | - | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon mogianus* | 0 | 1 | 1 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| *Cetiocyon gemellus* | 1 | 1 | 2 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | - | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| *Cetiocyon colossus* | 1 | 1 | 1 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | - | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| *Cetiocyon hamifer* | 0 | 1 | 2 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| *Platycyon wauensis* | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | - | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| *Pelosoma eremita* | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | - | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| *Ercycodes fossus* | 0 | 0 | 0 | 0 | 1 | 0 | - | - | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| *Cercyodes kingensis* | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | - | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| *Pseudosternum maculatum* | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | - | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| *Australocyon variegatus* | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | - | 0 | - | 1 | 0 | 0 | 0 | 0 |
| *Oosternum simplex* | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 1 | 0 | 0 | 0 |

**Supplementary Table S2.** Altitudinaldistribution of *Cetiocyon* species based on their occurrence data. First 11 columns give number of collecting events / specimens per altitude examined for each species. Events and specimens from the Mt. Wilhelm survey are highlighted in bold. Altitudinal ranges of the species known from the single collecting event. are indicated by an asterisk.

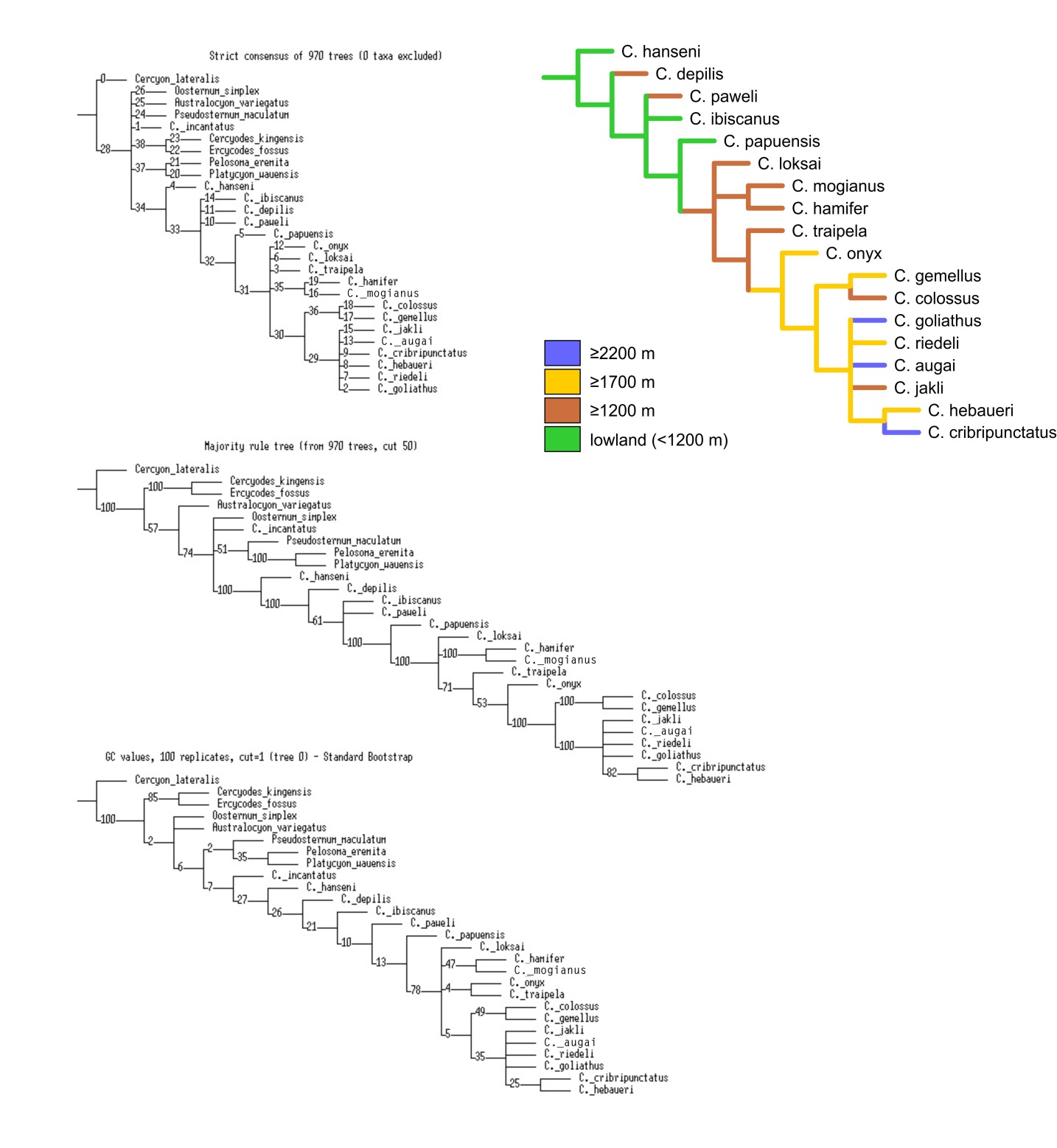
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **≤50** | **120** | **200** | **300-400** | **700** | **1100-1200** | **1400-1570** | **1700-1800** | **2200-2300** | **2700** | **2500-2800** | **Altitudinal range** | **Coded for reconstructions as** |
| *Cetiocyon hanseni* | 7/11 | **12/14** | **4/4** | 3/5 | **3/3** 2/3 | 4/111 | (1/1)\* |  |  |  |  | 0-1200 | lowland (<1200) |
| *Cetiocyon papuensis* | ?/3 |  |  |  | **1/2** |  |  |  |  |  |  | 0-700 | lowland (<1200) |
| *Cetiocyon ibiscanus* |  | **1/1** |  |  |  |  |  |  |  |  |  | 120\* | lowland (<1200) |
| *Cetiocyon depilis* |  |  |  |  |  | **3/3** |  |  |  |  |  | 1200 | ≥1200 |
| *Cetiocyon paweli* |  |  |  |  |  | **3/3** |  |  |  |  |  | 1200 | ≥1200 |
| *Cetiocyon mogianus* |  |  |  |  |  | **2/2** |  |  |  |  |  | 1200 | ≥1200 |
| *Cetiocyon loksai* |  |  |  |  |  | **9/23** | 1/2 | **3/3**  2/10 |  |  |  | 1200-1800 | ≥1200 |
| *Cetiocyon jakli* |  |  |  |  |  |  | 1/3 |  |  |  |  | 1570\* | ≥1200 |
| *Cetiocyon hamifer* |  |  |  |  |  |  | 1/2 |  |  |  |  | 1570\* | ≥1200 |
| *Cetiocyon colossus* |  |  |  |  |  |  | 1/1 |  |  |  |  | 1570\* | ≥1200 |
| *Cetiocyon traipela* |  |  |  |  |  |  | 3/2 | 2/2 |  |  |  | 1400-1800 | ≥1200 |
| *Cetiocyon hebaueri* |  |  |  |  |  |  |  | 1/2 |  |  |  | 1700-1800\* | ≥1700 |
| *Cetiocyon onyx* |  |  |  |  |  |  |  | **5/5** |  |  |  | 1700 | ≥1700 |
| *Cetiocyon gemellus* |  |  |  |  |  |  |  | **1/2** |  |  |  | 1700\* | ≥1700 |
| *Cetiocyon riedeli* |  |  |  |  |  |  |  | **5/7** | 2/2 |  |  | 1700-2300 | ≥1700 |
| *Cetiocyon augai* |  |  |  |  |  |  |  |  | **5/5** |  |  | 2200 | ≥2200 |
| *Cetiocyon cribripunctatus* |  |  |  |  |  |  |  |  | 1/5 | **23/26** |  | 2300-2700 | ≥2200 |
| *Cetiocyon goliathus* |  |  |  |  |  |  |  |  |  |  | 1/1 | 2500-2800\* | ≥2200 |

**Supplementary Table S3.** List of sequenced *Cetiocyon* specimens from Mt. Wilhelm transect, with indication of succesfully amplified gene fragments and GenBank accession numbers of Jerry-Tom *cox1* sequences used for the analyses.

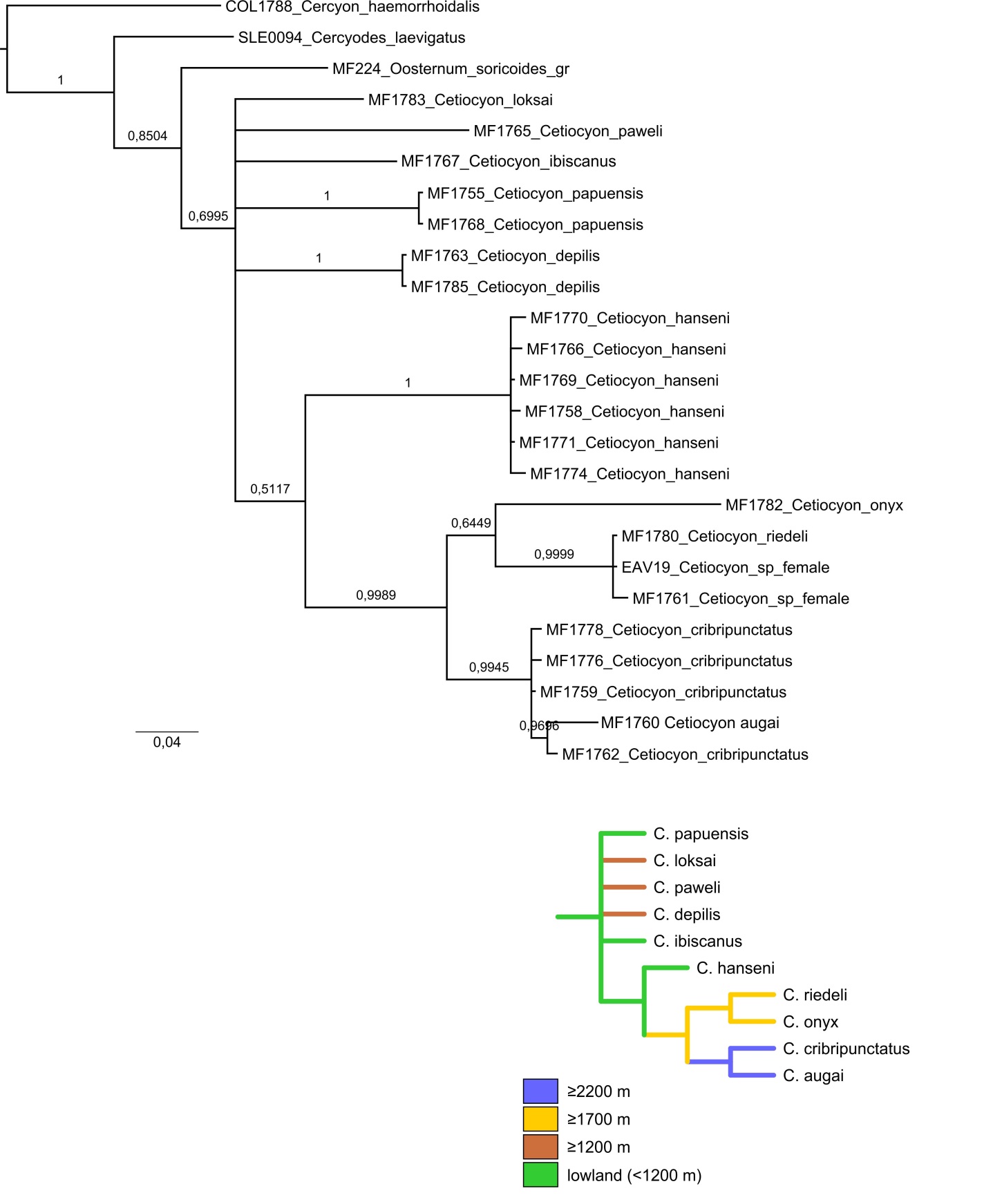
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Voucher** | **Morphological ID** | **Altitude / Vial #** | **cox1** (barcoding) | **cox1**  (sPat-sJerry) | **cox1**  (Jerry-Tom) | **cox1**  (Chy-Pat) | **GenBank**  **Accession**  (Jerry-Tom) |
| **MF1754** | female | 700 m / 16273 |  |  |  |  |  |
| **MF1755** | *C. papuensis* | 700 m / 16083 |  |  | ● |  | MH142717 |
| **MF1756** | *C. hanseni* | 120 m / 3974 |  |  |  | ● |  |
| **MF1757** | female | 120 m / 22331 |  |  |  |  |  |
| **MF1758** | *C. hanseni* | 200 m / 14369 |  |  | ● |  | MH142716 |
| **MF1759** | *C. cribripunctatus* | 2700 m / 6488 |  | ● | ● |  | MH142715 |
| **MF1760** | *C. augai* | 2200 m / 15735 |  |  | ● |  | MH142714 |
| **MF1761** | female | 1700 m / 9114 |  | ● | ● |  | MH142713 |
| **MF1762** | *C. cribripunctatus* | 2700 m / 14145 |  | ● | ● |  | MH142712 |
| **MF1763** | *C. depilis* | 1200 m / 17354 |  |  | ● |  | MH142711 |
| **MF1764** | female | 1700 m / 5645 |  |  |  |  |  |
| **MF1765** | *C. paweli* | 1200 m / 17360 |  |  | ● |  | MH142710 |
| **MF1766** | *C. hanseni* | 700 m / 16019 |  |  | ● |  | MH142709 |
| **MF1767** | *C. ibiscanus* | 700 m / 16236 |  |  | ● |  | MH142708 |
| **MF1768** | *C. papuensis* | 700 m / 16083 |  |  | ● |  | MH142707 |
| **MF1769** | *C. hanseni* | 700 m / 15664 |  |  | ● |  | MH142706 |
| **MF1770** | *C. hanseni* | 120 m / 22265 |  |  | ● |  | MH142705 |
| **MF1771** | *C. hanseni* | 120 m / 16574 |  |  | ● | ● | MH142704 |
| **MF1772** | *C. hanseni* | 120 m / 17649 |  |  |  |  |  |
| **MF1773** | *C. hanseni* | 120 m / 17658.1 |  |  |  |  |  |
| **MF1774** | *C. hanseni* | 200 m / 9663 |  |  | ● |  | MH142703 |
| **MF1775** | *C. cribripunctatus* | 2700 m / 14109 |  |  |  |  |  |
| **MF1776** | *C. cribripunctatus* | 2700 m / 5960 |  |  | ● | ● | MH142702 |
| **MF1777** | *C. cribripunctatus* | 2700 m / 14207 | ● |  |  |  |  |
| **MF1778** | *C. cribripunctatus* | 2700 m / 14340 |  |  | ● |  | MH142701 |
| **MF1779** | *C. augai* | 2200 m / 2484 |  |  |  |  |  |
| **MF1780** | *C. riedeli* | 1700 m / 5687 |  |  | ● |  | MH142700 |
| **MF1781** | *C. onyx* | 1700 m / 2419 |  |  |  |  |  |
| **MF1782** | *C. onyx* | 1700 m / 15384 |  |  | ● |  | MH142699 |
| **MF1783** | *C. loksai* | 1700 m / 5645.1 |  |  | ● |  | MH142698 |
| **MF1784** | *C. mogianus* | 1200 m / 17078 |  |  |  |  |  |
| **MF1785** | *C. depilis* | 1200 m / 17020 |  |  | ● |  | MH142697 |
| **MF1786** | *C. paweli* | 1200 m / 17327 |  |  |  |  |  |
| **MF1787** | *C. loksai* | 1200 m / 17327 | ● |  |  |  |  |
| **EAV19** | female | 1700 m / 5672 |  | ● | ● |  | MH142718 |

**Supplementary Table S****4.** Genetic divergence between sequences (in %) estimated using the maximum composite likelihood model as implemented in MEGA7.

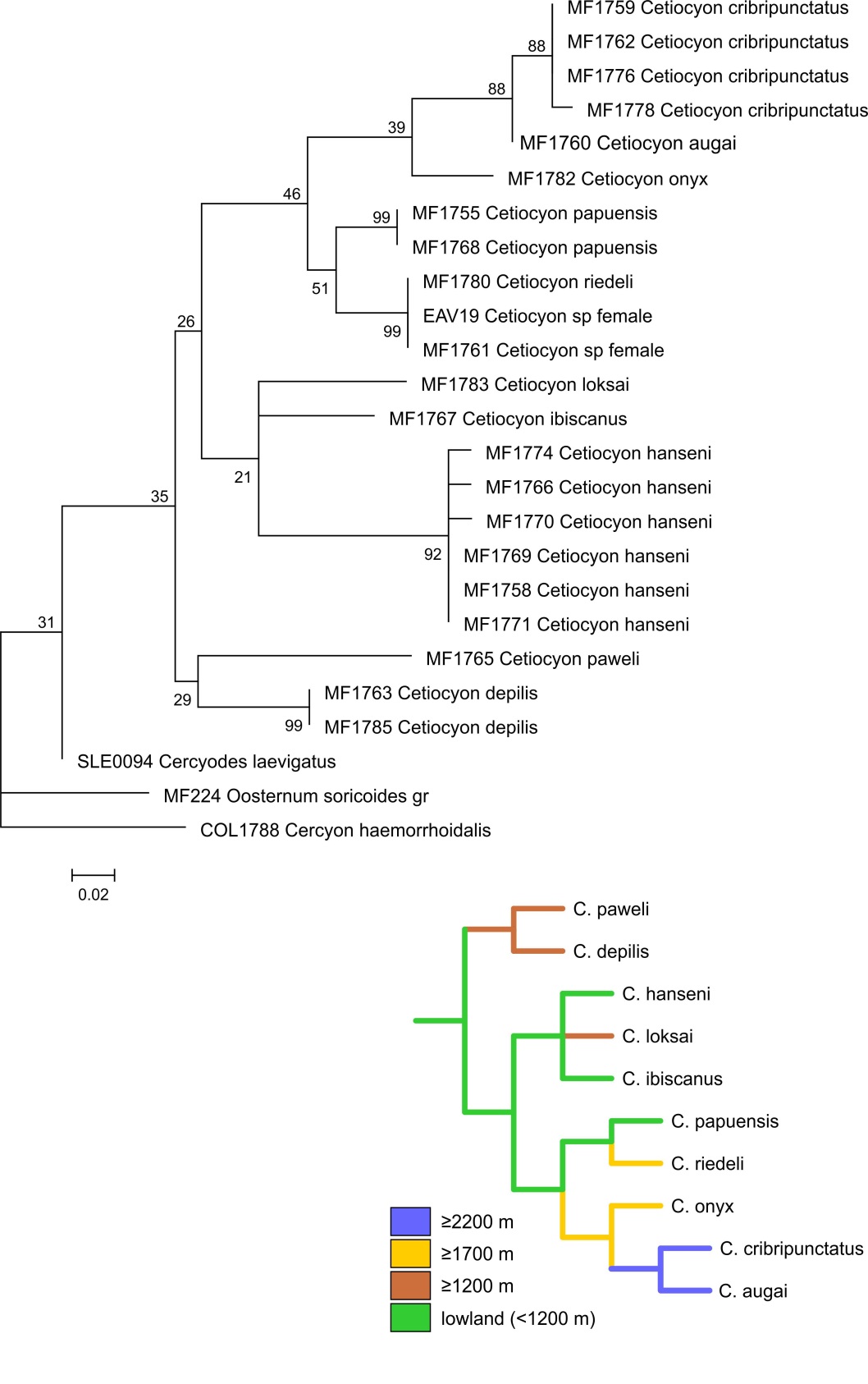
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** |
| **1** | MF1785: *C. depilis* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** | MF1763: *C. depilis* | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** | MF1765: *C. paweli* | 0.071 | 0.071 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** | MF1770: *C. hanseni* | 0.091 | 0.091 | 0.143 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | MF1766: *C. hanseni* | 0.090 | 0.090 | 0.153 | 0.017 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | MF1769: *C. hanseni* | 0.081 | 0.081 | 0.143 | 0.008 | 0.008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | MF1758: *C. hanseni* | 0.081 | 0.081 | 0.143 | 0.008 | 0.008 | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | MF1771: *C. hanseni* | 0.081 | 0.081 | 0.143 | 0.008 | 0.008 | 0.000 | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | MF1774: *C. hanseni* | 0.081 | 0.081 | 0.143 | 0.017 | 0.017 | 0.008 | 0.008 | 0.008 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | MF1767: *C. ibiscanus* | 0.070 | 0.070 | 0.088 | 0.081 | 0.081 | 0.072 | 0.072 | 0.072 | 0.072 |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | MF1783: *C. loksai* | 0.089 | 0.089 | 0.088 | 0.072 | 0.081 | 0.072 | 0.072 | 0.072 | 0.072 | 0.061 |  |  |  |  |  |  |  |  |  |  |  |
| **12** | MF1755: *C. papuensis* | 0.078 | 0.078 | 0.098 | 0.118 | 0.099 | 0.108 | 0.108 | 0.108 | 0.108 | 0.096 | 0.107 |  |  |  |  |  |  |  |  |  |  |
| **13** | MF1768: *C. papuensis* | 0.078 | 0.078 | 0.098 | 0.118 | 0.099 | 0.108 | 0.108 | 0.108 | 0.108 | 0.096 | 0.107 | 0.000 |  |  |  |  |  |  |  |  |  |
| **14** | MF1780: *C. riedeli* | 0.107 | 0.107 | 0.128 | 0.098 | 0.079 | 0.089 | 0.089 | 0.089 | 0.089 | 0.098 | 0.098 | 0.042 | 0.042 |  |  |  |  |  |  |  |  |
| **15** | EAV19: *C. riedeli* female | 0.107 | 0.107 | 0.128 | 0.098 | 0.079 | 0.089 | 0.089 | 0.089 | 0.089 | 0.098 | 0.098 | 0.042 | 0.042 | 0.000 |  |  |  |  |  |  |  |
| **16** | MF1761: *C. riedeli* female | 0.107 | 0.107 | 0.128 | 0.098 | 0.079 | 0.089 | 0.089 | 0.089 | 0.089 | 0.098 | 0.098 | 0.042 | 0.042 | 0.000 | 0.000 |  |  |  |  |  |  |
| **17** | MF1782: *C. onyx* | 0.098 | 0.098 | 0.116 | 0.099 | 0.089 | 0.099 | 0.099 | 0.099 | 0.099 | 0.098 | 0.098 | 0.086 | 0.086 | 0.060 | 0.060 | 0.060 |  |  |  |  |  |
| **18** | MF1760: *C. augai* | 0.118 | 0.118 | 0.127 | 0.089 | 0.070 | 0.079 | 0.079 | 0.079 | 0.079 | 0.079 | 0.088 | 0.069 | 0.069 | 0.061 | 0.061 | 0.061 | 0.051 |  |  |  |  |
| **19** | MF1778: *C. cribripunctatus* | 0.118 | 0.118 | 0.127 | 0.108 | 0.089 | 0.098 | 0.098 | 0.098 | 0.098 | 0.097 | 0.097 | 0.079 | 0.079 | 0.079 | 0.079 | 0.079 | 0.079 | 0.025 |  |  |  |
| **20** | MF1776: *C. cribripunctatus* | 0.108 | 0.108 | 0.118 | 0.099 | 0.080 | 0.089 | 0.089 | 0.089 | 0.089 | 0.088 | 0.088 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.017 | 0.008 |  |  |
| **21** | MF1759: *C. cribripunctatus* | 0.108 | 0.108 | 0.118 | 0.099 | 0.080 | 0.089 | 0.089 | 0.089 | 0.089 | 0.088 | 0.088 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.017 | 0.008 | 0.000 |  |
| **22** | MF1762: *C. cribripunctatus* | 0.108 | 0.108 | 0.118 | 0.099 | 0.080 | 0.089 | 0.089 | 0.089 | 0.089 | 0.088 | 0.088 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.017 | 0.008 | 0.000 | 0.000 |

****

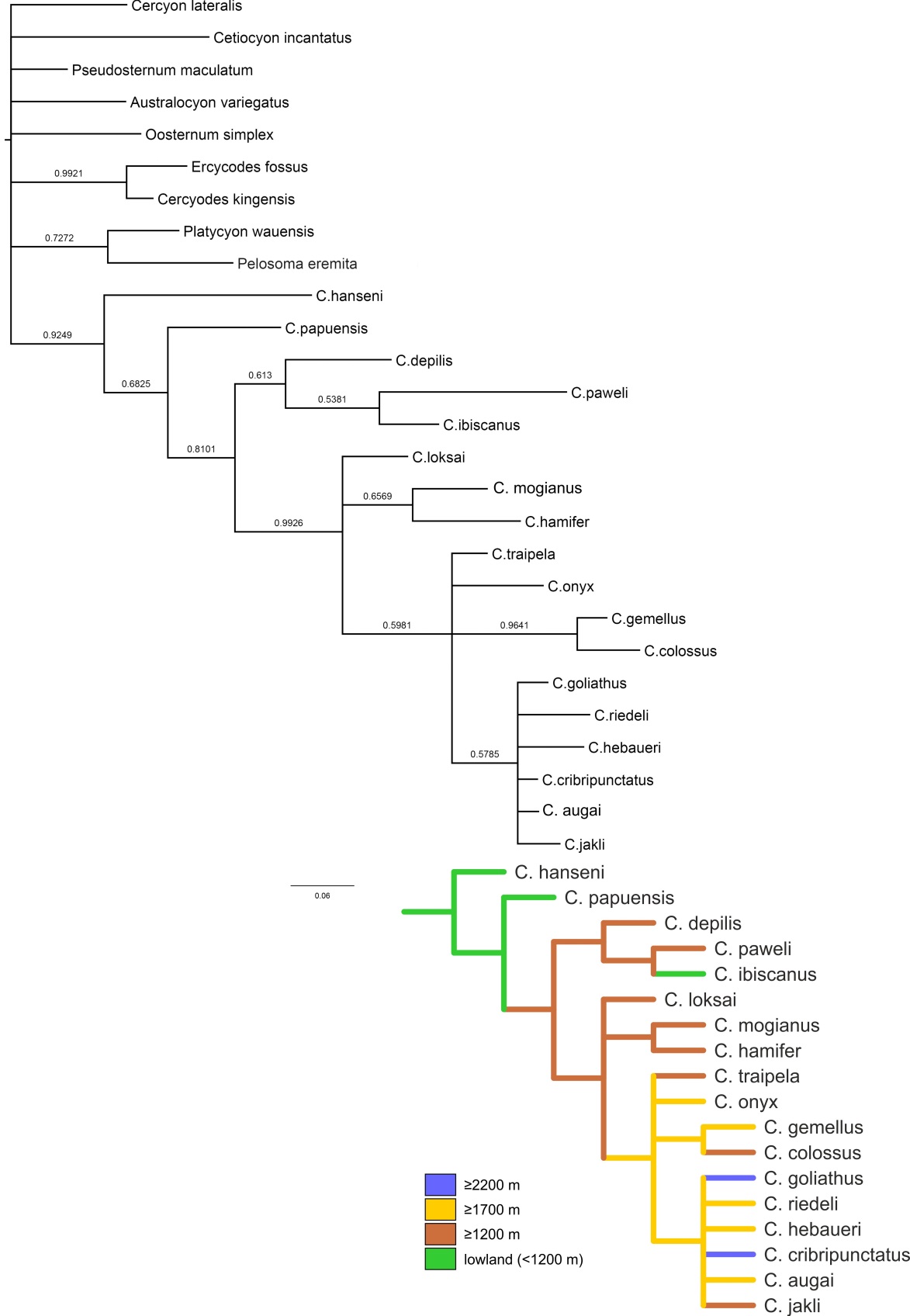
**Supplementary Figure S1.** Result of the maximum parsimony analysis of morphological data (top: strict consensus tree, middle: majority rule consensus, bottom: bootstrap tree) and altitudinal distribution mapped on the majority consensus tree.



**Supplementary Figure S2.** Result of the Bayesian phylogenetic analysis of *cox1* data and altitudinal distribution mapped on the tree.



**Supplementary Figure S3.** Result of the maximum likelihood phylogenetic analysis of *cox1* data and altitudinal distribution mapped on the tree.

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**Supplementary Figure S4.** Result of the Bayesian phylogenetic analysis of combined *cox1* and morphological data, data and altitudinal distribution mapped on the tree.