\$Genus Species carbon

```
diff
                                      lwr
                                                   p adj
                                             upr
Channa micropeltes-Boesemania microlepis
                                            -4.1678636 -6.7022192 -1.6335081 0.0000198
Chitala ornata-Boesemania microlepis
                                         -2.5562800 -5.3767325 0.2641725 0.1100397
Hemibagrus spilopterus-Boesemania microlepis -1.4051710 -3.7439471 0.9336052 0.6269717
Labeo chrysophekadion-Boesemania microlepis
                                              -3.3572370 -5.7686731 -0.9458010
0.0006569
Labiobarbus leptocheila-Boesemania microlepis -2.0760229 -4.3571663 0.2051206 0.1068493
Labiobarbus siamensis-Boesemania microlepis
                                             -1.8810818 -4.4154374 0.6532737 0.3318004
Notopterus notopterus-Boesemania microlepis
                                            -2.8978379 -5.2707153 -0.5249605 0.0052272
Pangasius larnaudii-Boesemania microlepis
                                           -1.6566903 -3.9954665 0.6820858 0.3972134
Chitala ornata-Channa micropeltes
                                        1.6115836 -1.2340595 4.4572268 0.6993668
Hemibagrus spilopterus-Channa micropeltes
                                            2.7626927 0.3935987 5.1317867 0.0096221
Labeo chrysophekadion-Channa micropeltes
                                             0.8106266 -1.6302249 3.2514781 0.9814813
Labiobarbus leptocheila-Channa micropeltes
                                            2.0918408 -0.2203763 4.4040579 0.1114666
Labiobarbus siamensis-Channa micropeltes
                                            2.2867818 -0.2755785 4.8491421 0.1225360
Notopterus notopterus-Channa micropeltes
                                            1.2700257 -1.1327393 3.6727907 0.7726499
Pangasius larnaudii-Channa micropeltes
                                          2.5111733 0.1420793 4.8802673 0.0285622
Hemibagrus spilopterus-Chitala ornata
                                          1.1511090 -1.5218296 3.8240476 0.9151973
Labeo chrysophekadion-Chitala ornata
                                         -0.8009570 -3.5376979 1.9357838 0.9918579
Labiobarbus leptocheila-Chitala ornata
                                         0.4802571 -2.1424023 3.1029165 0.9997110
Labiobarbus siamensis-Chitala ornata
                                         0.6751982 -2.1704449 3.5208413 0.9980864
Notopterus notopterus-Chitala ornata
                                        -0.3415579 -3.0443850 2.3612691 0.9999829
Pangasius larnaudii-Chitala ornata
                                       0.8995897 -1.7733489 3.5725283 0.9798635
Labeo chrysophekadion-Hemibagrus spilopterus -1.9520661 -4.1891785 0.2850464 0.1422991
Labiobarbus leptocheila-Hemibagrus spilopterus -0.6708519 -2.7668633 1.4251595 0.9853670
Labiobarbus siamensis-Hemibagrus spilopterus -0.4759109 -2.8450048 1.8931831 0.9994263
Notopterus notopterus-Hemibagrus spilopterus -1.4926670 -3.6881613 0.7028274 0.4559790
Pangasius larnaudii-Hemibagrus spilopterus
                                           -0.2515194 -2.4101120 1.9070733 0.9999999
Labiobarbus leptocheila-Labeo chrysophekadion 1.2812142 -0.8955756 3.4580039 0.6530865
Labiobarbus siamensis-Labeo chrysophekadion
                                              1.4761552 -0.9646963 3.9170067 0.6184549
Notopterus notopterus-Labeo chrysophekadion
                                             0.4593991 -1.8133405 2.7321387 0.9993995
Pangasius larnaudii-Labeo chrysophekadion
                                            1.7005467 -0.5365657 3.9376591 0.2996108
Labiobarbus siamensis-Labiobarbus leptocheila 0.1949410 -2.1172761 2.5071581 0.9999993
Notopterus notopterus-Labiobarbus leptocheila -0.8218151 -2.9558106 1.3121805 0.9545085
Pangasius larnaudii-Labiobarbus leptocheila
                                           0.4193325 -1.6766789 2.5153439 0.9994433
Notopterus notopterus-Labiobarbus siamensis
                                            -1.0167561 -3.4195211 1.3860089 0.9228217
Pangasius larnaudii-Labiobarbus siamensis
                                           0.2243915 -2.1447025 2.5934855 0.9999982
Pangasius larnaudii-Notopterus notopterus
                                           1.2411476 -0.9543467 3.4366419 0.7014382
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Nitrogen

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Channa micropeltes-Boesemania microlepis
                                           -2.92001285 -4.2432776 -1.59674806
0.0000000
Chitala ornata-Boesemania microlepis
                                        -1.90931072 -3.3819555 -0.43666592 0.0021664
Hemibagrus spilopterus-Boesemania microlepis -1.53422384 -2.7553706 -0.31307705
0.0034878
Labeo chrysophekadion-Boesemania microlepis -4.45395443 -5.7130392 -3.19486969
0.0000000
Labiobarbus leptocheila-Boesemania microlepis -4.80203453 -5.9930895 -3.61097954
0.0000000
Labiobarbus siamensis-Boesemania microlepis -4.82384012 -6.1471049 -3.50057533
0.0000000
Notopterus notopterus-Boesemania microlepis -2.81075532 -4.0497074 -1.57180323
0.0000000
Pangasius larnaudii-Boesemania microlepis
                                          -1.20744965 -2.4285964 0.01369714 0.0552639
Chitala ornata-Channa micropeltes
                                        1.01070212 -0.4750955 2.49649971 0.4552093
Hemibagrus spilopterus-Channa micropeltes
                                            1.38578900 0.1488123 2.62276566 0.0156178
Labeo chrysophekadion-Channa micropeltes
                                            -1.53394158 -2.8083850 -0.25949812
0.0063740
Labiobarbus leptocheila-Channa micropeltes
                                           -1.88202169 -3.0893012 -0.67474220 0.0000686
Labiobarbus siamensis-Channa micropeltes
                                           -1.90382727 -3.2417142 -0.56594033 0.0004400
Notopterus notopterus-Channa micropeltes
                                           0.10925752 -1.1452998 1.36381484 0.9999991
Pangasius larnaudii-Channa micropeltes
                                          1.71256320 0.4755865 2.94953986 0.0007256
Hemibagrus spilopterus-Chitala ornata
                                         0.37508688 -1.0205364 1.77071014 0.9954276
Labeo chrysophekadion-Chitala ornata
                                         -2.54464370 -3.9735801 -1.11570733 0.0000025
                                        -2.89272381 -4.2620948 -1.52335287 0.0000000
Labiobarbus leptocheila-Chitala ornata
Labiobarbus siamensis-Chitala ornata
                                        -2.91452939 -4.4003270 -1.42873180 0.0000001
Notopterus notopterus-Chitala ornata
                                       -0.90144460 -2.3126735 0.50978432 0.5445235
Pangasius larnaudii-Chitala ornata
                                       0.70186108 -0.6937622 2.09748433 0.8173592
Labeo chrysophekadion-Hemibagrus spilopterus -2.91973059 -4.0877956 -1.75166555
0.0000000
Labiobarbus leptocheila-Hemibagrus spilopterus -3.26781069 -4.3622026 -2.17341883
0.0000000
Labiobarbus siamensis-Hemibagrus spilopterus -3.28961628 -4.5265929 -2.05263962
0.0000000
Notopterus notopterus-Hemibagrus spilopterus -1.27653148 -2.4228664 -0.13019652
0.0167376
Pangasius larnaudii-Hemibagrus spilopterus
                                           0.32677419 -0.8002933 1.45384165 0.9923530
Labiobarbus leptocheila-Labeo chrysophekadion -0.34808011 -1.4846488 0.78848861
0.9890091
Labiobarbus siamensis-Labeo chrysophekadion -0.36988569 -1.6443292 0.90455778
0.9922999
Notopterus notopterus-Labeo chrysophekadion
                                             1.64319911 0.4565320 2.82986617
0.0007233
Pangasius larnaudii-Labeo chrysophekadion
                                            3.24650478 2.0784397 4.41456982 0.0000000
```

Labiobarbus siamensis-Labiobarbus leptocheila -0.02180558 -1.2290851 1.18547391 1.0000000

Notopterus notopterus-Labiobarbus leptocheila 1.99127921 0.8770547 3.10550376 0.0000022 Pangasius larnaudii-Labiobarbus leptocheila Notopterus notopterus-Labiobarbus siamensis Pangasius larnaudii-Labiobarbus siamensis Pangasius larnaudii-Notopterus notopterus

3.59458488 2.5001930 4.68897675 0.00000000 $2.01308480\ 0.7585275\ 3.26764211\ 0.0000355$ $3.61639047\ \ 2.3794138\ \ 4.85336713\ \ 0.00000000$ 1.60330567 0.4569707 2.74964063 0.0006046