**Supplementary Material Table S1**. Species data for brain mass and body mass for 164 species collated from published sources and fresh corpses

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Method** | **Nα** | **Body (g)** | **Brain (g)** | **Source** | **Analysisβ** |
| *Acanthiza pusilla* | Endocranial Volume | 1 | 6.2 | 0.49 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 6.2 | 0.45 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Acanthorhynchus tenuirostris* | Endocranial Volume | 6 | 12.8 | 0.47 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 12.8 | 0.51 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Adelomyia melanogenys* | Fixed Brain mass | 2 | 3.3 | 0.09 | Iwaniuk & Wylie 2007 |  |  |  | troc |
| *Agapornis roseicollis* | Endocranial Volume | 2 | 48.0 | 2.07 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 54.5 | 2.09 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Agelaius phoeniceus* | Fixed Brain mass | ? | 66.0 | 1.77 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 10 | 65.5 | 1.75 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Aglaiocercus kingi* | Endocranial Volume | 1 | 4.9 | 0.22 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Aglaiocercus coelestis* | Endocranial Volume | 1 | 5.7 | 0.22 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Alectoris chukar* | Endocranial Volume | 8 | 490.8 | 2.57 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 532.0 | 2.59 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Alisterus scapularis* | Fresh Brain Mass | 7 | 203.1 | 4.56 | Garamszegi et al. 2002 |  | b | c |  |
|  | Endocranial Volume | 9 | 160.4 | 4.35 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain mass | 6 | 235.0 | 5.16 | Iwaniuk & Nelson 2002 | a |  | c |  |
| *Alopochen aegyptiacus* | Endocranial Volume | 2 | 1863.0 | 6.94 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 1935.0 | 7.64 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Amazilia amabilis* | Fresh Brain Mass | 1 | 4.4 | 0.16 | This study |  |  |  | troc |
| *Amazilia decora* | Fresh Brain Mass | 3 | 4.0 | 0.18 | This study |  |  |  | troc |
| *Amazilia edward* | Fresh Brain Mass | 1 | 4.4 | 0.18 | This study |  |  |  | troc |
| *Amazilia rutila* | Fresh Brain Mass | 1 | 4.6 | 0.18 | This study |  |  |  | troc |
| *Amazilia saucerroteii* | Fresh Brain Mass | 2 | 4.3 | 0.16 | This study |  |  |  | troc |
| *Amazilia tzacatl* | Fresh Brain Mass | 2 | 5.4 | 0.17 | This study |  | b |  | troc |
|  | Endocranial Volume | 4 | 5.05 | 0.22792 | Iwaniuk & Nelson 2003 |  |  |  | troc |
|  | Endocranial Volume | 1 | 5.4 | 0.24 | Rehkamper et al. 1991 |  | b |  |  |
| *Anas carolinensis* | Fixed Brain mass | ? | 305.0 | 1.12 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 10 | 321.0 | 2.72 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Anas castanea* | Endocranial Volume | 8 | 601.0 | 3.86 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 625.0 | 4.45 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Anas platyrhynchos* | Endocranial Volume | 10 | 1110.0 | 5.64 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain mass | 8 | 1092.6 | 6.20 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Fresh Brain Mass | 7 | 1252.1 | 5.82 | Garamszegi et al. 2002 |  | b | c |  |
| *Anthochaera carunculata* | Endocranial Volume | 10 | 108.5 | 2.28 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 135.0 | 2.32 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Anthracothorax dominicus* | Endocranial Volume | 4 | 5.95 | 0.23828 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Anthracothorax prevostii* | Fresh Brain Mass | 3 | 7.3 | 0.23 | This study |  |  |  | troc |
| *Aquila audax* | Endocranial Volume | 7 | 3350.0 | 16.82 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 3500.0 | 16.57 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Aquila chrysaetus* | Fixed Brain mass | ? | 3290.0 | 15.60 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 33 | 3991.5 | 17.81 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Archilochus colubris* | Endocranial Volume | 3 | 3.1425 | 0.1554 | Iwaniuk & Nelson 2003 |  |  |  | troc |
|  | Fresh Brain Mass | 2 | 2.6 | 0.12 | This study |  |  |  | troc |
| *Ardea herodias* | Fixed Brain mass | ? | 1978.0 | 9.53 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 6 | 1944.5 | 9.28 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Ardenna grisea* | Endocranial Volume | 2 | 574.0 | 5.34 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 268.0 | 3.01 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Ardenna tenuirostris* | Endocranial Volume | 19 | 570.4 | 4.63 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 17 | 543.0 | 4.52 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Arremonops conirostris* | Endocranial Volume | ? | 37.3 | 1.34 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 6 | 41.7 | 1.02 | This study |  | b |  |  |
| *Asio otus* | Fresh Brain Mass | 70 | 284.3 | 5.73 | Garamszegi et al. 2002 |  | b | c |  |
|  | Fixed Brain mass | ? | 250.0 | 5.51 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Endocranial Volume | 12 | 214.7 | 5.50 | Iwaniuk & Nelson 2002 | a | b |  |  |
| *Athene cunicularia* | Fixed Brain mass | ? | 120.0 | 3.00 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 6 | 152.8 | 3.92 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Attila spadiceus* | Endocranial Volume | ? | 33.2 | 1.22 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 40.8 | 1.02 | This study |  | b |  |  |
| *Automolus ochrolaemus* | Endocranial Volume | ? | 40.2 | 1.18 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 38.8 | 1.20 | This study |  | b |  |  |
| *Balearica pannivens* | Fixed Brain mass | 2 | 4448.0 | 13.20 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 1 | 3590.0 | 12.43 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Botaurus lentiginosus* | Fixed Brain mass | ? | 404.0 | 4.78 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 2 | 741.6 | 4.45 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Brotogeris jugularis* | Endocranial Volume | 10 | 63.3 | 2.12 | Iwaniuk et al. 2005 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 66.8 | 2.14 | This study |  | b |  |  |
| *Buteo jamaicensis* | Endocranial Volume | 27 | 1053.9 | 9.51 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 1029.0 | 10.03 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Cacatua galerita* | Endocranial Volume | 10 | 750.0 | 14.19 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 7 | 900.0 | 15.16 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Cacatua roseicapillus* | Endocranial Volume | 10 | 351.0 | 6.58 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 7 | 320.0 | 7.06 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Calidris minutilla* | Endocranial Volume | 2 | 23.2 | 0.57 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 29.0 | 0.49 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Calypte anna* | Fixed Brain mass | 1 | 3.7 γ | 0.19 | Iwaniuk & Wylie 2007 |  |  |  | troc |
| *Campylopterus largipennis* | Endocranial Volume | 4 | 8.475 | 0.32116 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Campylopterus hemileucurus* | Fresh Brain Mass | 3 | 11.0 | 0.29 | This study |  |  |  | troc |
| *Carduelis carduelis* | Fresh Brain Mass | 21 | 15.0 | 0.59 | Garamszegi et al. 2002 |  | b |  |  |
|  | Endocranial Volume | ? | 15.0 | 0.59 | Sol et al. 2010 |  | b |  |  |
| *Carduelis spinus* | Fresh Brain Mass | 11 | 12.1 | 0.56 | Garamszegi et al. 2002 |  | b |  |  |
|  | Endocranial Volume | ? | 14.6 | 0.59 | Sol et al. 2010 |  | b |  |  |
| *Ceratopipra mentalis* | Fixed Brain mass | 6 | 13.9 | 0.49 | Lindsay et al. 2015 | a |  | c |  |
|  | Endocranial Volume | ? | 15.2 | 0.61 | Sol et al. 2010 | a | b |  |  |
|  | Fresh Brain Mass | 4 | 14.4 | 0.50 | This study |  | b | c |  |
| *Charadrius vociferus* | Endocranial Volume | 11 | 85.5 | 1.16 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 100.0 | 1.04 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Chenonetta jubata* | Endocranial Volume | 10 | 775.0 | 4.26 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 3 | 870.0 | 4.11 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Chlorospingus ophthalmicus* | Endocranial Volume | ? | 19.0 | 1.02 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 23.2 | 0.80 | This study |  | b |  |  |
| *Chlorostilbon ricordii* | Endocranial Volume | 4 | 3.445 | 0.13468 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Chlorostilbon canivetii* | Fresh Brain Mass | 1 | 2.2 | 0.10 | This study |  |  |  | troc |
| *Chrysococcyx lucidus* | Endocranial Volume | 9 | 23.5 | 0.71 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 23.2 | 0.68 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Coereba flaveola* | Endocranial Volume | ? | 8.5 | 0.46 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 8.7 | 0.49 | This study |  | b |  |  |
| *Colibri coruscans* | Endocranial Volume | 1 | 6.7 | 0.24 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Columba leucomela* | Endocranial Volume | 2 | 389.9 | 2.33 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 |  | 2.36 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Cormobates leucophaea* | Endocranial Volume | 7 | 22.4 | 0.84 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 22.6 | 0.81 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Corvus corax* | Fresh Brain Mass | 2 | 1405.0 | 15.31 | Garamszegi et al. 2002 |  | b | c |  |
|  | Fixed Brain mass | ? | 1175.0 | 14.99 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Endocranial Volume | 10 | 1051.9 | 14.97 | Iwaniuk & Nelson 2002 | a | b |  |  |
| *Corvus brachyrhynchos* | Endocranial Volume | 10 | 438.5 | 7.43 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 337.0 | 9.30 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Corvus mellori* | Fixed Brain mass | 3 | 363.0 | 10.53 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 1 | 300.0 | 8.81 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Coturnix chinensis* | Endocranial Volume | 2 | 28.8 | 0.55 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 31.4 | 0.50 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Dacelo novaeguineae* | Endocranial Volume | 10 | 272.5 | 4.42 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 5 | 305.0 | 4.69 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Dives dives* | Endocranial Volume | ? | 96.2 | 2.28 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 101.2 | 2.18 | This study |  | b |  |  |
| *Doryfera ludoviciae* | Fixed Brain mass | 1 | 5.4 | 0.14 | Iwaniuk & Wylie 2007 | a |  |  | troc |
|  | Endocranial Volume | 1 | 7.0 | 0.25 | Rehkamper et al. 1991 | a |  |  |  |
| *Dromaius novaehollandiae* | Endocranial Volume | 4 | 31160.0 | 29.92 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 40500.0 | 26.55 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Elvira chionura* | Fresh Brain Mass | 2 | 3.6 | 0.15 | This study |  |  |  | troc |
| *Eopsaltria australis* | Fixed Brain mass | 1 |  | 0.87 | Iwaniuk & Wylie 2007 | a |  |  |  |
|  | Endocranial Volume | ? | 19.6 | 0.89 | Sol et al. 2010 | a |  |  |  |
| *Erythrura gouldiae* | Fixed Brain mass | 4 |  | 0.49 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 2 |  | 0.50 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Eudyptula minor* | Endocranial Volume | 6 | 631.9 | 7.54 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 5 | 1105.0 | 7.95 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Eugenes spectabilis* | Fixed Brain mass | 1 | 8.8 δ | 0.20 | Iwaniuk & Wylie 2007 |  |  | c | troc |
|  | Fresh Brain Mass | 1 | 8.2 | 0.28 | This study |  |  | c | troc |
| *Eulampis holosericeus* | Endocranial Volume | 4 | 5.8 | 0.24864 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Eulampis jugularis* | Endocranial Volume | 4 | 9.533333333 | 0.33152 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Eutoxeres condamini* | Fixed Brain mass | 2 | 8.4 | 0.26 | Iwaniuk & Wylie 2007 |  |  |  | troc |
| *Eutoxeres aquila* | Fresh Brain Mass | 2 | 11.0 | 0.28 | This study |  |  |  | troc |
| *Falco longipennis* | Endocranial Volume | 10 | 226.1 | 3.47 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 253.0 | 3.37 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Falco peregrinus* | Endocranial Volume | 7 | 736.1 | 6.42 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain Mass | 1 | 781.0 | 6.41 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Fresh Brain Mass | 1 | 361.8 | 5.90 | This study |  | b | c |  |
| *Falco sparverius* | Endocranial Volume | 23 | 92.0 | 2.58 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 112.0 | 2.51 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Florisuga mellivora* | Endocranial Volume | 4 | 7.1 | 0.26936 | Iwaniuk & Nelson 2003 |  |  |  | troc |
|  | Fresh Brain Mass | 4 | 6.8 | 0.22 | This study |  |  |  | troc |
| *Formicarius analis* | Endocranial Volume | ? | 54.2 | 1.35 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 65.1 | 1.44 | This study |  | b |  |  |
| *Glaucis hirsutus* | Endocranial Volume | 4 | 6.85 | 0.259 | Iwaniuk & Nelson 2003 |  |  |  | troc |
|  | Fixed Brain mass | 1 | 6.5 | 0.13 | Iwaniuk & Wylie 2007 | a |  |  | troc |
|  | Endocranial Volume | 3 | 6.8 | 0.23 | Rehkamper et al. 1991 | a |  |  |  |
| *Glossopsitta concinna* | Endocranial Volume | 8 | 59.2 | 2.96 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 5 | 64.0 | 2.86 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Glossopsitta porphyrocephala* | Endocranial Volume | 9 | 45.7 | 1.96 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 3 | 43.8 | 1.97 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Glyphorhynchus spirurus* | Endocranial Volume | ? | 14.8 | 0.64 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 4 | 15.3 | 0.55 | This study |  | b |  |  |
| *Gymnorhina tibicen* | Endocranial Volume | 10 | 345.0 | 4.82 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 7 | 310.0 | 5.34 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Heliodoxa jacula* | Fresh Brain Mass | 3 | 8.3 | 0.25 | This study |  |  |  | troc |
| *Heliothryx barroti* | Endocranial Volume | 1 | 5.55 | 0.24 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Helmitheros vermivorum* | Endocranial Volume | ? | 14.2 | 0.61 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 11.5 | 0.84 | This study |  | b |  |  |
| *Henicorhina leucosticta* | Endocranial Volume | ? | 13.9 | 0.81 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 16.1 | 0.73 | This study |  | b |  |  |
| *Hirundo rustica* | Fresh Brain Mass | 27 | 17.5 | 0.58 | Garamszegi et al. 2002 |  | b | c |  |
|  | Fixed Brain mass | ? | 18.5 | 0.55 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Endocranial Volume | 2 | 16.0 | 0.59 | Iwaniuk & Nelson 2002 | a | b |  |  |
| *Klais guimeti* | Endocranial Volume | 1 | 3.5 | 0.17 | Rehkamper et al. 1991 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 3.0 | 0.11 | This study |  | b |  | troc |
| *Lagopus lagopus* | Fresh Brain Mass | 6 | 542.1 | 2.45 | Garamszegi et al. 2002 |  | b | c |  |
|  | Endocranial Volume | 9 | 459.6 | 2.47 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain mass | 1 | 542.0 | 2.38 | Iwaniuk & Nelson 2002 | a |  | c |  |
| *Lampornis amethystinus* | Endocranial Volume | 1 | 5.2 | 0.2 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Lanius collurio* | Fresh Brain Mass | 3 | 28.5 | 1.00 | Garamszegi et al. 2002 |  | b |  |  |
|  | Endocranial Volume | ? | 29.9 | 0.99 | Sol et al. 2010 |  | b |  |  |
| *Larus novaehollandiae* | Endocranial Volume | 9 | 328.7 | 3.23 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 188.0 | 3.14 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Lepidothrix coronata* | Fixed Brain mass | 3 | 9.0 | 0.38 | Lindsay et al. 2015 |  |  | c |  |
|  | Fresh Brain Mass | 2 | 9.9 | 0.40 | This study |  |  | c |  |
| *Limnodromus griseus* | Endocranial Volume | 1 | 145.0 | 1.40 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 90.0 | 1.16 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Lonchura malacca* | Fresh Brain Mass | 2 | 10.3 | 0.40 | Garamszegi et al. 2002 |  | b |  |  |
|  | Endocranial Volume | ? | 12.6 | 0.62 | Sol et al. 2010 |  | b |  |  |
| *Manacus candei* | Fixed Brain mass | 3 | 20.3 | 0.60 | Lindsay et al. 2015 | a |  | c |  |
|  | Endocranial Volume | ? | 17.6 | 0.59 | Sol et al. 2010 | a | b |  |  |
|  | Fresh Brain Mass | 2 | 19.1 | 0.46 | This study |  | b | c |  |
| *Manacus vitellinus* | Fixed Brain mass | 3 | 18.0 | 0.56 | Lindsay et al. 2015 | a |  |  |  |
|  | Endocranial Volume | ? | 18.2 | 0.64 | Sol et al. 2010 | a |  |  |  |
| *Manorina melanocephala* | Endocranial Volume | 7 | 60.9 | 1.98 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 62.0 | 1.98 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Manorina melanophrys* | Endocranial Volume | 10 | 25.5 | 1.18 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 |  | 1.08 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Melithreptus lunatus* | Endocranial Volume | 4 | 14.7 | 0.61 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 14.7 | 0.67 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Mellisuga minima* | Endocranial Volume | 1 | 2.2 | 0.13 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Melopsittacus undulatus* | Fixed Brain mass | 31 | 32.0 | 1.52 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 2 | 29.0 | 1.22 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Menura novaehollandiae* | Fixed Brain mass | 1 |  | 10.53 | Iwaniuk & Wylie 2007 | a |  |  |  |
|  | Endocranial Volume | ? | 644.4 | 11.11 | Sol et al. 2010 | a |  |  |  |
| *Mergus serrator* | Fresh Brain Mass | 3 | 1092.0 | 5.50 | Garamszegi et al. 2002 |  | b | c |  |
|  | Endocranial Volume | 7 | 1021.5 | 5.03 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain mass | 1 | 770.0 | 5.29 | Iwaniuk & Nelson 2002 | a |  | c |  |
| *Mionectes oleagineus* | Fixed Brain mass | 4 | 10.5 | 0.36 | Lindsay et al. 2015 |  |  | c |  |
|  | Fresh Brain Mass | 3 | 11.8 | 0.45 | This study |  |  | c |  |
| *Molothrus ater* | Fixed Brain mass | ? | 66.0 | 2.69 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 10 | 41.7 | 1.19 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Neochmia temporalis* | Endocranial Volume | 3 | 10.7 | 0.56 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 10.9 | 0.48 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Neophema pulchella* | Endocranial Volume | 2 | 30.0 | 1.48 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 38.0 | 1.35 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Neopsephotus bourkii* | Endocranial Volume | 8 | 44.0 | 1.18 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 27.0 | 1.26 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Ninox novaeeselandiae* | Endocranial Volume | 10 | 231.4 | 5.86 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 3 | 307.0 | 5.85 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Nycticorax caledonicus* | Endocranial Volume | 9 | 745.3 | 5.69 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 912.0 | 6.63 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Nymphicus hollandicus* | Endocranial Volume | 7 | 83.0 | 2.56 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 6 | 50.9 | 2.37 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Ocyphaps lophotes* | Fixed Brain mass | ? | 148.0 | 1.72 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 10 | 205.0 | 1.76 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Onychorhynchus coronatus* | Endocranial Volume | ? | 14.0 | 0.49 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 22.6 | 0.30 | This study |  | b |  |  |
| *Oreothlypis peregrina* | Endocranial Volume | ? | 9.5 | 0.45 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 9.4 | 0.39 | This study |  | b |  |  |
| *Orthorhyncus cristatus* | Endocranial Volume | 4 | 3.0 | 0.14504 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Panterpe insignis* | Fresh Brain Mass | 2 | 7.5 | 0.24 | This study |  |  |  | troc |
| *Pardalotus punctatus* | Fixed Brain mass | 1 |  | 0.42 | Iwaniuk & Wylie 2007 | a |  |  |  |
|  | Endocranial Volume | ? | 9.2 | 0.41 | Sol et al. 2010 | a |  |  |  |
| *Passer domesticus* | Fresh Brain Mass | 50 | 28.5 | 0.92 | Garamszegi et al. 2002 |  | b | c |  |
|  | Fixed Brain mass | ? | 23.5 | 1.03 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Endocranial Volume | 3 | 27.7 | 0.95 | Iwaniuk & Nelson 2002 | a | b |  |  |
| *Patagona gigas* | Fixed Brain mass | 1 | 17.4 | 0.41 | Iwaniuk & Wylie 2007 |  |  |  | troc |
| *Pelecanus conspicillatus* | Endocranial Volume | 6 | 5500.0 | 25.78 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 4900.0 | 23.31 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Petroica multicolor* | Endocranial Volume | 3 | 13.8 | 0.50 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 9.0 | 0.49 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Phaeochroa cuvierii* | Fresh Brain Mass | 1 | 8.5 | 0.28 | This study |  |  |  | troc |
| *Phaethornis superciliosus* | Endocranial Volume | 4 | 5.75 | 0.26936 | Iwaniuk & Nelson 2003 |  |  |  | troc |
|  | Endocranial Volume | 1 | 7.7 | 0.27 | Rehkamper et al. 1991 |  | b |  |  |
| *Phaethornis guy* | Fresh Brain Mass | 3 | 6.0 | 0.19 | This study |  |  |  | troc |
| *Phaethornis longirostris* | Fresh Brain Mass | 3 | 5.9 | 0.20 | This study |  | b |  | troc |
| *Phaethornis striigularis* | Fresh Brain Mass | 1 | 2.3 | 0.11 | This study |  |  |  | troc |
| *Pica pica* | Fresh Brain Mass | 30 | 206.1 | 5.34 | Garamszegi et al. 2002 |  | b | c |  |
|  | Fixed Brain mass | ? | 220.0 | 5.58 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Endocranial Volume | 10 | 188.1 | 4.84 | Iwaniuk & Nelson 2002 | a | b |  |  |
| *Pionus menstruus* | Endocranial Volume | 1 | 247.0 | 5.91 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 325.0 | 5.47 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Pitangus sulphuratus* | Endocranial Volume | ? | 70.2 | 1.32 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 67.0 | 1.50 | This study |  | b |  |  |
| *Platycercus elegans* | Endocranial Volume | 9 | 128.6 | 3.83 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 8 | 116.0 | 3.93 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Platycercus eximius* | Endocranial Volume | 10 | 104.0 | 2.95 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 6 | 110.0 | 3.35 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *podargus strigoides* | Endocranial Volume | 10 | 387.3 | 5.03 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 5 | 350.0 | 5.33 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Poephila acuticauda* | Fixed Brain mass | 7 | 16.1 | 0.49 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 4 | 10.9 | 0.53 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Polytelis alexandrae* | Endocranial Volume | 4 | 73.0 | 2.63 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 76.0 | 3.17 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Polytelis swanisonii* | Endocranial Volume | 6 | 142.6 | 3.58 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 2 | 149.0 | 3.27 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Psittacula krameri* | Fixed Brain mass | 4 | 134.2 | 4.11 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | 1 | 140.0 | 3.52 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Quiscalus quiscula* | Endocranial Volume | 10 | 110.2 | 2.68 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 82.0 | 2.92 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Quiscalus mexicanus* | Endocranial Volume | ? | 168.7 | 3.07 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 241.9 | 3.24 | This study |  | b |  |  |
| *Rhea americana* | Endocranial Volume | 2 | 23000.0 | 19.56 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 25000.0 | 19.92 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Saltator maximus* | Endocranial Volume | ? | 46.6 | 1.44 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 55.1 | 1.45 | This study |  | b |  |  |
| *Seiurus aurocapillus* | Endocranial Volume | ? | 22.1 | 0.73 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 16.2 | 0.69 | This study |  | b |  |  |
| *Selasphorus rufus* | Endocranial Volume | 3 | 3.5 | 0.16576 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Selasphorus flammula* | Fresh Brain Mass | 6 | 2.5 | 0.10 | This study |  |  |  | troc |
| *Sephanoides sephanoides* | Fixed Brain mass | 2 | 5.7 | 0.13 | Iwaniuk & Wylie 2007 |  |  |  | troc |
| *Setophaga petechia* | Endocranial Volume | ? | 9.8 | 0.54 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 9.9 | 0.42 | This study |  | b |  |  |
| *Strepera versicolor* | Endocranial Volume | 5 | 353.0 | 6.18 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 300.0 | 4.82 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Tachyphonus delattrii* | Endocranial Volume | ? | 16.8 | 0.77 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 19.6 | 0.67 | This study |  | b |  |  |
| *Tadorna tadornoides* | Endocranial Volume | 5 | 1290.0 | 5.75 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 1290.0 | 6.84 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Taeniopygia guttata* | Fixed Brain mass | 1 | 15.0 | 0.34 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Endocranial Volume | ? | 12.0 | 0.46 | Sol et al. 2010 | a |  |  |  |
| *Taeniopygia bichenovii* | Fixed Brain mass | 1 |  | 0.42 | Iwaniuk & Wylie 2007 | a |  |  |  |
|  | Endocranial Volume | ? | 10.5 | 0.41 | Sol et al. 2010 | a |  |  |  |
| *Thalassarche melanophris* | Endocranial Volume | 4 | 3564.0 | 15.54 | Iwaniuk & Nelson 2002 | a |  |  |  |
|  | Fixed Brain mass | 1 | 3564.0 | 14.64 | Iwaniuk & Nelson 2002 | a |  |  |  |
| *Thalurania colombica* | Endocranial Volume | 4 | 4.1 | 0.2072 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Thalurania furcata* | Fixed Brain mass | 1 | 4.7 | 0.12 | Iwaniuk & Wylie 2007 |  |  | c | troc |
|  | Fresh Brain Mass | 5 | 4.6 | 0.15 | This study |  |  | c | troc |
| *Thraupis episcopus* | Endocranial Volume | ? | 31.1 | 1.15 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 1 | 26.8 | 0.88 | This study |  | b |  |  |
| *Threnetes ruckeri* | Endocranial Volume | 4 | 5.45 | 0.27972 | Iwaniuk & Nelson 2003 |  |  |  | troc |
|  | Fresh Brain Mass | 5 | 6.0 | 0.19 | This study |  |  |  | troc |
| *Todirostrum cinereum* | Endocranial Volume | ? | 6.4 | 0.32 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 3 | 6.0 | 0.33 | This study |  | b |  |  |
| *Trichoglossus haematodus* | Fresh Brain Mass | 7 | 114.4 | 3.51 | Garamszegi et al. 2002 |  | b | c |  |
|  | Endocranial Volume | 9 | 116.0 | 3.72 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain mass | 4 | 122.0 | 4.23 | Iwaniuk & Nelson 2002 | a |  | c |  |
| *Trochilus polytmus* | Endocranial Volume | 4 | 4.8 | 0.19684 | Iwaniuk & Nelson 2003 |  |  |  | troc |
| *Turdus merula* | Fresh Brain Mass | 55 | 98.2 | 1.92 | Garamszegi et al. 2002 |  | b | c |  |
|  | Endocranial Volume | 5 | 81.4 | 1.89 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain mass | 1 | 87.8 | 1.98 | Iwaniuk & Nelson 2002 | a |  | c |  |
| *Tyto alba* | Endocranial Volume | 10 | 355.0 | 6.71 | Iwaniuk & Nelson 2002 | a | b |  |  |
|  | Fixed Brain mass | 1 | 523.5 | 7.40 | Iwaniuk & Nelson 2002 | a |  | c |  |
|  | Fresh Brain Mass | 1 | 294.2 | 5.10 | This study |  | b | c |  |
| *Volatinia jacarina* | Endocranial Volume | ? | 12.5 | 0.51 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 9.5 | 0.50 | This study |  | b |  |  |
| *Xenops minutus* | Endocranial Volume | ? | 11.7 | 0.51 | Sol et al. 2010 |  | b |  |  |
|  | Fresh Brain Mass | 2 | 12.0 | 0.42 | This study |   | b |   |   |

α) ? = Number of individuals measured not reported in the source

β) Data used for the following comparisons: a- Endocranial vs Fixed; b- Endocranial vs Fresh; c- Fixed vs Fresh; troc- Within hummingbirds

γ) Average body mass estimated from museum individuals (four males and four females)

δ) Average body mass estimated from museum individuals from five females (individuals with known sex)