

Supplementary Material 1. Brain volume and body mass for the 100 New World parrot species for which data was available. Brain volume was taken from the literature (Iwaniuk et al. 2005) and from measurements made from non-fractured adult specimens from skeleton collections. Body masses were collected from the literature (Terborgh et al. 1990; Rodriguez-Mahecha & Hernandez-Camacho 2002; Dunning 1993; Iwaniuk 2003; Silva 1993; Pereira et al. 2004; Iwaniuk et al. 2005) and from labels in museum collections (Berkeley, Carnegie, Field and Smithsonian Museums).

| Species | Brain Vol | n | Body mass | n |
|-----------------------------------|------------------|----------|------------------|----------|
| <i>Amazona aestiva</i> | 7.69 | 4 | 395.72 | 8 |
| <i>Amazona agilis</i> | 5.32 | 1 | 109.50 | r* |
| <i>Amazona albifrons</i> | 5.73 | 8 | 190.13 | 35 |
| <i>Amazona amazonica</i> | 8.63 | 15 | 330.48 | 8 |
| <i>Amazona autumnalis</i> | 8.13 | 5 | 406.98 | 35 |
| <i>Amazona barbadensis</i> | 7.40 | 1 | 203.10 | 1 |
| <i>Amazona brasiliensis</i> | 7.42 | 3 | 441.90 | r* |
| <i>Amazona dufresniana</i> | 9.33 | 1 | 314.50 | 1 |
| <i>Amazona farinosa</i> | 10.21 | 12 | 678.61 | 15 |
| <i>Amazona festiva</i> | 7.86 | 3 | 358.83 | 2 |
| <i>Amazona finschi</i> | 6.89 | 1 | 279.23 | 12 |
| <i>Amazona guildingii</i> | 9.08 | 1 | 504.80 | 1 |
| <i>Amazona leucocephala</i> | 5.63 | 8 | 239.93 | 5 |
| <i>Amazona mercenaria</i> | 7.48 | 2 | 340.00 | 2 |
| <i>Amazona ochrocephala</i> | 9.33 | 20 | 432.16 | 27 |
| <i>Amazona pretrei</i> | 5.72 | 3 | 303.40 | r* |
| <i>Amazona rhodocorytha</i> | 8.08 | 6 | 314.50 | 2 |
| <i>Amazona tucumana</i> | 6.43 | 2 | 199.75 | 2 |
| <i>Amazona ventralis</i> | 5.97 | 5 | 256.90 | 6 |
| <i>Amazona vinacea</i> | 7.76 | 4 | 299.86 | 10 |
| <i>Amazona viridigenalis</i> | 6.89 | 6 | 322.33 | 11 |
| <i>Amazona xanthops</i> | 6.83 | 2 | 164.90 | r* |
| <i>Anodorhynchus hyacinthinus</i> | 24.97 | 12 | 1405.00 | 9 |
| <i>Anodorhynchus leari</i> | 18.43 | 2 | 940.00 | 2 |
| <i>Ara ambiguus</i> | 17.50 | 1 | 1285.63 | 10 |
| <i>Ara ararauna</i> | 17.90 | 16 | 1020.60 | 14 |
| <i>Ara chloropterus</i> | 22.17 | 7 | 1008.57 | 11 |
| <i>Ara macao</i> | 19.14 | 15 | 915.30 | 22 |
| <i>Ara militaris</i> | 18.83 | 4 | 820.83 | 12 |
| <i>Ara rubrogenys</i> | 12.12 | 4 | 442.75 | 8 |
| <i>Ara severus</i> | 9.83 | 2 | 387.72 | 17 |
| <i>Aratinga acuticaudata</i> | 5.50 | 3 | 166.50 | 6 |
| <i>Aratinga aurea</i> | 3.35 | 8 | 80.25 | 4 |
| <i>Aratinga auricapilla</i> | 4.43 | 2 | 113.35 | 7 |
| <i>Aratinga cactorum</i> | 2.72 | 2 | 63.95 | 5 |
| <i>Aratinga canicularis</i> | 3.30 | 4 | 79.09 | 50 |
| <i>Aratinga chloropterus</i> | 5.49 | 2 | 126.86 | 8 |
| <i>Aratinga finschi</i> | 5.28 | 4 | 187.82 | 24 |
| <i>Aratinga holochlora</i> | 5.43 | 4 | 178.09 | 25 |
| <i>Aratinga jandaya</i> | 3.80 | 1 | 103.88 | 11 |
| <i>Aratinga leucophthalma</i> | 5.32 | 5 | 166.30 | 25 |
| <i>Aratinga nana</i> | 3.59 | 11 | 80.09 | 38 |
| <i>Aratinga pertinax</i> | 3.49 | 5 | 83.37 | 31 |
| <i>Aratinga solstitialis</i> | 4.12 | 3 | 101.43 | 11 |
| <i>Aratinga weddellii</i> | 4.01 | 4 | 108.15 | 20 |
| <i>Bolborhynchus lineola</i> | 2.08 | 2 | 54.12 | 4 |
| <i>Brotogeris chiriri</i> | 2.39 | 2 | 46.42 | 12 |
| <i>Brotogeris chrysoptera</i> | 2.10 | 11 | 66.78 | 14 |
| <i>Brotogeris jugularis</i> | 2.12 | 10 | 65.38 | 9 |
| <i>Brotogeris sanctithomae</i> | 1.83 | 1 | 57.06 | 19 |
| <i>Brotogeris tirica</i> | 2.68 | 2 | 63.00 | 2 |
| <i>Brotogeris versicolorus</i> | 2.39 | 7 | 66.44 | 41 |

Supplementary Material 1 (cont.). Brain volume and body mass for the 100 New World parrot species for which data was available. Brain volume was taken from the literature (Iwaniuk et al. 2005) and from measurements made from non-fractured adult specimens from skeleton collections. Body masses were collected from the literature (Terborgh et al. 1990; Rodriguez-Mahecha & Hernandez-Camacho 2002; Dunning 1993; Iwaniuk 2003; Silva 1993; Pereira et al. 2004; Iwaniuk et al. 2005) and from labels in museum collections (Berkeley, Carnegie, Field and Smithsonian Museums).

| Species | Brain Vol | n | Body mass | n |
|------------------------------------|-----------|----|-----------|----|
| <i>Cyanoliseus patagonus</i> | 7.48 | 3 | 271.11 | 14 |
| <i>Cyanopsitta spixii</i> | 7.69 | 2 | 360.33 | 3 |
| <i>Deroptyus accipitrinus</i> | 7.10 | 9 | 256.56 | 14 |
| <i>Diopsittaca nobilis</i> | 6.65 | 7 | 152.73 | 21 |
| <i>Enicognathus ferrugineus</i> | 4.97 | 4 | 177.40 | 13 |
| <i>Forpus coelestis</i> | 1.34 | 10 | 29.18 | 51 |
| <i>Forpus conspicillatus</i> | 1.30 | 2 | 25.49 | 49 |
| <i>Forpus cyanopygius</i> | 1.28 | 2 | 32.65 | 21 |
| <i>Forpus passerinus</i> | 1.10 | 6 | 26.87 | 24 |
| <i>Forpus sclateri</i> | 1.21 | 1 | 24.47 | 4 |
| <i>Forpus xanthopterygius</i> | 1.25 | 3 | 26.00 | 3 |
| <i>Graydidascalus brachyurus</i> | 5.50 | 2 | 210.25 | 3 |
| <i>Guarouba guarouba</i> | 7.77 | 15 | 249.62 | 13 |
| <i>Myiopsitta monachus</i> | 4.08 | 6 | 108.63 | 54 |
| <i>Nandayus nenday</i> | 4.93 | 4 | 116.60 | 8 |
| <i>Nannopsittaca dachilleae</i> | 1.45 | 2 | 41.85 | 19 |
| <i>Ognorhynchus icterotis</i> | 8.85 | 2 | 285.00 | 3 |
| <i>Orthopsittaca manilata</i> | 7.86 | 4 | 336.10 | 19 |
| <i>Pionites leucogaster</i> | 5.11 | 10 | 132.08 | 4 |
| <i>Pionites melanocephalus</i> | 5.30 | 9 | 146.55 | 24 |
| <i>Gypopsitta barrabandi</i> | 4.08 | 2 | 166.75 | 5 |
| <i>Gypopsitta caica</i> | 3.35 | 2 | 135.87 | 4 |
| <i>Gypopsitta haematotis</i> | 3.93 | 3 | 151.85 | 29 |
| <i>Pionopsitta pileata</i> | 3.21 | 6 | 149.59 | 1 |
| <i>Pionus chalcopterus</i> | 6.02 | 2 | 226.00 | 10 |
| <i>Pionus fuscus</i> | 5.11 | 2 | 203.00 | 5 |
| <i>Pionus maximiliani</i> | 6.20 | 5 | 244.33 | 6 |
| <i>Pionus menstruus</i> | 5.78 | 11 | 250.79 | 19 |
| <i>Pionus senilis</i> | 5.70 | 1 | 212.68 | 25 |
| <i>Primolius auricollis</i> | 8.09 | 5 | 212.67 | 13 |
| <i>Primolius maracana</i> | 7.27 | 2 | 255.57 | 12 |
| <i>Psilopsiagon aurifrons</i> | 1.40 | 1 | 37.00 | 1 |
| <i>Psilopsiagon aymara</i> | 1.41 | 3 | 32.82 | 12 |
| <i>Pyrrhura cruentata</i> | 3.35 | 4 | 91.40 | 5 |
| <i>Pyrrhura egregia</i> | 2.47 | 2 | 68.25 | 2 |
| <i>Pyrrhura frontalis</i> | 2.95 | 8 | 80.26 | 23 |
| <i>Pyrrhura hoffmanni</i> | 3.50 | 2 | 78.50 | 35 |
| <i>Pyrrhura lepida</i> | 2.55 | 2 | 84.63 | 1 |
| <i>Pyrrhura leucotis</i> | 2.19 | 2 | 56.70 | 6 |
| <i>Pyrrhura melanura</i> | 3.28 | 2 | 81.03 | 15 |
| <i>Pyrrhura molinae</i> | 4.60 | 1 | 64.80 | 25 |
| <i>Pyrrhura perlata</i> | 2.71 | 8 | 84.63 | 24 |
| <i>Pyrrhura pfrimeri</i> | 2.21 | 1 | 56.70 | 1 |
| <i>Pyrrhura picta</i> | 2.32 | 7 | 64.39 | 32 |
| <i>Rhynchositta pachyrhyncha</i> | 11.20 | 2 | 381.65 | 45 |
| <i>Touit dilectissimus</i> | 2.60 | 1 | 67.60 | 7 |
| <i>Touit purpuratus</i> | 2.40 | 2 | 62.74 | 12 |
| <i>Trichoglossus malachitaceus</i> | 4.25 | 7 | 142.00 | 3 |

r*: body weight estimated using the regression of weight against length for the corresponding genus