

These are electronic appendices to the Biology Letter by Nudds *et al.* 2004 Forelimb proportions and the evolutionary radiation in Neornithes. *Proc. R. Soc. Lond. B (Suppl.)* **271**, S324–S327. (DOI 10.1098/rsbl.2004.0167.)

Electronic appendices are refereed with the text. However, no attempt has been made to impose a uniform editorial style on the electronic appendices.

ELECTRONIC APPENDICES

Electronic Appendix A

Table 1. List of species and data used in the analyses.

Species	<i>n</i>	BI	s.d.
<i>Acanthis cannabina</i>	2	0.81	0.06
<i>Acanthisitta chloris</i>	1	0.73	
<i>Accipiter cooperii</i>	1	0.93	
<i>Accipiter gentilis</i>	6	0.89	0.04
<i>Accipiter nisus</i>	7	0.83	0.04
<i>Aceros plicatus</i>	1	0.65	
<i>Aceros undulatus</i>	1	0.65	
<i>Acridotheres tristis</i>	1	0.88	
<i>Acrocephalus schoenobaenus</i>	2	0.84	0.04
<i>Acrocephalus scirpaceus</i>	1	0.71	
<i>Acryllium vulturinum</i>	1	0.99	
<i>Actophilornis africana</i>	2	0.90	0.05
<i>Actophilornis albinucha</i>	1	0.92	
<i>Aechmophorus occidentalis</i>	3	1.13	0.03
<i>Aegialornis gallicus</i>	1	0.74	
<i>Aegithalos caudatus</i>	2	0.79	0.01
<i>Aegolius acadicus</i>	1	0.90	
<i>Aegolius funereus</i>	1	0.89	
<i>Aegypius monachus</i>	4	0.78	0.03
<i>Aegypius tracheliotus</i>	2	0.73	0.02
<i>Aenigmavis sapea</i>	1	1.21	
<i>Aethia cristatella</i>	2	1.35	0.32
<i>Aethia pusilla</i>	1	1.20	
<i>Aethia pygmaea</i>	1	1.20	
<i>Afropavo congensis</i>	1	0.97	
<i>Agapornis fischeri</i>	1	0.85	
<i>Agapornis personata</i>	2	0.84	0.01
<i>Agapornis pullaria</i>	1	0.82	
<i>Agapornis roseicollis</i>	1	0.86	
<i>Agelaius phoeniceus</i>	1	0.87	
<i>Agriocharis ocellata</i>	4	1.09	0.05

<i>Aix galericulata</i>	2	1.18	0.03
<i>Aix sponsa</i>	3	1.21	0.09
<i>Ajaia ajaja</i>	3	0.88	0.03
<i>Alauda arvensis</i>	3	0.82	0.04
<i>Alca torda</i>	10	1.29	0.12
<i>Alcedo atthis</i>	5	0.84	0.04
<i>Alcedo leucogaster</i>	1	0.83	
<i>Alectoris barbara</i>	2	1.04	0.06
<i>Alectoris graeca</i>	3	1.07	0.05
<i>Alectoris rufa</i>	3	1.07	0.02
<i>Alectura lathamii</i>	1	0.97	
<i>Alisterus scapularis</i>	2	0.86	0.02
<i>Alle alle</i>	9	1.23	0.07
<i>Alopochen aegyptiacus</i>	2	1.07	0.04
<i>Amandava amandava</i>	1	0.93	
<i>Amazilia sp.</i>	2	0.92	0.12
<i>Amazona aestiva</i>	1	0.83	
<i>Amazona albifrons</i>	1	0.81	
<i>Amazona amazonica</i>	1	0.85	
<i>Amazona autumnalis</i>	1	0.83	
<i>Amazona brasiliensis</i>	1	0.85	
<i>Amazona farinosa</i>	4	0.87	0.03
<i>Amazona festiva</i>	1	0.86	
<i>Amazona leucocephala</i>	2	0.85	0.01
<i>Amazona ochrocephala</i>	1	0.84	
<i>Amazona pretrei</i>	1	0.84	
<i>Amazona ventralis</i>	1	0.85	
<i>Amazona versicolor</i>	1	0.81	
<i>Amazonetta brasiliensis</i>	2	1.14	0.01
<i>Ammoperdix griseogularis</i>	1	1.01	
<i>Anadorhynchus hyacinthinus</i>	2	0.75	0.01
<i>Anas acuta</i>	3	1.13	0.02
<i>Anas americana</i>	1	1.13	
<i>Anas anguistrostris</i>	1	1.15	
<i>Anas aucklandica</i>	4	1.31	0.08
<i>Anas bahamensis</i>	2	1.12	0.01
<i>Anas castanea</i>	3	1.15	0.01
<i>Anas chlorotis</i>	2	1.22	0.01
<i>Anas clypeata</i>	4	1.17	0.09
<i>Anas crecca</i>	3	1.22	0.10
<i>Anas cyanoptera</i>	1	1.20	
<i>Anas discors</i>	1	1.16	
<i>Anas falcata</i>	1	1.16	
<i>Anas flavirostris</i>	1	1.13	
<i>Anas georgica</i>	1	1.16	
<i>Anas gibberifrons</i>	2	1.14	0.01
<i>Anas laysanensis</i>	2	1.15	0.01
<i>Anas leucophrys</i>	2	1.17	0.05
<i>Anas oustaleti</i>	2	1.16	0.02
<i>Anas penelope</i>	3	1.18	0.04

<i>Anas platalea</i>	1	1.15	
<i>Anas platyrhynchos</i>	11	1.21	0.06
<i>Anas poecilorhyncha</i>	2	1.15	0.01
<i>Anas querquedula</i>	2	1.22	0.12
<i>Anas rubripes</i>	4	1.21	0.05
<i>Anas sibilatrix</i>	1	1.13	
<i>Anas specularis</i>	1	1.22	
<i>Anas strepera</i>	2	1.20	0.06
<i>Anas superciliosa</i>	1	1.17	
<i>Anas undulata</i>	2	1.15	0.02
<i>Anas versicolor</i>	1	1.16	
<i>Anas wyvilliana</i>	2	1.15	0.01
<i>Anastomus lamelligerus</i>	1	0.84	
<i>Anastomus oscitans</i>	1	0.78	
<i>Anhima cornuta</i>	3	0.94	0.06
<i>Anhinga anhinga</i>	7	1.11	0.04
<i>Anhinga rufa</i>	1	1.11	
<i>Anneavis anneae</i>	2	1.09	0.05
<i>Anodorhynchus glaucus</i>	1	0.82	
<i>Anous stolidus</i>	3	0.86	0.01
<i>Anser albifrons</i>	3	1.05	0.03
<i>Anser anser</i>	3	1.05	0.01
<i>Anser caerulescens</i>	2	1.03	0.05
<i>Anser canagicus</i>	1	1.02	
<i>Anser cygnoides</i>	1	1.05	
<i>Anser erythropus</i>	2	1.07	0.05
<i>Anser fabalis</i>	6	1.05	0.04
<i>Anser indicus</i>	1	1.03	
<i>Anser rossii</i>	1	1.01	
<i>Anseranas semipalmata</i>	2	1.02	0.02
<i>Anthracoceros malabaricus</i>	1	0.71	
<i>Anthracothorax nigricollis</i>	1	1.00	
<i>Anthropoides paradisea</i>	2	0.88	0.07
<i>Anthropoides virgo</i>	6	0.88	0.04
<i>Anthus correndera</i>	1	0.94	
<i>Anthus pratensis</i>	2	0.82	0.01
<i>Anthus trivialis</i>	1	0.81	
<i>Apaloderma narina</i>	2	0.91	0.01
<i>Aphriza virgata</i>	1	0.93	
<i>Aplopelia simplex</i>	1	0.86	
<i>Aprosmictus erythropterus</i>	1	0.85	
<i>Aptenodytes forsteri</i>	3	1.44	0.07
<i>Aptenodytes patagonica</i>	8	1.31	0.07
<i>Apteryx australis</i>	1	1.98	
<i>Apteryx owenii</i>	2	2.27	0.04
<i>Apteryx sp.</i>	2	2.24	0.08
<i>Apus affinis</i>	1	0.69	
<i>Apus apus</i>	9	0.64	0.09
<i>Apus melba</i>	1	0.69	
<i>Aquila audax</i>	1	0.85	

<i>Aquila chrysaetos</i>	5	0.86	0.03
<i>Aquila heliaca</i>	2	0.85	0.01
<i>Ara ararauna</i>	1	0.78	
<i>Ara auricollis</i>	1	0.83	
<i>Ara chloroptera</i>	1	0.79	
<i>Ara macao</i>	6	0.82	0.03
<i>Ara maracana</i>	1	0.84	
<i>Ara militaris</i>	1	0.79	
<i>Ara severa</i>	1	0.84	
<i>Aramides cajanea</i>	3	1.12	0.03
<i>Aramides ypecaha</i>	1	1.10	
<i>Aramus scolopaceus</i>	3	0.96	0.03
<i>Aratinga aurea</i>	2	0.83	0.04
<i>Aratinga cactorum</i>	2	0.83	0.01
<i>Aratinga pertinax</i>	1	0.82	
<i>Arborophila javanica</i>	1	1.01	
<i>Archilochus colubris</i>	2	0.96	0.02
<i>Ardea cinerea</i>	6	0.85	0.01
<i>Ardea cocoi</i>	2	0.90	0.07
<i>Ardea goliath</i>	4	0.88	0.04
<i>Ardea herodias</i>	5	0.89	0.03
<i>Ardea melanocephala</i>	1	0.83	
<i>Ardea purpurea</i>	6	0.87	0.03
<i>Ardeola ralloides</i>	5	0.88	0.02
<i>Ardeola speciosa</i>	1	0.86	
<i>Aredotis kori</i>	4	0.88	0.04
<i>Arenaria interpres</i>	3	0.93	0.01
<i>Argusianus argus</i>	1	0.97	
<i>Asio flammeus</i>	6	0.84	0.05
<i>Asio otus</i>	5	0.88	0.04
<i>Athene noctua</i>	5	0.81	0.09
<i>Atlantisia elpenor</i>	1	1.31	
<i>Atlantisia podarces</i>	1	1.20	
<i>Atlantisia rogersi</i>	3	1.44	0.02
<i>Atrichornis clamosus</i>	1	1.58	
<i>Atticora fasciata</i>	1	0.68	
<i>Aviceda cuculoides</i>	1	0.92	
<i>Aythya affinis</i>	1	1.14	
<i>Aythya americana</i>	1	1.14	
<i>Aythya collaris</i>	1	1.12	
<i>Aythya ferina</i>	4	1.19	0.10
<i>Aythya fuligula</i>	3	1.12	0.03
<i>Aythya marila</i>	4	1.14	0.07
<i>Aythya nyroca</i>	2	1.13	0.03
<i>Balaeniceps rex</i>	1	0.83	
<i>Balearica exigua</i>	1	0.88	
<i>Balearica pavonina</i>	5	0.94	0.03
<i>Barnardius zonarius</i>	1	0.85	
<i>Bartramia longicauda</i>	2	0.92	0.01
<i>Berenicornis comatus</i>	2	0.69	0.03

<i>Biziura lobata</i>	1	1.18	
<i>Bombycilla cedrorum</i>	4	0.82	0.03
<i>Bombycilla garrulus</i>	1	0.81	
<i>Bonasa bonasia</i>	2	1.08	0.07
<i>Bonasa sewerzowi</i>	2	1.11	0.03
<i>Bonasa umbellus</i>	4	1.19	0.02
<i>Bostrychia hagedash</i>	2	0.87	0.01
<i>Botaurus lentiginosus</i>	3	0.95	0.01
<i>Botaurus stellaris</i>	6	0.94	0.03
<i>Brachyramphus brevirostris</i>	1	1.22	
<i>Branta bernicla</i>	3	1.07	0.06
<i>Branta canadensis</i>	4	1.10	0.05
<i>Branta leucopsis</i>	5	1.07	0.04
<i>Branta ruficollis</i>	1	1.04	
<i>Branta sandvicensis</i>	1	1.05	
<i>Brotogeris sanctithomae</i>	1	0.86	
<i>Brotogeris tirica</i>	1	0.83	
<i>Bubo africanus</i>	1	0.90	
<i>Bubo bubo</i>	5	0.86	0.03
<i>Bubo lacteus</i>	1	0.84	
<i>Bubo virginianus</i>	3	0.90	0.01
<i>Bubulcus ibis</i>	3	0.87	0.02
<i>Buccanodon anchietae</i>	1	0.81	
<i>Buccanodon duchaillui</i>	1	0.81	
<i>Bucephala albeola</i>	2	1.21	0.04
<i>Bucephala clangula</i>	3	1.17	0.03
<i>Buceros bicornis</i>	2	0.71	0.07
<i>Buceros rhinoceros</i>	3	0.70	0.02
<i>Bucorvus abyssinicus</i>	2	0.72	0.01
<i>Bucorvus cafer</i>	2	0.74	0.02
<i>Budytes flavus</i>	1	0.84	
<i>Bulweria bulwerii</i>	1	0.98	
<i>Burhinus capensis</i>	2	0.94	0.01
<i>Burhinus magnirostris</i>	1	0.95	
<i>Burhinus oedicephalus</i>	2	0.89	0.01
<i>Burhinus vermiculatus</i>	1	0.87	
<i>Buteo brachypterus</i>	1	0.81	
<i>Buteo buteo</i>	6	0.84	0.01
<i>Buteo jamaicensis</i>	5	0.87	0.03
<i>Buteo lagopus</i>	3	0.86	0.01
<i>Buteo magnirostris</i>	1	0.96	
<i>Buteo rufinus</i>	1	0.97	
<i>Butorides striatus</i>	4	0.93	0.05
<i>Butorides virescens</i>	1	0.93	
<i>Bycanistes cylindricus</i>	2	0.66	0.01
<i>Cacatua alba</i>	1	0.82	
<i>Cacatua galerita</i>	3	0.87	0.05
<i>Cacatua leadbeateri</i>	2	0.87	0.02
<i>Cacatua moluccensis</i>	2	0.85	0.01
<i>Cacatua sulphurea</i>	2	0.84	0.01

<i>Cacatua tenuirostris</i>	1	0.82	
<i>Cairina moschata</i>	4	1.16	0.07
<i>Calidris alba</i>	3	0.92	0.03
<i>Calidris alpina</i>	4	0.95	0.01
<i>Calidris canutus</i>	3	0.92	0.03
<i>Calidris ferruginea</i>	1	0.95	
<i>Calidris minuta</i>	2	0.96	0.02
<i>Calidris ruficollis</i>	1	0.96	
<i>Callaeas cinerea</i>	1	0.99	
<i>Callipepla squamata</i>	2	1.11	0.07
<i>Callocephalon fimbriatum</i>	1	0.83	
<i>Caloenas nicobarica</i>	2	0.87	0.09
<i>Calyptomena viridis</i>	2	0.82	0.04
<i>Calyptorhynchus funereus</i>	1	0.87	
<i>Calyptorhynchus magnificus</i>	2	0.84	0.03
<i>Campethera caroli</i>	1	0.84	
<i>Campethera nubica</i>	1	0.88	
<i>Campethera permista</i>	2	0.84	0.01
<i>Camptostoma obsoletum</i>	1	0.84	
<i>Caprimulgus europaeus</i>	4	0.78	0.01
<i>Caprimulgus fossil</i>	2	0.76	0.02
<i>Caprimulgus natalensis</i>	1	0.80	
<i>Caprimulgus pectoralis</i>	1	0.84	
<i>Caprimulgus ridgwayi</i>	1	0.86	
<i>Caprimulgus tristigma</i>	1	0.80	
<i>Caprimulgus vociferus</i>	2	0.83	0.03
<i>Cardinalis cardinalis</i>	2	0.94	0.07
<i>Carduelis carduelis</i>	1	0.73	
<i>Carduelis chloris</i>	2	0.81	0.03
<i>Carduelis spinus</i>	1	0.81	
<i>Cariama cristata</i>	5	1.07	0.04
<i>Carpodacus purpureus</i>	1	0.93	
<i>Casuarius bennetti</i>	1	1.77	
<i>Casuarius casuarius</i>	2	1.49	0.03
<i>Casuarius sp.</i>	2	1.75	0.06
<i>Casuarius unappendiculatus</i>	1	1.59	
<i>Catharacta skua</i>	3	0.99	0.03
<i>Cathartes aura</i>	5	0.84	0.03
<i>Cathartes burrovianus</i>	1	0.90	
<i>Catreus wallichii</i>	2	1.06	0.01
<i>Centrocercus urophasianus</i>	2	1.11	0.11
<i>Centropelma micropterum</i>	4	1.31	0.01
<i>Centropus grillii</i>	1	1.17	
<i>Centropus monachus</i>	1	1.23	
<i>Centropus senegalensis</i>	1	1.23	
<i>Centropus superciliosus</i>	1	1.22	
<i>Cephus grylle</i>	6	1.19	0.03
<i>Ceratogymna atrata</i>	1	0.64	
<i>Cereopsis novaehollandiae</i>	1	1.07	
<i>Cercococyx olivinus</i>	1	0.95	

<i>Cerorhinca monocerata</i>	3	1.27	0.02
<i>Certhia brachydactyla</i>	2	0.87	0.09
<i>Certhia familiaris</i>	3	0.81	0.02
<i>Ceryle alcyon</i>	2	0.83	0.01
<i>Ceryle rudis</i>	1	0.77	
<i>Ceuthmochares aereus</i>	1	1.12	
<i>Ceyx lecomtei</i>	1	0.78	
<i>Ceyx picta</i>	2	0.78	0.01
<i>Chaetura pelagica</i>	4	0.75	0.04
<i>Chalcophaps indica</i>	1	0.81	
<i>Chalcopsitta atra</i>	1	0.90	
<i>Charadrius alexandrinus</i>	2	0.93	0.03
<i>Charadrius hiaticula</i>	4	0.91	0.03
<i>Charadrius mongolus</i>	1	0.91	
<i>Charadrius wilsonia</i>	1	0.90	
<i>Chascacocolius oscitans</i>	1	1.11	
<i>Chauna chavaria</i>	1	0.91	
<i>Chauna torquata</i>	2	0.89	0.01
<i>Chelidoptera tenebrosa</i>	1	0.81	
<i>Chendytes lawi</i>	1	2.73	
<i>Chendytes milleri</i>	1	2.26	
<i>Chenonetta jubata</i>	1	1.08	
<i>Chionis alba</i>	2	0.94	0.01
<i>Chiunga burmeisteri</i>	1	1.05	
<i>Chlamydera nuchalis</i>	1	0.77	
<i>Chlamydotis undulata</i>	3	0.95	0.02
<i>Chlidonias leucoptera</i>	1	0.84	
<i>Chlidonias nigra</i>	2	0.84	0.02
<i>Chloephaga picta</i>	2	1.05	0.08
<i>Chloephaga poliocephala</i>	1	1.05	
<i>Chlorestes notatus</i>	1	0.75	
<i>Choephaga hybrida</i>	1	1.04	
<i>Chondestes grammacus</i>	1	0.95	
<i>Chondrohierax uncinatus</i>	1	0.87	
<i>Chordeiles minor</i>	6	0.85	0.03
<i>Choriotis australis</i>	1	0.92	
<i>Chrysococcyx caprius</i>	1	0.92	
<i>Chrysococcyx cupreus</i>	1	0.96	
<i>Chrysococcyx klaas</i>	1	0.97	
<i>Chrysolampis mosquitus</i>	1	0.80	
<i>Chrysolophus amherstiae</i>	1	1.08	
<i>Chrysolophus pictus</i>	1	1.04	
<i>Ciccaba virgata</i>	1	0.91	
<i>Ciccaba woodfordii</i>	1	0.89	
<i>Ciconia abdimii</i>	1	0.87	
<i>Ciconia ciconia</i>	3	0.86	0.01
<i>Ciconia episcopus</i>	1	0.82	
<i>Ciconia maguari</i>	3	0.88	0.02
<i>Ciconia nigra</i>	4	0.89	0.03
<i>Cinclus cinclus</i>	3	0.88	0.01

<i>Circaetus gallicus</i>	2	0.81	0.03
<i>Circus aeruginosus</i>	5	0.83	0.04
<i>Circus cyaneus</i>	6	0.88	0.03
<i>Circus macrourus</i>	1	0.79	
<i>Circus pygargus</i>	2	0.78	0.05
<i>Cladorhynchus leucocephalus</i>	1	0.99	
<i>Clamator cafer</i>	1	0.96	
<i>Clamator levaillantii</i>	1	1.00	
<i>Clangula hyemalis</i>	4	1.14	0.05
<i>Claravis pretiosa</i>	1	0.79	
<i>Coccothraustes coccothraustes</i>	1	0.88	
<i>Coccyzus americanus</i>	2	1.07	0.05
<i>Coccyzus erythrophthalmus</i>	1	1.13	
<i>Coccyzus melacoryphus</i>	1	1.13	
<i>Cochlearius cochlearius</i>	4	0.89	0.03
<i>Coeligena torquata</i>	1	0.86	
<i>Colaptes auratus</i>	2	0.91	0.10
<i>Colius sp.</i>	2	1.00	0.11
<i>Colinus nigrogularis</i>	1	1.22	
<i>Colinus pectoralis</i>	1	1.00	
<i>Colinus virginianus</i>	3	1.22	0.05
<i>Colius castanotus</i>	1	1.22	
<i>Colius colius</i>	6	1.22	0.06
<i>Colius indicus</i>	4	0.99	0.02
<i>Colius macrourus</i>	4	0.96	0.04
<i>Colius striatus</i>	20	1.14	0.07
<i>Colius striatus leucotis</i>	2	1.18	0.02
<i>Collocalia sp.</i>	1	0.70	
<i>Colopteryx galeatus</i>	1	0.79	
<i>Columba albilinea</i>	1	0.83	
<i>Columba araucana</i>	2	0.91	0.07
<i>Columba arquatrix</i>	1	0.87	
<i>Columba cayennensis</i>	1	0.93	
<i>Columba fasciata</i>	1	0.86	
<i>Columba goodsoni</i>	1	0.83	
<i>Columba guinea</i>	1	0.84	
<i>Columba inornata</i>	1	0.85	
<i>Columba leucocephala</i>	1	0.83	
<i>Columba leuconota</i>	1	0.86	
<i>Columba livia</i>	6	0.86	0.04
<i>Columba maculosa</i>	1	0.87	
<i>Columba oenas</i>	4	0.89	0.04
<i>Columba palumbus</i>	4	0.90	0.04
<i>Columba picazuro</i>	1	0.86	
<i>Columba plumbea</i>	1	0.85	
<i>Columba rufina</i>	1	0.84	
<i>Columba speciosa</i>	2	0.91	0.11
<i>Columba squamosa</i>	1	0.83	
<i>Columba subvinacea</i>	1	0.86	
<i>Columbina passerina</i>	2	0.83	0.01

<i>Columbina picui</i>	1	0.83	
<i>Columbina squammata</i>	1	0.81	
<i>Columbina talpacoti</i>	1	0.95	
<i>Colymboides anglicus</i>	1	1.47	
<i>Colymboides minutus</i>	1	1.22	
<i>Conopophaga castaneiceps</i>	1	0.99	
<i>Coracias abyssinica</i>	1	0.85	
<i>Coracias garrulus</i>	4	0.83	0.03
<i>Coracina caeruleo-grisea</i>	1	0.93	
<i>Coracina novaehollandiae</i>	1	0.79	
<i>Coracopsis vasa</i>	1	0.80	
<i>Coragyps atratus</i>	5	0.87	0.04
<i>Corcorax melanorhamphos</i>	1	0.98	
<i>Corvus corax</i>	1	0.82	
<i>Corvus corone</i>	7	0.83	0.03
<i>Corvus frugilegus</i>	5	0.82	0.01
<i>Corvus monedula</i>	5	0.78	0.02
<i>Corythaeola cristata</i>	1	1.13	
<i>Coturnix coromandelica</i>	1	1.10	
<i>Coturnix coturnix</i>	4	1.20	0.06
<i>Coturnix delegorguei</i>	2	1.18	0.09
<i>Crax alberti</i>	1	1.04	
<i>Crax fasciolata</i>	1	0.94	
<i>Crax mitu</i>	2	0.98	0.07
<i>Crax pauxi</i>	2	0.95	0.06
<i>Creadion carunculatus</i>	1	0.96	
<i>Crex crex</i>	4	1.09	0.02
<i>Crex egregia</i>	1	1.11	
<i>Criniger ochraceus</i>	1	0.80	
<i>Crossoptilon mantchuricum</i>	1	1.07	
<i>Crotophaga ani</i>	3	1.24	0.03
<i>Crotophaga major</i>	3	1.14	0.02
<i>Crotophaga sulcirostris</i>	1	1.29	
<i>Crypturellus boucardi</i>	1	1.01	
<i>Crypturellus noctivagus</i>	1	1.06	
<i>Crypturellus obsoletus</i>	2	1.01	0.03
<i>Crypturellus parvirostris</i>	3	1.07	0.05
<i>Crypturellus tatuapa</i>	1	0.98	
<i>Crypturellus variegatus</i>	2	1.01	0.01
<i>Cuculus canorus</i>	5	0.93	0.08
<i>Cuculus solitarius</i>	1	0.97	
<i>Cursorius chalcopterus</i>	1	0.89	
<i>Cursorius temminckii</i>	1	0.84	
<i>Cyanocorax chrysops</i>	9	0.86	0.02
<i>Cyanocorax yncas</i>	1	0.81	
<i>Cyanoliseus patagonus</i>	1	0.87	
<i>Cyanoramphus auriceps</i>	1	0.91	
<i>Cyanoramphus novaezelandiae</i>	1	0.88	
<i>Cygnus atratus</i>	1	1.09	
<i>Cygnus buccinator</i>	1	1.03	

<i>Cygnus columbianus</i>	1	1.13	
<i>Cygnus cygnus</i>	3	1.08	0.04
<i>Cygnus olor</i>	5	1.07	0.07
<i>Dacelo novaeguineae</i>	3	0.82	0.01
<i>Dactylortyx thoracicus</i>	1	1.12	
<i>Daption capense</i>	8	1.08	0.06
<i>Daptrius americanus</i>	1	0.90	
<i>Daptrius ater</i>	1	0.91	
<i>Delichon urbica</i>	3	0.66	0.05
<i>Dendrocolaptes certhia</i>	1	0.85	
<i>Dendrocygna arborea</i>	1	1.00	
<i>Dendrocygna arcuata</i>	1	0.96	
<i>Dendrocygna autumnalis</i>	4	0.98	0.01
<i>Dendrocygna bicolor</i>	2	0.99	0.04
<i>Dendrocygna eytoni</i>	1	0.98	
<i>Dendrocygna javanica</i>	1	0.95	
<i>Dendrocygna viduata</i>	1	0.95	
<i>Dendropicos fuscescens</i>	1	0.87	
<i>Dendropicos poecilolaemus</i>	1	0.87	
<i>Dendrortyx leucophrys</i>	1	1.10	
<i>Dicrurus adsimilis</i>	1	0.74	
<i>Dicrurus macrocercus</i>	1	0.73	
<i>Dicrurus paradiseus</i>	1	0.77	
<i>Didunculus strigirostris</i>	3	0.85	0.01
<i>Dinopium benghalense</i>	1	1.05	
<i>Dinopium javanense</i>	1	0.83	
<i>Diomedea chlororhynchos</i>	1	0.86	
<i>Diomedea chrysostoma</i>	1	1.01	
<i>Diomedea exulans</i>	2	0.99	0.02
<i>Diomedea fusca</i>	7	1.00	0.01
<i>Diomedea immutabilis</i>	3	0.99	0.03
<i>Diomedea irrorata</i>	1	1.02	
<i>Diomedea melanophris</i>	1	1.01	
<i>Diomedea nigripes</i>	1	1.00	
<i>Diomedea palpebrata</i>	2	0.98	0.01
<i>Dromaius novaehollandiae</i>	4	1.40	0.06
<i>Dromas ardeola</i>	2	0.96	0.02
<i>Dryocopus martius</i>	2	0.87	0.04
<i>Dryocopus pileatus</i>	1	0.94	
<i>Dryotriorchis spectabilis</i>	1	0.88	
<i>Ducula aenea</i>	3	0.89	0.07
<i>Dumetella carolinensis</i>	2	0.94	0.08
<i>Ectopistes migratorius</i>	2	0.91	0.06
<i>Egretta alba</i>	8	0.86	0.02
<i>Egretta caerulea</i>	3	0.86	0.02
<i>Egretta garzetta</i>	5	0.84	0.01
<i>Egretta gularis</i>	1	0.92	
<i>Egretta rufescens</i>	1	0.81	
<i>Egretta thula</i>	4	0.86	0.01
<i>Egretta tricolor</i>	1	0.85	

<i>Elanus caeruleus</i>	2	0.87	0.01
<i>Elanus leucurus</i>	1	0.89	
<i>Emberiza cia</i>	1	0.85	
<i>Emberiza cirrus</i>	1	0.90	
<i>Emberiza citrinella</i>	3	0.86	0.01
<i>Emberiza hortulana</i>	2	0.82	0.06
<i>Emberiza schoeniclus</i>	2	0.87	0.04
<i>Empidonax flaviventris</i>	1	0.77	
<i>Empidonax virescens</i>	2	0.69	0.01
<i>Eocypselus vincenti</i>	1	0.72	
<i>Eoglaucicium pallas</i>	9	1.03	0.04
<i>Eolophus roseicapillus</i>	1	0.85	
<i>Eos reticulata</i>	1	0.90	
<i>Eos squamata</i>	1	0.88	
<i>Ephippiorhynchus senegalensis</i>	2	0.87	0.04
<i>Eremophila alpestris</i>	3	0.87	0.03
<i>Erithacus rubecula</i>	3	0.84	0.04
<i>Eudocimus ruber</i>	5	0.91	0.02
<i>Eudromia elegans</i>	1	0.91	
<i>Eudromias morinellus</i>	2	0.92	0.03
<i>Eudynamis scolopacea</i>	1	1.05	
<i>Eudyptes chrysolophus</i>	5	1.32	0.04
<i>Eudyptes crestatus</i>	3	1.28	0.05
<i>Eudyptes pachyrhynchus</i>	1	1.24	
<i>Eudyptes sclateri</i>	2	1.31	0.01
<i>Eudyptula minor</i>	8	1.41	0.08
<i>Eunymphicus cornutus</i>	1	0.86	
<i>Eupetomena macroura</i>	2	0.83	0.03
<i>Eupherusa eximia</i>	1	0.73	
<i>Eupodotis afra</i>	1	0.95	
<i>Eupodotis melanogaster</i>	1	0.91	
<i>Eupodotis vigorsii</i>	1	0.89	
<i>Eupodotis ruficrista</i>	1	0.91	
<i>Euryanas finschi</i>	1	1.20	
<i>Eurylaimus nasutus</i>	1	0.84	
<i>Eurylaimus ochromalus</i>	1	0.89	
<i>Eurynorhynchus pygmeus</i>	1	0.95	
<i>Eurypyga helias</i>	6	0.93	0.01
<i>Eurystomus glaucurus</i>	1	0.82	
<i>Eurystomus orientalis</i>	1	0.82	
<i>Excalfactoria chinensis</i>	1	1.28	
<i>Falco columbarius</i>	5	0.88	0.02
<i>Falco jugger</i>	1	0.91	
<i>Falco peregrinus</i>	4	0.85	0.01
<i>Falco rusticolus</i>	1	0.87	
<i>Falco severus</i>	1	0.82	
<i>Falco sparverius</i>	3	0.93	0.04
<i>Falco subbuteo</i>	5	0.88	0.03
<i>Falco tinnunculus</i>	8	0.85	0.03
<i>Falco vespertinus</i>	3	0.88	0.01

<i>Ficedula hypoleuca</i>	1	0.68	
<i>Foro panarium</i>	1	1.18	
<i>Forpus passerinus</i>	1	0.86	
<i>Francolinus afer</i>	1	1.08	
<i>Francolinus africanus</i>	1	1.03	
<i>Francolinus clappertoni</i>	1	1.07	
<i>Francolinus leucoscepus</i>	1	1.05	
<i>Francolinus sephaena</i>	2	1.09	0.02
<i>Francolinus sp.</i>	2	1.10	0.01
<i>Francolinus squamatus</i>	2	1.05	0.01
<i>Fratercula arctica</i>	9	1.25	0.08
<i>Fregata aquila</i>	4	0.76	0.02
<i>Fregata minor</i>	1	0.79	
<i>Fregata sp.</i>	1	0.79	
<i>Fregatta grallaria</i>	2	1.19	0.01
<i>Fringilla coelebs</i>	3	0.81	0.08
<i>Fringilla montifringilla</i>	2	0.83	0.05
<i>Fulica americana</i>	3	1.16	0.01
<i>Fulica atra</i>	6	1.16	0.05
<i>Fulmarus glacialis</i>	7	1.06	0.02
<i>Furnarius rufus</i>	1	1.00	
<i>Galbula albirostris</i>	2	0.78	0.01
<i>Galbula leucogastra</i>	1	0.80	
<i>Galbula tombacea</i>	1	0.80	
<i>Galerida cristata</i>	1	0.85	
<i>Gallicolumba luzonica</i>	1	0.86	
<i>Gallinago gallinago</i>	4	0.94	0.01
<i>Gallinula chloropus</i>	9	1.21	0.02
<i>Gallirallus australis</i>	6	1.45	0.05
<i>Galloperdix spadicea</i>	1	1.05	
<i>Gallus gallus</i>	5	1.07	0.07
<i>Gallus varius</i>	2	1.01	0.04
<i>Gampsonyx swainsonii</i>	1	0.84	
<i>Garrulax striatus</i>	1	1.00	
<i>Garrulus glandarius</i>	7	0.85	0.02
<i>Gavia arctica</i>	4	1.17	0.10
<i>Gavia immer</i>	42	1.25	0.02
<i>Gavia sp.</i>	2	1.28	0.01
<i>Gavia stellata</i>	11	1.24	0.06
<i>Genyornis newtoni</i>	1	0.96	
<i>Geococcyx californianus</i>	4	1.23	0.06
<i>Geopelia cuneata</i>	3	0.86	0.01
<i>Geopelia striata</i>	1	0.85	
<i>Geotrygon chrysia</i>	1	0.85	
<i>Geotrygon montana</i>	1	0.91	
<i>Geranoaetus melanoleucus</i>	2	0.81	0.04
<i>Geranoospiza caerulescens</i>	1	0.96	
<i>Geronticus calvus</i>	1	0.89	
<i>Geronticus eremita</i>	1	0.89	
<i>Glareola isabella</i>	1	0.85	

<i>Glareola maldivarum</i>	1	0.84	
<i>Glareola pratincola</i>	2	0.83	0.02
<i>Glaucidium brasilianum</i>	1	0.82	
<i>Glaucis hirsuta</i>	3	0.84	0.13
<i>Glossopsitta concinna</i>	1	0.93	
<i>Goura cristata</i>	3	0.84	0.02
<i>Goura scheepmakeri</i>	1	0.82	
<i>Goura victoria</i>	1	0.81	
<i>Gracula religiosa</i>	1	0.87	
<i>Grus antigone</i>	2	0.89	0.23
<i>Grus canadensis</i>	3	0.92	0.02
<i>Grus carunculatus</i>	2	0.90	0.02
<i>Grus grus</i>	4	0.90	0.01
<i>Grus japonensis</i>	1	0.91	0.04
<i>Grus leucogeranus</i>	2	0.91	
<i>Grus rubicunda</i>	1	0.90	0.02
<i>Grus vipio</i>	1	0.92	
<i>Guara rubra</i>	4	0.94	
<i>Guira guira</i>	5	1.16	0.05
<i>Guttera edouardi</i>	2	1.09	0.03
<i>Gygis alba</i>	3	0.84	0.09
<i>Gymnobucco bonapartei</i>	1	0.80	0.02
<i>Gymnobucco sladeni</i>	1	0.80	
<i>Gymnorhina tibicen</i>	1	0.91	
<i>Gypaetus barbatus</i>	3	0.86	
<i>Gypohierax angolensis</i>	1	0.89	0.09
<i>Gyps coprotheres</i>	2	0.77	
<i>Gyps fulvus</i>	5	0.81	0.02
<i>Habia rubica</i>	1	0.94	0.03
<i>Haematopus ostralegus</i>	3	0.94	
<i>Halcyon badia</i>	1	0.75	0.02
<i>Halcyon chelicuti</i>	1	0.81	
<i>Halcyon chloris</i>	3	0.82	
<i>Halcyon cyanoventris</i>	1	0.78	0.01
<i>Halcyon leucocephala</i>	2	0.78	
<i>Halcyon sancta</i>	2	0.82	0.01
<i>Halcyon senegalensis</i>	1	0.81	0.01
<i>Haliaeetus albicilla</i>	5	0.88	
<i>Haliaeetus indus</i>	1	0.84	0.03
<i>Haliaeetus leucocephalus</i>	1	0.91	
<i>Haliaeetus pelagicus</i>	1	0.89	
<i>Haliaeetus vocifer</i>	1	0.82	
<i>Halobaena caerulea</i>	1	1.02	
<i>Harpactes diardii</i>	1	0.69	
<i>Harpia harpyja</i>	2	0.85	
<i>Harpiprion caerulescens</i>	1	0.89	0.07
<i>Heliornis fulica</i>	7	1.22	
<i>Hemiprocne comata</i>	2	0.82	0.02
<i>Herpetotheres cachinnans</i>	3	0.93	0.01
<i>Heteralocha acutirostris</i>	2	0.94	0.04

<i>Heteronetta atricapilla</i>	1	1.21	0.10
<i>Heterospizias meridionalis</i>	1	0.85	
<i>Hieraaetus fasciatus</i>	3	0.83	
<i>Hieraaetus pennatus</i>	1	0.84	0.06
<i>Himantopus himantopus</i>	5	0.94	
<i>Himantornis haematopus</i>	1	1.00	0.02
<i>Hippolais icterina</i>	1	0.73	
<i>Hirundinea ferruginea</i>	1	0.68	
<i>Hirundo rustica</i>	5	0.66	
<i>Histrionicus histrionicus</i>	2	1.21	0.06
<i>Hoploxypterus cayanus</i>	1	0.90	0.06
<i>Hydrobates pelagicus</i>	4	1.05	
<i>Hylocharis cyanus</i>	1	0.85	0.01
<i>Hylocharis sapphirina</i>	1	0.80	
<i>Hymenolaimus malacorhynchos</i>	1	1.17	
<i>Hypogramma hypogrammicum</i>	1	0.78	
<i>Ibidorhyncha struthersii</i>	1	0.90	
<i>Ibis cinereus</i>	1	0.83	
<i>Ibis ibis</i>	7	0.84	
<i>Ibis sp.</i>	1	0.90	0.02
<i>Ichthyophaga ichthyaetus</i>	1	0.87	
<i>Icterus icterus</i>	1	0.85	
<i>Ictinia plumbea</i>	1	0.88	
<i>Idiornis tuberculata</i>	1	1.32	
<i>Indicator indicator</i>	2	0.81	
<i>Indicator minor</i>	1	0.79	0.02
<i>Irena puella</i>	1	0.86	
<i>Ixobrychus involucris</i>	1	0.94	
<i>Ixobrychus minutus</i>	3	0.96	
<i>Jabiru mycteria</i>	3	0.85	0.02
<i>Jacamerops aurea</i>	1	0.82	0.04
<i>Jacana spinosa</i>	5	0.93	
<i>Juncitarsus merkei</i>	1	0.85	0.04
<i>Jungornis tessellatus</i>	1	0.62	
<i>Jynx torquilla</i>	4	0.87	
<i>Kaupifalco monogrammicus</i>	2	0.88	0.05
<i>Ketupa ketupa</i>	1	0.91	0.01
<i>Knipolegus lophotes</i>	1	0.73	
<i>Lagopus lagopus</i>	4	1.09	
<i>Lagopus mutus</i>	4	1.12	0.06
<i>Lanius collurio</i>	3	0.85	0.04
<i>Lanius excubitor</i>	2	0.81	0.05
<i>Lanius senator</i>	1	0.73	0.02
<i>Larus argentatus</i>	6	0.89	
<i>Larus atricilla</i>	1	0.92	0.03
<i>Larus californicus</i>	1	0.88	
<i>Larus canus</i>	3	0.89	
<i>Larus delawarensis</i>	1	0.87	0.02
<i>Larus fuscus</i>	2	0.89	
<i>Larus genei</i>	1	0.89	0.01

<i>Larus glaucescens</i>	1	0.93	
<i>Larus glaucoides</i>	2	0.92	
<i>Larus hyperboreus</i>	1	0.91	0.03
<i>Larus ichthyaetus</i>	1	0.91	
<i>Larus marinus</i>	6	0.88	
<i>Larus minutus</i>	1	0.85	0.02
<i>Larus novaehollandiae</i>	1	0.93	
<i>Larus pipixcan</i>	1	0.90	
<i>Larus ridibundus</i>	3	0.87	
<i>Laterallus viridis</i>	1	1.13	0.03
<i>Leipoa ocellata</i>	1	0.92	
<i>Leptoptilos crumeniferus</i>	4	0.78	
<i>Leptoptilos dubius</i>	4	0.75	0.03
<i>Leptoptilos javanicus</i>	2	0.78	0.04
<i>Leptosomus discolor</i>	1	0.86	0.01
<i>Leptotila rufaxilla</i>	1	0.85	
<i>Leptotila verreauxi</i>	1	0.97	
<i>Leucopternis albicollis</i>	1	0.88	
<i>Leucosarcia melanoleuca</i>	1	0.87	
<i>Limnocolinus flavirostris</i>	2	1.14	
<i>Limnodromus griseus</i>	1	0.92	0.03
<i>Limosa fedoa</i>	1	0.94	
<i>Limosa lapponica</i>	2	0.94	
<i>Limosa limosa</i>	5	0.93	0.01
<i>Lophaetus occipitalis</i>	2	0.87	0.01
<i>Lophophorus impejanus</i>	1	1.02	0.01
<i>Lophortyx californicus</i>	2	1.14	
<i>Lophortyx gambelli</i>	1	1.23	0.01
<i>Lophotibis cristata</i>	1	0.85	
<i>Lophura diardi</i>	1	1.00	
<i>Lophura edwardsi</i>	1	1.01	
<i>Lophura erythrophthalma</i>	1	0.98	
<i>Lophura ignita</i>	3	0.99	
<i>Lophura leucomelana</i>	1	1.05	0.01
<i>Lophura nycthemera</i>	3	1.02	
<i>Loriculus philippensis</i>	1	0.84	0.02
<i>Lorius albidinucha</i>	1	0.84	
<i>Lorius domicellus</i>	1	0.89	
<i>Lorius garrulus</i>	1	0.92	
<i>Lorius hypoinochrous</i>	1	0.88	
<i>Loxia curvirostra</i>	3	0.81	
<i>Lunda cirrhata</i>	1	1.25	0.03
<i>Luscinia megarhynchos</i>	1	0.74	
<i>Luscinia svecica</i>	1	0.77	
<i>Lybius bidentatus</i>	1	0.83	
<i>Lybius hirsutus</i>	1	0.84	
<i>Lybius lachrymosus</i>	1	0.83	
<i>Lybius minor</i>	1	0.81	
<i>Lybius torquatus</i>	1	0.82	
<i>Lymnocyptes minimus</i>	3	0.93	

<i>Lyrurus tetrrix</i>	5	1.05	0.02
<i>Macheirhamphus alcinus</i>	1	0.82	0.03
<i>Macrocephalon maleo</i>	2	0.94	
<i>Macrodipteryx vexillarius</i>	2	0.76	0.06
<i>Macronectes giganteus</i>	2	1.03	0.01
<i>Macropygia phasianella</i>	1	0.85	0.01
<i>Malacoptila panamensis</i>	1	0.86	
<i>Malacorhynchus membranaceus</i>	1	1.07	
<i>Mancalla cedrosensis</i>	2	2.45	
<i>Mancalla diegensis</i>	1	2.48	0.08
<i>Mancalla diegensis</i>	1	2.49	
<i>Mancalla milleri</i>	1	2.39	
<i>Margaroperdix madagascariensis</i>	1	1.13	
<i>Masillacolius brevidactylus</i>	3	1.07	
<i>Megadyptes antipodes</i>	2	1.33	0.04
<i>Megalaima asiatica</i>	1	0.78	0.07
<i>Megalaima haemacephala</i>	1	0.83	
<i>Megaloprepria magnifica</i>	1	0.88	
<i>Megapodius eremita</i>	1	0.92	
<i>Melanerpes erythrocephalus</i>	1	0.97	
<i>Melanerpes rubricapillus</i>	1	0.82	
<i>Melanerpes superciliaris</i>	1	0.81	
<i>Melanitta fusca</i>	7	1.12	
<i>Melanitta nigra</i>	4	1.07	0.04
<i>Melanitta perspicillata</i>	1	1.13	0.04
<i>Melanocorypha yeltoniensis</i>	1	0.95	
<i>Melanotrochilus fuscus</i>	1	0.88	
<i>Meleagris gallopavo</i>	5	1.08	
<i>Melierax metabates</i>	1	1.00	0.05
<i>Meliphaga virescens</i>	1	0.81	
<i>Melopsittacus undulatus</i>	3	0.88	
<i>Menura novaehollandiae</i>	2	1.06	0.01
<i>Merganetta armata</i>	2	1.23	0.06
<i>Mergus albellus</i>	3	1.25	0.13
<i>Mergus australis</i>	2	1.25	0.06
<i>Mergus cucullatus</i>	3	1.21	0.01
<i>Mergus merganser</i>	8	1.25	0.02
<i>Mergus serrator</i>	7	1.23	0.11
<i>Merops albicollis</i>	1	0.77	0.08
<i>Merops apiaster</i>	1	0.78	
<i>Merops gularis</i>	1	0.79	
<i>Merops muelleri</i>	1	0.77	
<i>Merops nubicus</i>	1	0.76	
<i>Merops ornatus</i>	1	0.82	
<i>Merops pusillus</i>	1	0.74	
<i>Merops superciliosus</i>	1	0.75	
<i>Merops variegatus</i>	1	0.75	
<i>Mesembrinibis cayennensis</i>	2	0.87	

<i>Mesitornis unicolor</i>	1	1.11	0.01
<i>Mesitornis variegata</i>	1	0.95	
<i>Mesopicos goertae</i>	1	0.83	
<i>Mesopicos griseocephalus</i>	1	0.85	
<i>Mesopicos xantholophus</i>	1	0.84	
<i>Messelornis neartica</i>	1	1.06	
<i>Micrastur semitorquatus</i>	1	0.96	
<i>Microhierax fringillarius</i>	1	0.80	
<i>Micropsitta keiensis</i>	1	0.86	
<i>Micropsitta meeki</i>	1	0.91	
<i>Microtrogon ramonianus</i>	3	0.86	
<i>Milvago chimango</i>	2	0.91	0.05
<i>Milvus migrans</i>	5	0.87	0.04
<i>Milvus milvus</i>	4	0.87	0.02
<i>Mimus polyglottos</i>	1	0.84	0.04
<i>Miosula media</i>	1	1.29	
<i>Mirafra javanica</i>	2	0.91	
<i>Momotus mexicanus</i>	2	0.86	0.08
<i>Momotus momota</i>	4	0.87	0.04
<i>Monasa atra</i>	1	0.84	0.05
<i>Monasa morphoeus</i>	2	0.78	
<i>Monasa nigrifrons</i>	2	0.87	0.03
<i>Monias benschi</i>	1	1.00	0.02
<i>Monticola saxatilis</i>	1	0.72	
<i>Monticola solitarius</i>	1	0.72	
<i>Morphnus guianensis</i>	1	0.82	
<i>Morus bassanus</i>	6	1.16	
<i>Morus lompocana</i>	1	1.14	0.02
<i>Motacilla alba</i>	3	0.80	
<i>Motacilla cinerea</i>	2	0.76	0.02
<i>Motacilla flava</i>	1	0.76	0.05
<i>Muscicapa griseisticta</i>	1	0.81	
<i>Muscicapa striata</i>	3	0.71	
<i>Muscisaxicola brevicauda</i>	1	0.92	0.04
<i>Muscisaxicola plauinucha</i>	1	0.79	
<i>Muscivora tyrannus</i>	1	0.73	
<i>Musophaga rossae</i>	1	1.07	
<i>Mycteria americana</i>	3	0.80	
<i>Myiobius barbatus</i>	1	0.81	0.04
<i>Myiophoneus caeruleus</i>	1	0.89	
<i>Myiopsitta monachus</i>	1	0.88	
<i>Myzomela obscura</i>	1	0.88	
<i>Nandayus nenday</i>	1	0.84	
<i>Nannopterum harrisi</i>	4	1.22	
<i>Neochen jubata</i>	1	0.97	0.01
<i>Neophema bourkii</i>	1	0.86	
<i>Neophema elegans</i>	2	0.88	
<i>Neophron percnopterus</i>	3	0.88	0.01
<i>Neotis denhami</i>	2	0.87	0.02
<i>Nestor meridionalis</i>	2	0.93	0.01

<i>Nestor notabilis</i>	3	0.91	0.04
<i>Netta peposaca</i>	3	1.19	0.01
<i>Netta rufina</i>	2	1.15	0.06
<i>Nettapus auritus</i>	1	1.15	0.02
<i>Nettapus coromandelianus</i>	1	1.14	
<i>Nettapus pulchellus</i>	1	1.13	
<i>Ninox scutulata</i>	1	0.87	
<i>Notharchus macrorhynchus</i>	1	0.80	
<i>Notharchus tectus</i>	2	0.84	
<i>Nothoprocta perdicaria</i>	1	0.99	0.01
<i>Nothura maculosa</i>	4	1.01	
<i>Nothura sp.</i>	1	1.00	0.03
<i>Nucifraga caryocatactes</i>	1	0.76	
<i>Numenius americanus</i>	1	0.93	
<i>Numenius arquata</i>	6	0.92	
<i>Numenius phaeopus</i>	3	0.89	0.03
<i>Numida meleagris</i>	2	1.11	0.02
<i>Nyctea scandiaca</i>	2	0.90	0.12
<i>Nyctibius griseus</i>	1	0.95	0.03
<i>Nycticorax nycticorax</i>	5	0.90	
<i>Nycticorax sp.</i>	1	0.89	0.02
<i>Nyctidromus albicollis</i>	2	0.80	
<i>Nyctiprogne leucopyga</i>	1	0.68	0.09
<i>Nymphicus hollandicus</i>	2	0.83	
<i>Oceanites oceanicus</i>	3	1.13	0.01
<i>Oceanodroma leucorhoa</i>	4	1.03	0.06
<i>Oceanodroma tethys</i>	1	1.03	0.04
<i>Ocyphaps lophotes</i>	2	0.99	
<i>Odontophorus guttatus</i>	2	1.11	0.10
<i>Odontophorus sp.</i>	1	1.03	0.01
<i>Oena capensis</i>	2	0.79	
<i>Opisthocomus hoazin</i>	14	0.98	0.02
<i>Oreortyx pictus</i>	1	1.03	0.07
<i>Oriolus oriolus</i>	2	0.78	
<i>Ortalis araucan</i>	3	1.06	0.02
<i>Ortalis guttata</i>	1	1.19	0.03
<i>Ortalis motmot</i>	1	1.06	
<i>Ortalis vetula</i>	1	1.20	
<i>Ortyxelos meiffrenii</i>	1	0.89	
<i>Otis tarda</i>	3	0.93	
<i>Otis tetrax</i>	3	0.94	0.03
<i>Otus asio</i>	2	0.94	0.04
<i>Otus leucotis</i>	1	0.86	0.01
<i>Otus scops</i>	3	0.83	
<i>Oxyura australis</i>	1	1.26	0.08
<i>Oxyura dominica</i>	1	1.09	
<i>Oxyura jamaicensis</i>	1	1.11	
<i>Oxyura vittata</i>	1	1.18	
<i>Pachyplichas jagui</i>	1	0.92	
<i>Pachyplichas yaldwyni</i>	1	0.95	

<i>Pachyptila belcheri</i>	1	1.03	
<i>Pachyptila desolata</i>	1	1.03	
<i>Pachyptila turtur</i>	1	1.02	
<i>Pagodroma nivea</i>	3	1.07	
<i>Palaeoglaux artophoron</i>	2	0.85	0.03
<i>Palaeospheniscus gracilis</i>	1	1.43	0.04
<i>Palaeospheniscus patagonicus</i>	1	1.31	
<i>Palaeospheniscus robustus</i>	1	1.33	
<i>Palaeosula stocktoni</i>	1	1.51	
<i>Palaeotis weigelti</i>	1	1.63	
<i>Pandion haliaetus</i>	5	0.79	
<i>Parus ater</i>	1	0.84	0.02
<i>Parus atricapillus</i>	1	0.85	
<i>Parus caeruleus</i>	2	0.82	
<i>Parus cristatus</i>	2	0.79	0.01
<i>Parus major</i>	2	0.82	0.08
<i>Parus montanus</i>	1	0.83	0.04
<i>Parus palustris</i>	1	0.85	
<i>Parus palustris communis</i>	1	0.80	
<i>Parus palustris longirostris</i>	1	0.88	
<i>Passer domesticus</i>	3	0.85	
<i>Passer montanus</i>	2	0.88	0.06
<i>Patagona gigas</i>	1	0.89	0.03
<i>Pavo cristatus</i>	4	1.16	
<i>Pelagodroma marina</i>	2	1.08	0.08
<i>Pelecanoides urinatrix</i>	5	1.23	0.05
<i>Pelecanus erythrorhynchos</i>	2	0.91	0.08
<i>Pelecanus occidentalis</i>	6	0.84	0.01
<i>Pelecanus onocrotalus</i>	2	0.87	0.03
<i>Pelecanus rufescens</i>	1	0.86	0.01
<i>Penelope obscura</i>	2	0.99	
<i>Penelope purpurascens</i>	2	1.02	0.01
<i>Penelope sp.</i>	1	1.01	0.05
<i>Penelopina nigra</i>	2	0.99	
<i>Perdica asiatica</i>	1	1.17	0.07
<i>Perdix perdix</i>	3	1.11	
<i>Pernis apivorus</i>	6	0.89	0.04
<i>Petrochelidon pyrrhonota</i>	1	0.66	0.04
<i>Petronia petronia</i>	1	0.80	
<i>Pezophaps solitaria</i>	2	1.39	
<i>Phaethon aethereus</i>	1	0.96	0.01
<i>Phaethon lepturus</i>	4	0.96	
<i>Phaethon rubricauda</i>	3	0.94	0.04
<i>Phalacroboenus australis</i>	1	1.08	0.03
<i>Phalacrocorax africanus</i>	4	1.00	
<i>Phalacrocorax aristotelis</i>	2	0.94	0.03
<i>Phalacrocorax atriceps</i>	2	0.94	0.03
<i>Phalacrocorax auritus</i>	5	0.96	0.01
<i>Phalacrocorax bougainvillii</i>	3	0.93	0.01
<i>Phalacrocorax carbo</i>	14	0.93	0.01

<i>Phalacrocorax magellanicus</i>	2	0.95	0.04
<i>Phalacrocorax melanoleucos</i>	3	0.97	0.01
<i>Phalacrocorax nigrogularis</i>	3	0.94	0.01
<i>Phalacrocorax penicillatus</i>	3	0.93	0.01
<i>Phalacrocorax sulcirostris</i>	1	1.02	0.02
<i>Phalacrocorax urile</i>	3	0.94	
<i>Phalacrocorax varius</i>	1	0.92	0.01
<i>Phalaropus fulicarius</i>	2	0.99	
<i>Phalaropus lobatus</i>	2	0.99	0.04
<i>Phalaropus tricolor</i>	1	0.94	0.01
<i>Phaps chalcoptera</i>	1	0.88	
<i>Phaps elegans</i>	2	0.86	
<i>Pharomachrus mocinno</i>	1	0.86	0.01
<i>Phasianus colchicus</i>	2	1.11	
<i>Philepitta castanea</i>	2	0.74	0.02
<i>Philomachus pugnax</i>	5	0.93	0.03
<i>Phimosus infuscatus</i>	1	0.90	0.03
<i>Phoenicopterus antiquarum</i>	2	0.95	
<i>Phoenicopterus ruber</i>	13	0.94	0.01
<i>Phoeniculus bollei</i>	2	0.82	0.01
<i>Phoeniculus castaneiceps</i>	1	0.80	0.01
<i>Phoeniculus cyanomelas</i>	1	0.81	
<i>Phoeniculus purpureus</i>	2	0.83	
<i>Phoenicurus ochruros</i>	2	0.77	0.01
<i>Phoenicurus phoenicurus</i>	2	0.79	0.06
<i>Phylloscopus bonellii</i>	1	0.70	0.02
<i>Phylloscopus collybita</i>	2	0.80	
<i>Phytotoma rara</i>	1	0.93	0.09
<i>Piaya cayana</i>	4	1.14	
<i>Pica pica</i>	5	0.84	0.05
<i>Picoides major</i>	4	0.86	0.04
<i>Picoides minor</i>	4	0.86	0.05
<i>Picoides pubescens</i>	2	0.89	0.03
<i>Picus viridis</i>	5	0.86	0.01
<i>Pilherodias pileatus</i>	1	0.95	0.05
<i>Pinguinnus impennes</i>	8	1.86	
<i>Pionus maximiliani</i>	1	0.82	0.10
<i>Pionus menstruus</i>	1	0.80	
<i>Pionus senilis</i>	2	0.89	
<i>Pipile cumanensis</i>	1	0.90	0.01
<i>Pipra erythrocephala</i>	1	0.81	
<i>Piranga rubra</i>	1	0.82	
<i>Pitangus lictor</i>	2	0.75	
<i>Pitangus sulphuratus</i>	1	0.74	0.12
<i>Pitta baudi</i>	2	0.88	
<i>Pitta sordida</i>	5	0.77	0.01
<i>Pityriasis gymnocephala</i>	1	0.96	0.10
<i>Platalea leucorodia</i>	3	0.90	
<i>Platycercus adscitus</i>	2	0.83	0.01
<i>Platycercus caledonicus</i>	2	0.86	0.01

<i>Platycercus elegans</i>	2	0.87	0.01
<i>Platycercus eximius</i>	2	0.86	0.01
<i>Plectrophenax nivalis</i>	2	0.85	0.01
<i>Plectropterus gambensis</i>	3	1.10	0.02
<i>Plegadis falcinellus</i>	4	0.91	0.03
<i>Plegadis sp.</i>	1	0.93	0.05
<i>Pluvialis apricaria</i>	4	0.92	
<i>Pluvialis squatarola</i>	5	0.95	0.05
<i>Pluvianus aegyptius</i>	1	0.88	0.01
<i>Podargus ocellatus</i>	1	0.90	
<i>Podargus strigoides</i>	2	0.84	
<i>Podica senegalensis</i>	2	1.20	0.02
<i>Podiceps auritus</i>	6	1.14	0.01
<i>Podiceps cristatus</i>	6	1.06	0.01
<i>Podiceps grisegena</i>	3	1.09	0.03
<i>Podiceps nigricollis</i>	4	1.09	0.06
<i>Podiceps occipitalis</i>	2	1.08	0.05
<i>Podiceps rolland</i>	2	1.12	0.01
<i>Podiceps ruficollis</i>	5	1.09	0.01
<i>Podiceps taczanowskii</i>	2	1.11	0.04
<i>Podilymbus gigas</i>	2	1.12	0.01
<i>Podilymbus podiceps</i>	10	1.09	0.01
<i>Poephila guttata</i>	1	0.94	0.03
<i>Pogoniulus bilineatus</i>	1	0.85	
<i>Pogoniulus chrysoconus</i>	2	0.81	
<i>Pogoniulus scolopaceus</i>	1	0.80	0.01
<i>Poicephalus gulielmi</i>	1	0.87	
<i>Poicephalus meyeri</i>	1	0.87	
<i>Poicephalus robustus</i>	2	0.79	
<i>Poicephalus senegalus</i>	1	0.86	0.01
<i>Polyboroides radiatus</i>	4	0.93	
<i>Polyborus plancus</i>	4	0.99	0.03
<i>Polyplectron bicalcaratum</i>	2	1.05	0.04
<i>Polytelis anthopeplus</i>	2	0.87	0.01
<i>Polytelis swainsonii</i>	2	0.89	0.01
<i>Porphyrio albus</i>	1	1.10	0.03
<i>Porphyrio porphyrio</i>	10	1.07	
<i>Porphyriornis nesiotis</i>	3	1.28	0.05
<i>Porphyryula alleni</i>	3	1.12	0.02
<i>Porzana astrictocarpus</i>	1	1.36	0.02
<i>Porzana carolina</i>	1	1.17	
<i>Porzana porzana</i>	4	1.17	
<i>Porzana pusilla</i>	1	1.22	0.02
<i>Porzanula palmeri</i>	1	1.34	
<i>Praemancalla sp.</i>	1	1.92	
<i>Praemancalla wetmorei</i>	1	2.31	
<i>Primapus szarskii</i>	4	0.66	
<i>Primobucco mcgrewi</i>	1	0.81	0.04
<i>Primobucco olsoni</i>	1	0.94	
<i>Prionochilus maculatus</i>	1	0.79	

<i>Priotelus temnurus</i>	1	0.83	
<i>Probosciger aterrimus</i>	3	0.84	
<i>Procellaria aequinoctialis</i>	2	0.98	0.04
<i>Procnias nudicollis</i>	1	0.79	0.01
<i>Procypseloides ignotus</i>	1	0.66	
<i>Progne subis</i>	1	0.70	
<i>Prosopieia personata</i>	1	0.82	
<i>Prunella modularis</i>	3	0.93	
<i>Psephotus haematogaster</i>	1	0.87	0.02
<i>Psephotus haematonotus</i>	2	0.88	
<i>Psittacula alexandri</i>	1	0.84	0.01
<i>Psittacula columboides</i>	1	0.84	
<i>Psittacula cyanicephala</i>	2	0.83	
<i>Psittacula krameri</i>	2	0.84	0.01
<i>Psittacula longicauda</i>	1	0.82	0.01
<i>Psittacus erithacus</i>	3	0.82	
<i>Psittirichas fulgidus</i>	1	0.82	0.03
<i>Psophia crepitans</i>	2	1.07	
<i>Psophia viridis</i>	2	1.07	0.01
<i>Pterocles coronatus</i>	1	0.85	0.03
<i>Pterocles exustus</i>	1	0.82	
<i>Pterocles lichtensteinii</i>	1	0.83	
<i>Pterocles quadricinctus</i>	2	0.85	
<i>Pterodroma hypoleuca</i>	1	0.99	0.01
<i>Pterodroma inexpectata</i>	1	1.01	
<i>Pterodroma lessonii</i>	1	0.99	
<i>Pterodroma macroptera</i>	1	0.95	
<i>Pteroglossus aracari</i>	5	0.76	
<i>Pteroglossus bitorquatus</i>	1	0.80	0.06
<i>Pteroglossus castanotis</i>	1	0.73	
<i>Pteroglossus viridis</i>	2	0.71	
<i>Pteronetta hartlaubii</i>	1	1.07	0.01
<i>Pterophassa scripta</i>	1	0.89	
<i>Pteroptochos megapodius</i>	1	1.09	
<i>Ptilinopus cinctus</i>	1	0.85	
<i>Ptilinopus melanospila</i>	1	0.85	
<i>Ptilinopus roseicapillus</i>	1	0.82	
<i>Ptilopachus petrosus</i>	1	1.07	
<i>Pucrasia maculophya</i>	1	1.03	
<i>Puffinus assimilis</i>	1	1.09	
<i>Puffinus diomedea</i>	1	0.99	
<i>Puffinus griseus</i>	3	1.04	
<i>Puffinus puffinus</i>	3	1.11	0.03
<i>Puffinus tenuirostris</i>	1	1.05	0.06
<i>Pulsatrix perspicillata</i>	2	0.89	
<i>Pygoscelis adeliae</i>	3	1.51	0.06
<i>Pygoscelis papua</i>	2	1.44	0.02
<i>Pyrrhocorax graculus</i>	1	0.73	0.05
<i>Pyrrhocorax pyrrhocorax</i>	1	0.86	
<i>Pyrrhula pyrrhula</i>	2	0.82	

<i>Pyrrhura frontalis</i>	1	0.83	0.12
<i>Pyrrhura leucotis</i>	1	0.84	
<i>Rallus aquaticus</i>	7	1.23	
<i>Ramphastos dicolorus</i>	1	0.75	0.05
<i>Ramphastos sulfuratus</i>	1	0.78	
<i>Ramphastos toco</i>	2	0.81	
<i>Ramphastos vitellinus</i>	2	0.74	0.08
<i>Raphus cucullatus</i>	3	1.22	0.01
<i>Recurvirostra americana</i>	6	0.99	0.04
<i>Recurvirostra avosetta</i>	3	0.96	0.02
<i>Regulus regulus</i>	3	0.69	0.02
<i>Rhea americana</i>	7	1.36	0.07
<i>Rhodonessa caryophyllacea</i>	1	1.12	0.05
<i>Rhynchocyclus olivaceus</i>	1	0.85	
<i>Rhynchops flavirostris</i>	2	0.80	
<i>Rhynchops niger</i>	3	0.82	0.01
<i>Rhynchotus rufescens</i>	3	1.01	0.01
<i>Rhynochetos jubatus</i>	3	0.97	0.02
<i>Riparia riparia</i>	3	0.67	0.02
<i>Rissa tridactyla</i>	4	0.90	0.04
<i>Rollulus roulroul</i>	1	0.97	0.03
<i>Rostratula benghalensis</i>	2	0.90	
<i>Rostrhamus sociabilis</i>	1	0.83	0.01
<i>Rupicola rupicola</i>	1	0.79	
<i>Sagittarius serpentarius</i>	5	0.99	
<i>Sandcoleus copiosus</i>	2	1.11	0.03
<i>Sarcogyps calvus</i>	1	0.70	0.02
<i>Sarcorhamphus papa</i>	4	0.82	
<i>Sarkidiornis melanotos</i>	1	1.10	0.01
<i>Sarothrura bohmi</i>	1	1.09	
<i>Sarothrura pulchra</i>	1	1.11	
<i>Saxicola rubetra</i>	2	0.74	
<i>Saxicola torquata</i>	2	0.79	0.04
<i>Scaniacypselus wardi</i>	1	0.66	0.04
<i>Scelorchilus albicollis</i>	1	1.11	
<i>Scolopax rusticola</i>	3	0.91	
<i>Scopus umbretta</i>	1	0.81	0.03
<i>Seiurus aurocapillus</i>	1	0.85	
<i>Serinus canaria</i>	1	0.75	
<i>Serinus citrinella</i>	1	0.80	
<i>Sitta carolinensis</i>	1	0.86	
<i>Sitta europaea</i>	3	0.83	
<i>Somateria mollissima</i>	6	1.14	0.04
<i>Somateria spectabilis</i>	1	1.14	0.05
<i>Speotyto cunicularia</i>	1	0.84	
<i>Spheniscus demersus</i>	6	1.28	
<i>Spheniscus humboldti</i>	4	1.46	0.12
<i>Spheniscus magellanicus</i>	2	1.37	0.06
<i>Spheniscus mendiculus</i>	1	1.46	0.01
<i>Spheniscus sp.</i>	1	1.43	

<i>Sphyrapicus varius</i>	1	0.81	
<i>Spilornis cheela</i>	1	0.86	
<i>Spizaetus nipalensis</i>	2	0.89	
<i>Spizaetus ornatus</i>	3	0.89	0.01
<i>Starnoenas cyanocephala</i>	2	0.90	0.01
<i>Steatornis caripensis</i>	3	0.68	0.01
<i>Stelgidopteryx ruficollis</i>	1	0.58	0.02
<i>Stephanoaetus coronatus</i>	1	0.82	
<i>Stercorarius parasiticus</i>	3	0.95	
<i>Sterna albifrons</i>	2	0.88	0.03
<i>Sterna bergii</i>	1	0.83	0.01
<i>Sterna fuscata</i>	1	0.86	
<i>Sterna hirundo</i>	7	0.84	
<i>Sterna maxima</i>	1	0.83	0.02
<i>Sterna nilotica</i>	2	0.84	
<i>Sterna paradisaea</i>	3	0.86	0.01
<i>Sterna repressa</i>	1	0.84	0.01
<i>Sterna sandvicensis</i>	3	0.82	
<i>Sterna striata</i>	2	0.87	0.02
<i>Stictonetta naevosa</i>	1	1.13	0.01
<i>Strepera graculina</i>	1	0.84	
<i>Streptopelia capicola</i>	1	0.81	
<i>Streptopelia chinensis</i>	1	0.85	
<i>Streptopelia decaocto</i>	1	0.85	
<i>Streptopelia decipiens</i>	1	0.92	
<i>Streptopelia lugens</i>	1	0.83	
<i>Streptopelia roseogrisea</i>	2	0.81	
<i>Streptopelia semitorquata</i>	1	0.84	0.01
<i>Streptopelia senegalensis</i>	1	0.85	
<i>Streptopelia turtur</i>	4	0.86	
<i>Strigops habroptilus</i>	6	1.03	0.04
<i>Strix aluco</i>	4	0.89	0.04
<i>Strix varia</i>	2	0.96	0.05
<i>Struthio camelus</i>	6	3.18	0.01
<i>Sturnus vulgaris</i>	3	0.82	0.14
<i>Sula abbotti</i>	1	0.98	0.02
<i>Sula dactylatra</i>	5	0.92	
<i>Sula leucogaster</i>	3	0.87	0.08
<i>Sula nebouxii</i>	1	0.99	0.07
<i>Sula pohli</i>	2	0.93	
<i>Sula sp.</i>	1	0.95	0.07
<i>Sula sula</i>	3	0.92	
<i>Sula tasmani</i>	1	0.99	0.04
<i>Sula variegata</i>	2	0.93	
<i>Sula willetti</i>	1	1.06	0.07
<i>Surnia ulula</i>	1	0.89	
<i>Sylvia atricapilla</i>	1	0.85	
<i>Sylvia borin</i>	2	0.89	
<i>Sylvia communis</i>	1	0.85	0.06
<i>Sylvia curruca</i>	1	0.83	

<i>Synoicus ypsilophorus</i>	1	1.18	
<i>Synthliboramphus antiquus</i>	1	1.30	
<i>Syrigma sibilatrix</i>	2	0.84	
<i>Syrmaticus ellioti</i>	1	1.01	0.01
<i>Syrmaticus mikado</i>	1	1.03	
<i>Syrmaticus reevesii</i>	1	1.03	
<i>Syrmaticus soemmerringii</i>	1	1.02	
<i>Syrrhaptes paradoxus</i>	2	0.93	
<i>Tachyeres brachypterus</i>	3	1.28	0.02
<i>Tachyeres leucocephalus</i>	2	1.22	0.05
<i>Tachyeres patachonicus</i>	3	1.21	0.01
<i>Tachyeres pteneres</i>	4	1.30	0.01
<i>Tadorna cana</i>	1	1.06	0.01
<i>Tadorna ferruginea</i>	2	1.07	
<i>Tadorna radjah</i>	1	1.04	0.09
<i>Tadorna tadorna</i>	2	1.08	
<i>Tadorna tadornoides</i>	1	1.06	0.05
<i>Tadorna variegata</i>	1	1.05	
<i>Tanygnathus sumatranus</i>	1	0.83	
<i>Tapera naevia</i>	2	1.06	
<i>Taraba major</i>	1	1.01	0.08
<i>Tauraco johnstoni</i>	1	1.12	
<i>Tauraco persa</i>	1	1.10	
<i>Tauraco schuettii</i>	1	1.10	
<i>Tauraco sp.</i>	2	1.09	
<i>Terathopius ecaudatus</i>	3	0.79	0.01
<i>Teratornis merriami</i>	1	0.75	0.02
<i>Tetrao sp.</i>	1	1.06	
<i>Tetrao urogallus</i>	6	1.03	
<i>Thalurania glaucopis</i>	1	0.86	0.06
<i>Thamnophilus punctatus</i>	1	0.91	
<i>Theristicus caudatus</i>	4	0.91	
<i>Thinocorus orbignyianus</i>	2	0.93	0.03
<i>Threskiornis aethiopica</i>	1	0.86	0.01
<i>Threskiornis spinicollis</i>	2	0.91	
<i>Tichodroma muraria</i>	1	0.77	0.02
<i>Tigrisoma lineatum</i>	3	0.87	
<i>Tinamus major</i>	1	1.04	0.04
<i>Tinamus tao</i>	1	0.99	
<i>Tockus alboterminatus</i>	2	0.67	
<i>Tockus camurus</i>	1	0.69	0.01
<i>Tockus deckeni</i>	1	0.73	
<i>Tockus erythrorhynchus</i>	2	0.72	
<i>Tockus fasciatus</i>	1	0.66	0.01
<i>Tockus hartlaubi</i>	1	0.67	
<i>Tockus nasutus</i>	2	0.68	
<i>Todus angustirostris</i>	4	0.76	0.01
<i>Todus multicolor</i>	1	0.77	0.03
<i>Todus sp.</i>	2	0.71	
<i>Todus todus</i>	1	0.86	0.03

<i>Toxostoma bendirei</i>	1	0.91	
<i>Toxostoma curvirostre</i>	1	0.92	
<i>Toxostoma dorsale</i>	1	0.95	
<i>Toxostoma lecontei</i>	1	0.95	
<i>Toxostoma montanus</i>	1	0.87	
<i>Toxostoma redivivum</i>	1	0.96	
<i>Toxostoma rufum</i>	2	0.96	
<i>Trachyphonus erythrocephalus</i>	1	0.91	0.06
<i>Tragopan caboti</i>	1	0.98	
<i>Tragopan melanocephalus</i>	1	1.00	
<i>Tragopan satyra</i>	2	1.00	
<i>Tragopan temminckii</i>	2	1.02	0.03
<i>Traversia lyalli</i>	1	1.03	0.02
<i>Treron australis</i>	1	0.85	
<i>Treron oxyura</i>	1	0.83	
<i>Treron phoenicoptera</i>	1	0.83	
<i>Treron waalia</i>	1	0.84	
<i>Trichoglossus chlorolepidotus</i>	1	0.91	
<i>Trichoglossus haematodus</i>	2	0.89	
<i>Trichoglossus ornatus</i>	4	0.96	0.01
<i>Trigonoceps occipitalis</i>	1	0.73	0.05
<i>Tringa erythropus</i>	2	0.91	
<i>Tringa flavipes</i>	3	0.96	0.02
<i>Tringa glareola</i>	2	0.90	0.01
<i>Tringa hypolecus</i>	2	0.91	0.01
<i>Tringa nebularia</i>	2	0.95	0.01
<i>Tringa ochropus</i>	3	0.92	0.01
<i>Tringa totanus</i>	3	0.91	0.02
<i>Troglodytes troglodytes</i>	2	0.84	0.02
<i>Trogon massena</i>	1	0.96	0.10
<i>Trogon melanurus</i>	1	0.83	
<i>Turdus iliacus</i>	3	0.84	
<i>Turdus merula</i>	4	0.86	0.02
<i>Turdus migratorius</i>	1	0.91	0.03
<i>Turdus naumanni</i>	1	0.83	
<i>Turdus philomelos</i>	2	0.87	
<i>Turdus pilaris</i>	2	0.85	0.01
<i>Turdus torquatus</i>	2	0.81	0.02
<i>Turdus viscivorus</i>	2	0.87	0.08
<i>Turnix nigricollis</i>	2	0.99	0.03
<i>Turnix suscitator</i>	2	1.04	0.01
<i>Turnix sylvatica</i>	1	1.04	0.02
<i>Turnix varia</i>	1	1.03	
<i>Turtur brehmeri</i>	1	0.84	
<i>Turtur chalcospilos</i>	1	0.85	
<i>Tympanistria tympanistria</i>	1	0.84	
<i>Tympanuchus cupido</i>	2	1.11	
<i>Tyrannus melancholicus</i>	1	0.74	0.10
<i>Tyrannus tyrannus</i>	1	0.69	
<i>Tyto alba</i>	6	0.90	

<i>Tyto capensis</i>	1	0.87	0.02
<i>Upupa epops</i>	4	0.75	
<i>Uraeginthus bengalus</i>	1	0.86	0.02
<i>Uria aalge</i>	11	1.38	
<i>Uria lomvia</i>	6	1.28	0.15
<i>Vanellus albiceps</i>	1	0.83	0.06
<i>Vanellus chilensis</i>	3	0.89	
<i>Vanellus coronatus</i>	1	0.90	0.03
<i>Vanellus crassirostris</i>	1	0.87	
<i>Vanellus spinosus</i>	1	0.90	
<i>Vanellus tricolor</i>	1	0.89	
<i>Vanellus vanellus</i>	3	0.89	
<i>Vestiaria coccinea</i>	1	0.83	0.06
<i>Vini australis</i>	1	0.91	
<i>Vireo olivaceus</i>	1	0.82	
<i>Vultur californianus</i>	4	0.86	
<i>Vultur gryphus</i>	6	0.84	0.01
<i>Wilsonia pusilla</i>	1	0.80	0.02
<i>Xenicus gilviventris</i>	1	0.85	
<i>Xenicus longiceps</i>	2	0.86	
<i>Xenorhynchus asiaticus</i>	3	0.84	0.01
<i>Xiphorhynchus guttatus</i>	1	0.86	0.04
<i>Zenaida auriculata</i>	1	0.87	
<i>Zenaida macroura</i>	3	0.89	
<i>Zonotrichia leucophrys</i>	1	1.05	0.06
<i>Zosterops lutea</i>	1	0.81	

Electronic Appendix B

BI and the phylogeny of modern birds

In figure 1, mean BI is plotted onto the ordinal-level phylogeny presented by Sibley and Ahlquist (1990). At this level, and assuming the approximate validity of the results presented by these workers, values of BI of less than 1 occur within the clade comprising the Piciformes and higher terminals (i.e. Passeriformes). The distribution of the values of BI within this part of the cladogram suggests a correlated reduction in the relative length of the humerus and increase in the relative length of the ulna throughout the evolution of these "higher" clades. This trend towards reduction of the humerus culminates in orders like the swifts (Apodiformes) and hummingbirds (Trochiliformes) where the length of this element is extremely abbreviated.

Interestingly, observed values of BI within the two orders Tinamiformes and Turniciformes and in the Cracidae (Craciformes) cluster close to 1 (figure 1): these relatively primitive groups have long proved difficult to classify. Within most of the other avian orders, with few exceptions (see below), the BI remains consistently greater than or less than 1 and a narrow range of values are seen within these clades. Groups in which BI is > 1 include the clades Struthioniformes, Galliformes, Anseriformes, Coliiformes, Cuculiformes, and Musophagiformes. Overall, most of the species that have particularly high values of BI are those that have relatively low wing area. A reduction in feather area can be achieved by a shortening of the ulna, which will determine the extent of the secondary feather area available for flight (Rayner 1988). Groups in which BI is < 1 are the Craciformes (Megapodidae), Piciformes, Galbuliformes, Bucerotiformes, Upupiformes, Trogoniformes, Coraciiformes, Psittaciformes, Apodiformes, Trochiliformes, Strigiformes, Columbiformes and Passeriformes.

Observed stability of the brachial index to the phylogenetic topology of Sibley and Ahlquist (1990) is remarkable, but there are a number of exceptions at this level, most notably the average values for the Coliiformes, Cuculiformes, Gruiformes and Ciconiformes. The phylogenetic positions of these orders, however, are controversial. The clades "Gruiformes" (figure 3a) and "Ciconiiformes" (figure 3b) of Sibley and Ahlquist (1990) correspond to large and complex groups, which other authors (Wetmore 1960; Gruson 1976; Cracraft *et al.* In press) have considered substantially different in composition. Members of the groupings Gruiformes and Ciconiiformes (Sibley & Ahlquist 1990) are varied in their wing proportions. Within the Gruiformes four clades have values of BI > 1 : the Rallidae (1.19 ± 0.12 , species $n = 25$), Cariamidae (1.09 ± 0.06 , species $n = 2$),

Psophiidae (1.07 ± 0.02 , species $n = 2$), and Heliornithidae (1.15 ± 0.12 , species $n = 2$). However, although the Rallidae were considered the most basal clade within Gruiformes by Sibley and Ahlquist (1990), this conclusion is controversial. On the basis of a cladistic analysis of morphological characters, Livezey (1998) hypothesised that the Rallidae are derived within the order, and that clades with $BI < 1$ such as Turnicidae (mean $BI = 0.99 \pm 0.05$, species $n = 7$) and Otidae (mean $BI = 0.91 \pm 0.04$, species $n = 10$) represent the most basal divergences. Indeed, the remaining families within this group are consistent with the reported trend in that they have BI values of > 1 .

Within Sibley and Ahlquist's (1990) large order Ciconiiformes, a few anomalous clades are characterised by $BI > 1$: Procellariidae (1.05 ± 0.07 , $n = 35$), Gaviidae (1.25 ± 0.05 , $n = 6$), Spheniscidae (1.37 ± 0.10 , $n = 18$), Sulidae (1.02 ± 0.15 , $n = 14$) Anhingidae (1.11 ± 0.04 , $n = 2$) and Podcipedidae (1.12 ± 0.07 , $n = 12$). The Laridae also exhibit a $BI > 1$ (1.15 ± 0.38 , $n = 54$), which is explained by the inclusion of underwater swimmers such as the auks and guillemots (the Alcidae, *sensu* Wetmore (1960)), that without exception have BI values > 1.1 . The more aerial species within the Laridae (terns and gulls) exhibit $BI < 1$. Once again BI values of < 1 appear to be primitive for Ciconiiformes: all of the basal lineages within Ciconiiformes (the clades including the Falconidae and Pteroclididae) have BI 's < 1 .

BI distribution among the phylogeny of Cracraft et al (In press) is similar to that found for Sibley and Ahlquist's phylogeny. Paleognaths and the Galloanserae are characterised by $BI > 1$, and higher clades by $BI < 1$. Clades exhibiting $BI > 1$ are identical to those discussed above with reference to the hypothesis of Sibley and Ahlquist (1990), but a lack of resolution amongst the 'higher' land-bird clades (a polytomy) precludes a detailed discussion of BI distribution across the phylogeny.

Although our analyses have demonstrated the presence of a remarkably stable fit between BI and phylogeny, there are a number of exceptions to this trend. All of these exceptions, however, occur within clades characterised by mean values of the BI that do fit within the overall trend (i.e., within a clade that is overall consistent with reported trends). Further investigation shows that exceptions are either secondarily flightless (or near flightless) birds that have evolved to use their wings to swim underwater, or are taxa that have unusual ecologies (when compared to other members of the same clade) (Rayner & Dyke 2002).

Gruson, E. S. 1976 *A Checklist of the Birds of the World*. London: Collins.

Livezey, B. C. 1998 A phylogenetic analysis of the Gruiformes (Aves) based on morphological characters, with an emphasis on the rails (Rallidae). *Phil. Trans. R. Soc. Lond. B* **353**, 2077-2151.

FIGURE LEGENDS (ELECTRONIC APPENDIX B)

Figure 3. Distribution of brachial index among the families contained within the orders a) Gruiformes b) Ciconiiformes *sensu* Sibley and Ahlquist (1990). Values displayed are means \pm s.e (n).

Figure 3a.

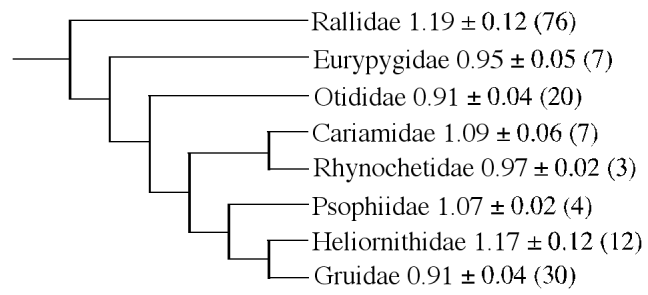


Figure 3b.

