

Supporting Information

Freeman and Class Freeman 10.1073/pnas.1318190111

Table S1. Elevational changes in Mt. Karimui's avifauna

English name	Latin name	Diet	Lower limit (1965), m (1)	Upper limit (1965), m (1)	Lower limit (2012), m	Upper limit (2012), m	Lower limit change, m	Upper limit change, m
Pacific Baza	<i>Aviceda subcristata</i>	Carnivore	NA	1,250	NA	1,203	NA	-47
Papuan Eagle	<i>Harpyopsis novaeguineae</i>	Carnivore	NA	1,981	NA	1,888	NA	-93
Gray-Headed Goshawk	<i>Accipiter poliocephalus</i>	Carnivore	NA	1,524	NA	1,163	NA	-361
Brahminy Kite	<i>Haliastur indus</i>	Carnivore	NA	2,012	NA	2,383	NA	371
Slender-Billed Cuckoo-Dove	<i>Macropygia amboinensis</i>	Frugivore	NA	1,372	NA	1,903	NA	531
Bar-Tailed Cuckoo-Dove	<i>Macropygia nigrirostris</i>	Frugivore	NA	2,316	NA	2,520	NA	204
Great Cuckoo-Dove	<i>Reinwardtoena reinwardti</i>	Frugivore	NA	2,063	NA	2,233	NA	170
Stephan's Emerald Dove	<i>Chalcophaps stephani</i>	Frugivore	NA	1,113	NA	1,423	NA	310
Cinnamon Ground Dove	<i>Gallilolumba rufigula</i>	Frugivore	NA	1,113	NA	1,288	NA	175
Bronze Ground Dove	<i>Gallilolumba beccarii</i>	Frugivore	1,762	2,219	1,363	2,068	-399	-151
Pheasant Pigeon	<i>Otidiphaps nobilis</i>	Frugivore	NA	1,113	NA	1,658	NA	545
Wompo Fruit Dove	<i>Ptilinopus magnificus</i>	Frugivore	NA	1,219	NA	1,033	NA	-186
Ornate Fruit Dove	<i>Ptilinopus ornatus</i>	Frugivore	NA	1,981	NA	1,888	NA	-93
Beautiful Fruit Dove	<i>Ptilinopus pulchellus</i>	Frugivore	NA	1,448	NA	1,243	NA	-205
White-Bibbed Fruit Dove	<i>Ptilinopus rivoli</i>	Frugivore	1,113	2,219	1,243	2,105	130	-114
Purple-Tailed Imperial Pigeon	<i>Ducula rufigaster</i>	Frugivore	NA	1,113	NA	1,283	NA	170
Zoe's Imperial Pigeon	<i>Ducula zoeae</i>	Frugivore	NA	1,113	NA	2,083	NA	970
Papuan Mountain Pigeon	<i>Gymnophaps albertisii</i>	Frugivore	NA	2,134	NA	2,333	NA	199
Sulfur-Crested Cockatoo	<i>Cacatua galerita</i>	Frugivore	NA	1,762	NA	2,373	NA	611
Coconut Lorikeet	<i>Trichoglossus hematodus</i>	Nectarivore	NA	1,463	NA	1,423	NA	-40
Black-Capped Lory	<i>Lorius lory</i>	Nectarivore	NA	1,448	NA	1,423	NA	-25
Red-Flanked Lorikeet	<i>Charmosyna placentis</i>	Nectarivore	NA	1,448	NA	1,323	NA	-125
Fairy Lorikeet	<i>Charmosyna pulchella</i>	Nectarivore	1,341	1,612	1,323	1,913	-18	301
Plum-Faced Lorikeet	<i>Oreopsittacus arfaki</i>	Nectarivore	1,707	2,323	1,943	2,263	236	-60
Brehm's Tiger Parrot	<i>Psittacella brehmii</i>	Frugivore	1,707	2,219	1,765	2,235	58	16
Red-Cheeked Parrot	<i>Geoffroyus geoffroyi</i>	Frugivore	NA	1,113	NA	1,243	NA	130
Blue-Collared Parrot	<i>Geoffroyus simplex</i>	Frugivore	991	1,463	1,033	1,710	42	247
Large Fig Parrot	<i>Psittaculirostris desmarestii</i>	Frugivore	NA	1,280	NA	1,243	NA	-37
Ivory-Billed Coucal	<i>Centropus menbeki</i>	Insectivore	NA	1,311	NA	1,233	NA	-78
White-Eared Bronze Cuckoo	<i>Chrysococcyx meyerii</i>	Insectivore	610	1,448	NA	1,813	NA	365
White-Crowned Cuckoo	<i>Cacomantis leucolophus</i>	Omnivore	NA	1,737	NA	2,200	NA	463
Chestnut-Breasted Cuckoo	<i>Cacomantis castaneiventris</i>	Insectivore	610	1,448	NA	1,593	NA	145
Papuan Boobook	<i>Ninox theomacha</i>	Carnivore	NA	1,981	NA	2,093	NA	112
Marbled Frogmouth	<i>Podargus ocellatus</i>	Insectivore	NA	1,113	NA	1,233	NA	120
Glossy Swiftlet	<i>Collocalia esculenta</i>	Insectivore	NA	2,520	NA	2,520	NA	0
Hook-Billed Kingfisher	<i>Melidora macrorrhina</i>	Insectivore	NA	1,113	NA	1,873	NA	760
Mountain Kingfisher	<i>Syma megarhyncha</i>	Insectivore	1,341	1,737	1,773	2,158	432	421
Variable Dwarf Kingfisher	<i>Ceyx lepidus</i>	Insectivore	NA	1,113	NA	1,388	NA	275
Red-Bellied Pitta	<i>Erythropitta erythrogaster</i>	Insectivore	NA	1,113	NA	1,198	NA	85
White-Eared Catbird	<i>Ailuroedus buccoides</i>	Frugivore	NA	1,113	NA	1,303	NA	190
Spotted Catbird	<i>Ailuroedus melanotis</i>	Frugivore	1,311	1,661	1,366	1,703	55	42
MacGregor's Bowerbird	<i>Amblyornis macgregoriae</i>	Frugivore	1,585	1,981	1,693	2,243	108	262
Papuan Black Myzomela	<i>Myzomela nigrita</i>	Nectarivore	610	1,113	NA	1,243	NA	130
Red-Collared Myzomela	<i>Myzomela rosenbergii</i>	Nectarivore	1,113	2,520	1,273	2,520	160	0
Rufous-Backed Honeyeater	<i>Ptiloprora guisei</i>	Omnivore	1,341	2,520	1,853	2,520	512	0
Spotted Honeyeater	<i>Xanthis polygrammus</i>	Omnivore	991	1,402	NA	1,321	NA	-81
Tawny-Breasted Honeyeater	<i>Xanthis flaviventris</i>	Insectivore	NA	1,478	NA	1,658	NA	180
New Guinea Friarbird	<i>Philemon novaeguineae</i>	Omnivore	NA	610	NA	1,243	NA	633
Long-Billed Honeyeater	<i>Meliphaga megarhynchus</i>	Insectivore	NA	1,643	NA	1,633	NA	-10
Common Smoky Honeyeater	<i>Meliphaga fumigata</i>	Frugivore	1,113	2,520	1,338	2,520	225	0
Olive Straightbill	<i>Timeliopsis fulvigula</i>	Insectivore	1,762	1,981	1,633	2,063	-129	82
Black-Throated Honeyeater	<i>Caligavis subfrenata</i>	Nectarivore	1,341	2,520	1,423	2,520	82	0
Obscure Honeyeater	<i>Caligavis obscura</i>	Omnivore	610	1,411	NA	1,243	NA	-168
Yellow-Browed Melidectes	<i>Melidectes rufocrissalis</i>	Omnivore	1,219	2,520	1,338	2,520	119	0
Ornate Melidectes	<i>Melidectes torquatus</i>	Omnivore	1,113	1,341	1,333	1,888	220	547
Mottle-Breasted Honeyeater	<i>Meliphaga mimikae</i>	Omnivore	411	1,372	NA	1,313	NA	-59
Mountain Honeyeater	<i>Meliphaga orientalis</i>	Omnivore	1,113	1,707	1,423	1,883	310	176
Mimic Honeyeater	<i>Meliphaga analoga</i>	Omnivore	NA	991	NA	1,163	NA	172

Table S1. Cont.

English name	Latin name	Diet	Lower limit (1965), m (1)	Upper limit (1965), m (1)	Lower limit (2012), m	Upper limit (2012), m	Lower limit change, m	Upper limit change, m
Puff-Backed Honeyeater	<i>Meliphaga aruensis</i>	Omnivore	NA	1,113	NA	1,158	NA	45
Rusty Mouse-Warbler	<i>Crateroscelis murina</i>	Insectivore	NA	1,644	NA	1,765	NA	121
Mountain Mouse-Warbler	<i>Crateroscelis robusta</i>	Insectivore	1,646	2,520	1,893	2,520	247	0
Pale-Billed Scrubwren	<i>Sericornis spilodera</i>	Insectivore	610	1,292	NA	1,443	NA	151
Papuan Scrubwren	<i>Sericornis papuensis</i>	Insectivore	1,966	2,520	1,943	2,520	-23	0
Large Scrubwren	<i>Sericornis nouhuysi</i>	Insectivore	1,554	2,520	1,473	2,426	-81	-94
Buff-Faced Scrubwren	<i>Sericornis perspicillatus</i>	Insectivore	1,554	1,935	1,793	2,013	239	78
Gray-Green Scrubwren	<i>Sericornis arfakianus</i>	Insectivore	1,341	1,524	1,378	1,783	37	259
Brown-Breasted Gerygone	<i>Gerygone ruficollis</i>	Insectivore	1,280	1,935	1,447	2,340	167	405
Fairy Gerygone	<i>Gerygone palpebrosa</i>	Insectivore	411	1,280	NA	1,243	NA	-37
Goldenface	<i>Pachycare flavogriseum</i>	Insectivore	1,113	1,646	NA	1,923	NA	277
Loria's Satinbird	<i>Cnemophilus loriae</i>	Frugivore	1,615	2,316	1,423	2,373	-192	57
Yellow-Breasted Satinbird	<i>Loboparadisea sericea</i>	Frugivore	610	1,795	1,433	1,843	NA	48
Black Berrypecker	<i>Melanocharis nigra</i>	Frugivore	NA	1,311	NA	1,463	NA	152
Fan-Tailed Berrypecker	<i>Melanocharis versteri</i>	Frugivore	1,372	2,520	1,388	2,520	16	0
Streaked Berrypecker	<i>Melanocharis striativentris</i>	Frugivore	1,448	1,817	1,453	1,873	5	56
Dwarf Longbill	<i>Oedistoma iliolophus</i>	Insectivore	610	1,562	NA	1,653	NA	91
Pygmy Longbill	<i>Oedistoma pygmaeum</i>	Nectarivore	NA	1,113	NA	1,288	NA	175
Slaty-Headed Longbill	<i>Toxorhamphus poliopterus</i>	Nectarivore	NA	1,768	NA	1,993	NA	225
Tit Berrypecker	<i>Oreocharis arfaki</i>	Frugivore	1,439	2,520	1,338	2,520	-101	0
Spotted Jewel-Babbler	<i>Ptilorrhhoa leucosticta</i>	Insectivore	1,762	1,981	1,533	2,083	-229	102
Chestnut-Backed Jewel-Babbler	<i>Ptilorrhhoa castanonota</i>	Insectivore	610	1,448	NA	1,450	NA	2
Yellow-Breasted Boatbill	<i>Machaerirhynchus flaviventer</i>	Insectivore	NA	1,250	NA	1,243	NA	-7
Black-Breasted Boatbill	<i>Machaerirhynchus nigripectus</i>	Insectivore	1,588	1,859	1,243	1,913	-345	54
Mountain Peltops	<i>Peltops montanus</i>	Insectivore	817	1,554	NA	2,105	NA	551
Black Butcherbird	<i>Cracticus quoyi</i>	Omnivore	0	1,332	NA	1,328	NA	-4
Stout-Billed Cuckooshrike	<i>Coracina caeruleoogrisea</i>	Omnivore	991	1,585	NA	1,503	NA	-82
Gray-Headed Cuckooshrike	<i>Coracina schisticeps</i>	Frugivore	NA	1,280	NA	1,338	NA	58
Black-Bellied Cuckooshrike	<i>Coracina montana</i>	Insectivore	1,262	2,219	1,338	2,303	76	84
Golden Cuckooshrike	<i>Campochaera sloetii</i>	Frugivore	NA	1,113	NA	1,243	NA	130
Varied Triller	<i>Lalage leucomela</i>	Omnivore	NA	1,280	NA	1,423	NA	143
Mottled Whistler	<i>Rhagologus leucostigma</i>	Omnivore	1,113	2,063	1,323	2,233	210	170
Wattled Ploughbill	<i>Eulacestoma nigropectus</i>	Insectivore	1,905	2,219	2,013	2,163	108	-56
Rufous-Naped Whistler	<i>Aleadryas rufinucha</i>	Insectivore	1,448	1,817	1,870	2,073	422	256
Crested Pitohui	<i>Ornorettes cristatus</i>	Insectivore	792	1,311	NA	1,353	NA	42
Black Pitohui	<i>Melanorettes nigrescens</i>	Insectivore	1,570	1,981	1,573	2,073	3	92
Rusty Whistler	<i>Pachycephala hyperythra</i>	Insectivore	457	1,280	NA	1,348	NA	68
Gray Whistler	<i>Pachycephala simplex</i>	Insectivore	NA	1,448	NA	1,463	NA	15
Slater's Whistler	<i>Pachycephala soror</i>	Insectivore	1,113	1,768	1,243	1,903	130	135
Regent Whistler	<i>Pachycephala schlegelii</i>	Insectivore	1,341	2,520	1,753	2,520	412	0
Rusty Pitohui	<i>Pseudorectes ferrugineus</i>	Omnivore	NA	1,113	NA	1,143	NA	30
Little Shrikethrush	<i>Colluricincla megarhyncha</i>	Insectivore	NA	1,646	NA	1,743	NA	97
Southern Variable Pitohui	<i>Pitohui uropygialis</i>	Insectivore	NA	1,113	NA	1,231	NA	118
Hooded Pitohui	<i>Pitohui dichrous</i>	Insectivore	457	1,570	NA	1,658	NA	88
Brown Oriole	<i>Oriolus szalayi</i>	Frugivore	NA	1,332	NA	1,423	NA	91
Pygmy Drongo	<i>Chaetorhynchus papuensis</i>	Insectivore	610	1,463	NA	1,493	NA	30
Spangled Drongo	<i>Dicrurus bracteatus</i>	Insectivore	NA	1,113	NA	1,273	NA	160
Northern Fantail	<i>Rhipidura rufiventris</i>	Insectivore	NA	1,113	NA	1,423	NA	310
Sooty Thicket Fantail	<i>Rhipidura threnothorax</i>	Insectivore	NA	1,113	NA	1,243	NA	130
Black Fantail	<i>Rhipidura atra</i>	Insectivore	1,247	2,323	1,241	2,263	-6	-60
Chestnut-Bellied Fantail	<i>Rhipidura hyperythra</i>	Insectivore	NA	1,329	NA	1,658	NA	329
Friendly Fantail	<i>Rhipidura albolimbata</i>	Insectivore	1,411	2,520	1,633	2,520	222	0
Dimorphic Fantail	<i>Rhipidura brachyrhyncha</i>	Insectivore	1,981	2,323	1,920	2,520	-61	197
Black Monarch	<i>Symposiachrus axillaris</i>	Insectivore	1,113	1,905	1,188	1,913	75	8
Spot-Winged Monarch	<i>Symposiachrus guttula</i>	Insectivore	NA	1,113	NA	1,183	NA	70
Black-Winged Monarch	<i>Monarcha frater</i>	Insectivore	610	1,494	NA	1,433	NA	-61
Golden Monarch	<i>Carterornis chrysomela</i>	Insectivore	NA	1,256	NA	1,193	NA	-63
Friilled Monarch	<i>Arses telescopthalmus</i>	Insectivore	NA	1,494	NA	1,273	NA	-221
Gray Crow	<i>Corvus tristis</i>	Frugivore	NA	1,332	NA	1,233	NA	-99
Blue-Capped Iffrit	<i>Iffrita kowaldi</i>	Insectivore	1,905	2,520	1,863	2,356	-42	-164
Crinkle-Collared Manucode	<i>Manucodia chalybatus</i>	Frugivore	610	1,448	NA	1,423	NA	-25
Princess Stephanie's Astrapia	<i>Astrapia stephaniae</i>	Frugivore	1,554	2,469	1,833	2,520	279	51
Superb Bird-of-Paradise	<i>Lophorina superba</i>	Omnivore	1,280	1,905	1,338	1,961	58	56
Magnificent Riflebird	<i>Ptiloris magnificus</i>	Insectivore	NA	1,219	NA	1,458	NA	239
Black Sicklebill	<i>Epimachus fastosus</i>	Insectivore	1,585	2,225	1,713	2,433	128	208

Table S1. Cont.

English name	Latin name	Diet	Lower limit (1965), m (1)	Upper limit (1965), m (1)	Lower limit (2012), m	Upper limit (2012), m	Lower limit change, m	Upper limit change, m
Magnificent Bird-of-Paradise	<i>Diphylloides magnificus</i>	Omnivore	610	1,548	NA	1,709	NA	161
Raggiana Bird-of-Paradise	<i>Paradisaea raggiana</i>	Omnivore	NA	1,448	NA	1,623	NA	175
Black-Throated Robin	<i>Poecilodryas albonotata</i>	Insectivore	1,905	2,323	1,723	2,520	-182	197
White-Winged Robin	<i>Peneothello sigillata</i>	Insectivore	2,225	2,520	2,403	2,520	178	0
Slaty Robin	<i>Peneothello cyanus</i>	Insectivore	1,585	2,134	1,683	2,398	98	264
White-Rumped Robin	<i>Peneothello bimaculata</i>	Insectivore	991	1,113	NA	1,283	NA	170
White-Faced Robin	<i>Tregellasia leucops</i>	Insectivore	1,113	1,646	1,198	1,718	85	72
White-Eyed Robin	<i>Pachycephalopsis poliosoma</i>	Insectivore	985	1,570	1,218	1,698	233	128
Canary Flyrobin	<i>Microeca papuana</i>	Insectivore	1,859	2,323	1,763	2,313	-96	-10
Garnet Robin	<i>Eugerygone rubra</i>	Insectivore	1,859	2,185	1,943	2,213	84	28
Northern Scrub Robin	<i>Drymodes superciliaris</i>	Insectivore	610	1,280	NA	1,393	NA	113
Island Leaf Warbler	<i>Phylloscopus maforensis</i>	Insectivore	1,311	1,859	1,321	1,723	10	-136
Russet-Tailed Thrush	<i>Zoothera heinei</i>	Insectivore	1,082	1,554	1,473	1,643	391	89
Red-Capped Flowerpecker	<i>Dicaeum geelvinkianum</i>	Frugivore	NA	1,762	NA	1,723	NA	-39
Blue-Faced Parrotfinch	<i>Erythrura trichroa</i>	Frugivore	1,113	2,323	1,493	2,313	380	-10

Nomenclature and order follow International Ornithological Committee (IOC) classification (2).

1. Diamond JM (1972) *Avifauna of the Eastern Highlands of New Guinea* (Nuttall Ornithological Club, Cambridge, MA), p vii.
2. Gill F, Donsker D (2013) IOC World Bird List, Version 3.5. Available at www.worldbirdnames.org. Accessed December 11, 2013.

Table S2. Elevational changes in Karkar Island's avifauna

English name	Latin name	Diet	Lower limit (1969), m (1)	Upper limit (1969), m (1)	Lower limit (2013), m	Upper limit (2013), m	Lower limit change, m	Upper limit change, m
Brahminy Kite	<i>Haliastur indus</i>	Carnivore	0	1,433	NA	1,380	NA	-53
Meyer's Goshawk	<i>Accipiter meyerianus</i>	Carnivore	945	1,433	830	1,380	-115	-53
Mackinlay's Cuckoo-Dove	<i>Macropygia mackinlayi</i>	Frugivore	0	1,036	NA	1,560	NA	524
Great Cuckoo-Dove	<i>Reinwardtoena reinwardti</i>	Frugivore	0	1,189	NA	1,350	NA	161
Stephan's Emerald Dove	<i>Chalcophaps stephani</i>	Frugivore	0	701	NA	1,010	NA	309
Wompoo Fruit Dove	<i>Ptilinopus magnificus</i>	Frugivore	0	884	NA	880	NA	-4
Superb Fruit Dove	<i>Ptilinopus superbus</i>	Frugivore	0	1,128	NA	1,290	NA	162
White-Bibbed Fruit Dove	<i>Ptilinopus rivoli</i>	Frugivore	1,067	1,524	1,160	NA	93	NA
Zoe's Imperial Pigeon	<i>Ducula zoeae</i>	Frugivore	0	823	NA	970	NA	147
Coconut Lorikeet	<i>Trichoglossus hematodus</i>	Nectarivore	0	1,372	NA	1,410	NA	38
Brush Cuckoo	<i>Cacomantis variolosus</i>	Insectivore	0	1,311	NA	1,380	NA	69
Barking Owl	<i>Ninox connivens</i>	Carnivore	0	1,036	NA	970	NA	-66
Common Paradise Kingfisher	<i>Tanyiptera galatea</i>	Insectivore	0	823	NA	1,020	NA	197
Variable Dwarf Kingfisher	<i>Ceyx lepidus</i>	Piscivore	0	1,006	NA	1,050	NA	44
Hooded Pitta	<i>Pitta sordida</i>	Insectivore	701	1,189	NA	1,330	NA	141
Sclater's Myzomela	<i>Myzomela sclateri</i>	Nectarivore	1,036	1,831	1,415	NA	379	NA
Common Cicadabird	<i>Coracina tenuirostris</i>	Omnivore	0	1,372	NA	1,460	NA	88
Island Monarch	<i>Monarcha cinerascens</i>	Insectivore	0	1,463	1,250	1,450	NA	-13
Shining Flycatcher	<i>Myiagra alecto</i>	Insectivore	0	1,219	NA	1,360	NA	141
Island Leaf Warbler	<i>Phylloscopus maforensis</i>	Insectivore	1,097	1,494	1,090	NA	-7	NA
Metallic Starling	<i>Aplonis metallica</i>	Omnivore	0	610	NA	1,260	NA	650
Singing Starling	<i>Aplonis cantoroides</i>	Omnivore	0	1,189	NA	1,440	NA	251
Island Thrush	<i>Turdus poliocephalus</i>	Insectivore	1,158	1,524	1,425	NA	267	NA
Red-Capped Flowerpecker	<i>Dicaeum geelvinkianum</i>	Frugivore	0	1,036	NA	1,430	NA	394
Olive-Backed Sunbird	<i>Nectarinia jugularis</i>	Nectarivore	0	1,189	NA	1,260	NA	71
Black Sunbird	<i>Leptocoma sericea</i>	Nectarivore	0	1,250	NA	1,405	NA	155

Nomenclature and order follow IOC classification (2).

1. Diamond JM, Lecroy M (1979) Birds of Karkar and Bagabag Islands, New Guinea. *Bull Am Mus Nat Hist* 164:467-532.
2. Gill F, Donsker D (2013) IOC World Bird List, Version 3.5. Available at www.worldbirdnames.org. Accessed December 11, 2013.

Table S3. Measured and predicted distributional shifts reported by tropical and temperate resurveys

No.	Taxon	Site	Location	Measured upslope shift, m	Predicted upslope shift, m	Shift rate	Source
1	Moths	Malaysia	Tropical	58.9	127.3	0.46	(1)
2	Butterflies	Czech Republic	Temperate	7.8	93.5	0.08	(2)
3	Butterflies	Spain	Temperate	108.6	251.3	0.43	(3)
4	Butterflies	United Kingdom	Temperate	44.8	98.2	0.46	(4)
5	Butterflies	United Kingdom	Temperate	11.1	108.3	0.10	(5)
6	Aquatic bugs	United Kingdom	Temperate	19.2	90	0.21	(5)
7	Dragonflies and damselflies	United Kingdom	Temperate	61.9	75	0.83	(5)
8	Grasshoppers and allies	United Kingdom	Temperate	30.5	75	0.41	(5)
9	Ground beetles	United Kingdom	Temperate	12.7	108.3	0.12	(5)
10	Harvestmen	United Kingdom	Temperate	35.8	63.3	0.57	(5)
11	Lacewings	United Kingdom	Temperate	7.4	108.3	0.07	(5)
12	Longhorn beetles	United Kingdom	Temperate	39.3	75	0.52	(5)
13	Millipedes	United Kingdom	Temperate	24	108.3	0.22	(5)
14	Soldier beetles and allies	United Kingdom	Temperate	62.1	108.3	0.57	(5)
15	Spiders	United Kingdom	Temperate	24.3	108.3	0.22	(5)
16	Woodlice	United Kingdom	Temperate	55.3	75	0.74	(5)
17	Fish	United Kingdom	Temperate	32.7	108.3	0.30	(5)
18	Herptiles	Madagascar	Tropical	65.3	43.6	1.50	(6)
19	Birds	France	Temperate	-19.3	194.9	-0.10	(7)
20	Birds	Italy	Temperate	7.6	200	0.04	(8)
21	Birds	United States (New York)	Temperate	-5.2	103.4	-0.05	(9)
22	Birds	United Kingdom	Temperate	-2.1	40	-0.05	(5)
23	Mammals	United Kingdom	Temperate	31	75	0.41	(5)
24	Mammals	United States (California)	Temperate	69	433.3	0.16	(10)
25	Plants	Italy	Temperate	88.6	272.2	0.33	(11)
26	Plants	Switzerland	Temperate	20.7	78.3	0.26	(12)
27	Plants	Switzerland	Temperate	89	208.3	0.43	(13)
28	Plants	United States (Vermont)	Temperate	69	206.9	0.33	(14)
29	Plants	United States (California)	Temperate	64.9	56.2	1.15	(15)
30	Plants	West Europe	Temperate	64.8	115.4	0.56	(16)
31	Birds	Peru	Tropical	49	152	0.32	(17)
32	Birds	Papua New Guinea (Karkar Island)	Tropical	147.4	90	1.64	This study
33	Birds	Papua New Guinea (Mt. Karimui)	Tropical	107.2	76	1.41	This study
34	Plants	Taiwan	Tropical	213	210	1.01	(18)
35	Plants	Peru	Tropical	3	6	0.50	(19)

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