

Identifying important endemic areas using ecoregions: birds and mammals in the Indo-Pacific

John E. Fa, Robert W. Burn, Mark R. Stanley Price and Fiona M. Underwood

Appendix

Characteristics of the 133 ecoregions used in the study, including location, size, species attributes and classification according to the empirical logit endemicity/log species richness plot (Fig. 3). The ecoregions have been ranked in descending order of endemicity within each quartile range combination.

Ecoregion	Ecoregion number	Island/Continental	Montane/Non-montane	Ecoregion size (km ²)	Biome type ¹	Biome group ²	No. mammal species	No. endemic mammals	% mammal endemism	No. bird species	No. endemic birds	% bird endemism	Endemicity range ³	Richness range ⁴	Log(richness)	Empirical logit Group id. ⁵	
Solomon Islands rainforests	137	I	NM	35,700	1	TRF	47	26	55.32	198	89	44.95	1	1	5.50	-0.12	1
Vanuatu rainforests	138	I	NM	13,200	1	TRF	12	6	50.00	79	30	37.97	1	1	4.51	-0.42	1
New Caledonia rainforests	139	I	NM	14,500	1	TRF	9	6	66.67	90	31	34.44	1	1	4.60	-0.51	1
Central Range sub-alpine grasslands	131	I	M	15,500	10	GR	9	4	44.44	84	28	33.33	1	1	4.53	-0.64	1
New Caledonia dry forests	140	I	NM	4,400	2	TRF	8	5	62.50	79	23	29.11	1	1	4.47	-0.74	1
New Britain-New Ireland lowland rainforests	133	I	NM	34,700	1	TRF	47	9	19.15	185	55	29.73	1	1	5.45	-0.96	1
New Britain-New Ireland montane rainforests	134	I	M	12,100	1	TRF	45	8	17.78	103	30	29.13	1	1	5.00	-1.05	1
Mindanao montane rainforests	103	I	M	17,800	1	TRF	42	14	33.33	167	34	20.36	1	1	5.34	-1.20	1
Admiralty Islands lowland rainforests	132	I	NM	2,100	1	TRF	18	5	27.78	64	13	20.31	1	1	4.41	-1.25	1
Luzon tropical pine forests	106	I	NM	7,100	3	TRF	40	16	40.00	149	23	15.44	1	1	5.24	-1.34	1
Luzon montane rainforests	102	I	M	8,300	1	TRF	34	9	26.47	163	28	17.18	1	1	5.28	-1.45	1
Banda Sea islands moist deciduous forests	117	I	NM	7,500	1	TRF	22	3	13.64	225	43	19.11	1	1	5.51	-1.47	1
Buru rainforests	115	I	NM	8,600	1	TRF	25	4	16.00	178	29	16.29	1	1	5.31	-1.63	1
Nicobar Islands rainforests	61	I	NM	1,700	1	TRF	21	6	28.57	82	9	10.98	1	1	4.63	-1.74	1
Biak-Numfoor rainforests	120	I	NM	2,900	1	TRF	29	5	17.24	107	13	12.15	1	1	4.91	-1.86	1
Andaman Islands rainforests	60	I	NM	5,600	1	TRF	27	7	25.93	123	12	9.76	1	1	5.01	-1.91	1
Louisiade Archipelago rainforests	136	I	NM	1,600	1	TRF	24	3	12.50	100	7	7.00	1	1	4.82	-2.39	1
Sulawesi montane rainforests	110	I	M	75,500	1	TRF	102	33	32.35	168	44	26.19	1	2	5.60	-0.91	2
Halmahera rainforests	114	I	NM	26,800	1	TRF	38	8	21.05	223	43	19.28	1	2	5.56	-1.41	2
Seram rainforests	116	I	NM	19,300	1	TRF	38	9	23.68	213	33	15.49	1	2	5.53	-1.60	2
Timor and Wetar deciduous forests	112	I	NM	33,300	2	TRF	38	5	13.16	229	35	15.28	1	2	5.59	-1.73	2
Western Java montane rainforests	93	I	M	26,200	1	TRF	63	14	22.22	235	30	12.77	1	2	5.70	-1.74	2
Kinabalu montane alpine meadows	108	I	M	4,300	10	GR	113	16	14.16	184	25	13.59	1	2	5.69	-1.82	2
Sri Lanka montane rainforests	4	I	M	3,000	1	TRF	76	13	17.11	179	20	11.17	1	2	5.54	-1.89	2
Palawan rainforests	97	I	NM	13,900	1	TRF	54	15	27.78	246	20	8.13	1	2	5.70	-2.01	2
Lesser Sundas deciduous forests	111	I	NM	39,300	2	TRF	50	5	10.00	273	29	10.62	1	2	5.78	-2.13	2

Ecoregion	Ecoregion number	Island/Continental		Ecoregion size (km ²)	Biome type ¹	Biome group ²	No. mammal species	No. endemic mammals	% mammal endemism		% bird endemism		Endemicity range ³	Richness range ⁴	Log(richness)	Empirical logit Group id. ⁵	
		Island/Continental	Montane/Non-montane						No. bird species	No. endemic birds	% bird endemism	Richness range ⁴					
Greater Negros-Panay rainforests	100	I	NM	34,200	1	TRF	58	13	22.41	300	23	7.67	1	2	5.88	-2.18	2
Sri Lanka lowland rainforests	3	I	NM	12,500	1	TRF	75	8	10.67	229	18	7.86	1	2	5.72	-2.35	2
Central Range montane rainforests	125	I	M	171,200	1	TRF	90	44	48.89	348	55	15.80	1	3	6.08	-1.23	3
Sulawesi lowland rainforests	109	I	NM	114,100	1	TRF	104	28	26.92	337	70	20.77	1	3	6.09	-1.25	3
Mindanao-Eastern Visayas rainforests	101	I	NM	105,000	1	TRF	77	16	20.78	334	36	10.78	1	3	6.02	-1.92	3
Luzon rainforests	98	I	NM	94,800	1	TRF	78	15	19.23	365	40	10.96	1	3	6.09	-1.95	3
Borneo montane rainforests	95	I	M	115,100	1	TRF	147	11	7.48	256	28	10.94	1	3	6.00	-2.22	3
Southeastern Papuan rainforests	126	I	NM	77,000	1	TRF	138	28	20.29	509	40	7.86	1	4	6.47	-2.14	4
Trobriand Islands rainforests	135	I	NM	4,200	1	TRF	38	9	23.68	136	2	1.47	2	1	5.16	-2.65	5
Sumba deciduous forests	113	I	NM	10,700	2	TRF	17	0	0.00	180	12	6.67	2	1	5.28	-2.70	5
Sulu archipelago rainforest	104	I	NM	2,000	1	TRF	18	1	5.56	184	10	5.43	2	1	5.31	-2.81	5
Rajasthan-North Pakistan sandy desert	45	C	NM	68,300	13	DS	28	2	7.14	44	0	0.00	2	1	4.28	-3.34	5
Yapen rainforests	121	C	NM	2,300	1	TRF	37	1	2.70	147	2	1.36	2	1	5.21	-3.95	5
Mentawai Islands rainforests	84	I	NM	6,500	1	TRF	44	17	38.64	212	3	1.42	2	2	5.55	-2.45	6
Mindoro rainforests	99	I	NM	10,300	1	TRF	42	8	19.05	256	11	4.30	2	2	5.70	-2.66	6
Eastern Java-Bali montane rainforests	94	I	M	15,800	1	TRF	96	1	1.04	213	18	8.45	2	2	5.73	-2.70	6
Northern New Guinea montane rainforests	122	I	M	23,200	1	TRF	51	6	11.76	264	12	4.55	2	2	5.75	-2.78	6
Sumatra tropical pine forests	105	I	NM	2,700	3	TRF	100	1	1.00	166	12	7.23	2	2	5.58	-2.93	6
Sri Lanka dry-zone dry evergreen forests	7	I	NM	48,200	2	TRF	74	4	5.41	270	9	3.33	2	2	5.84	-3.20	6
Western Himalayan subalpine conifer forests	29	C	M	39,400	5	TEF	58	1	1.72	285	9	3.16	2	2	5.84	-3.46	6
Trans Fly savanna and grasslands	130	I	NM	26,600	7	GR	44	5	11.36	306	5	1.63	2	2	5.86	-3.48	6
Eastern Himalayan subalpine conifer forests	28	C	M	26,900	5	TEF	89	3	3.37	202	5	2.48	2	2	5.67	-3.51	6
Malabar coast moist forests	13	C	NM	35,300	1	TRF	97	6	6.19	280	1	0.36	2	2	5.93	-3.90	6
Vogelkop-Aru lowland rainforests	119	I	NM	77,400	1	TRF	47	8	17.02	366	21	5.74	2	3	6.02	-2.57	7
Vogelkop montane rainforests	118	I	M	21,900	1	TRF	42	7	16.67	354	20	5.65	2	3	5.98	-2.60	7
Northern New Guinea lowland rainforests and freshwater swamp forests	123	I	NM	134,700	1	TRF	75	12	16.00	359	17	4.74	2	3	6.07	-2.62	7
South Western Ghats montane rainforests	2	C	M	22,500	1	TRF	96	10	10.42	309	13	4.21	2	3	6.00	-2.79	7
Huon Peninsula montane rainforests	124	C	M	16,400	1	TRF	80	6	7.50	370	16	4.32	2	3	6.11	-2.95	7
Southern New Guinea freshwater swamp forests	127	I	NM	99,400	1	TRF	50	6	12.00	339	11	3.24	2	3	5.96	-3.06	7
Southern New Guinea lowland rainforests	128	I	NM	122,300	1	TRF	69	13	18.84	344	5	1.45	2	3	6.02	-3.06	7
South Western Ghats moist deciduous forests	15	C	NM	23,700	1	TRF	90	6	6.67	323	9	2.79	2	3	6.02	-3.25	7
Western Java rainforests	91	I	NM	41,400	1	TRF	98	5	5.10	355	9	2.54	2	3	6.12	-3.41	7

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	Island/Continental	Montane/Non-montane														
Western Himalayan broadleaf forests	27	C NM		55,800	4	TEF	76	2	2.63	315	9	2.86	2 3	5.97	-3.50	7
Eastern Java-Bali rainforests	92	I NM		53,500	1	TRF	99	2	2.02	346	10	2.89	2 3	6.10	-3.55	7
North Western Ghats montane rainforests	1	C M		30,800	1	TRF	89	2	2.25	327	8	2.45	2 3	6.03	-3.66	7
Sumatra montane rainforests	83		NM	72,600	1	TRF	150	9	6.00	308	29	9.42	2 4	6.13	-2.39	8
Borneo lowland rainforests	96	I NM		425,400	1	TRF	193	12	6.22	467	17	3.64	2 4	6.49	-3.06	8
Eastern Himalayan broadleaf forests	26	C NM		82,900	4	TEF	128	5	3.91	490	11	2.24	2 4	6.43	-3.60	8
Southern Annamites montane rainforests	57	C M		46,200	1	TRF	110	3	2.73	414	10	2.42	2 4	6.26	-3.63	8
Himalayan subtropical pine forests	31	C NM		76,200	3	TRF	121	3	2.48	480	11	2.29	2 4	6.40	-3.70	8
Northern Triangle subtropical forests	73	C NM		55,600	1	TRF	139	9	6.47	372	1	0.27	2 4	6.24	-3.87	8
Eastern Himalayan alpine shrub and meadows	39	C NM		40,100	10	GR	63	1	1.59	115	1	0.87	3 1	5.18	-4.26	9
Karakoram-West Tibetan Plateau alpine steppe	40	C NM		112,600	10	GR	36	1	2.78	122	0	0.00	3 1	5.06	-4.65	9
Western Himalayan alpine shrub and meadows	38	C NM		34,600	10	GR	37	0	0.00	127	1	0.79	3 1	5.10	-4.69	9
Sulaiman Range alpine meadows	42	C NM		19,600	10	GR	40	1	2.50	171	0	0.00	3 1	5.35	-4.94	9
South Deccan plateau dry deciduous forests	22	C NM		81,900	2	TRF	76	1	1.32	261	2	0.77	3 2	5.82	-4.56	10
Northeast India-Myanmar pine forests	77	C NM		9,700	3	TRF	71	0	0.00	286	2	0.70	3 2	5.88	-4.96	10
Rann of Kutch seasonal salt marsh	36	C NM		27,800	9	GR	50	1	2.00	205	0	0.00	3 2	5.54	-5.13	10
Deccan thorn scrub forests	23	C NM		339,000	13	DS	96	3	3.13	345	4	1.16	3 3	6.09	-4.06	11
Peninsular Malaysia montane rainforests	81	C M		17,100	1	TRF	175	1	0.57	258	5	1.94	3 3	6.07	-4.19	11
Northern Vietnam lowland rainforests	56	C NM		22,500	1	TRF	110	1	0.91	306	4	1.31	3 3	6.03	-4.32	11
North Western Ghats moist deciduous forests	14	C NM		48,000	1	TRF	88	0	0.00	346	5	1.45	3 3	6.07	-4.36	11
Chao Phraya freshwater swamp forests	64	C NM		38,900	1	TRF	123	3	2.44	307	1	0.33	3 3	6.06	-4.55	11
Southern Vietnam lowland dry forests	58	C NM		34,900	2	TRF	93	1	1.08	320	2	0.63	3 3	6.02	-4.76	11
Irrawaddy dry forests	71	C NM		35,000	2	TRF	107	1	0.93	338	2	0.59	3 3	6.10	-4.84	11
Eastern highlands moist deciduous forests	12	C M		340,200	1	TRF	81	1	1.23	313	1	0.32	3 3	5.98	-5.06	11
Cardamom Mountains rainforests	55	C NM		44,100	1	TRF	103	0	0.00	324	2	0.62	3 3	6.06	-5.14	11
Himalayan subtropical broadleaf forests	25	C NM		38,100	1	TRF	97	1	1.03	343	1	0.29	3 3	6.09	-5.17	11
Northern Triangle temperate forests	76	C NM		10,700	4	TEF	91	1	1.10	365	1	0.27	3 3	6.12	-5.20	11
Northern Annamites rainforests	54	C NM		47,100	1	TRF	106	5	4.72	524	6	1.15	3 4	6.45	-3.99	12
Southeastern Indochina dry evergreen forests	59	C NM		123,800	2	TRF	132	4	3.03	454	3	0.66	3 4	6.37	-4.35	12
Borneo peat swamp forests	86	C NM		67,100	1	TRF	153	5	3.27	396	1	0.25	3 4	6.31	-4.43	12

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Northern Indochina subtropical forests	74	C	NM	288,300	1	TRF	183	9	4.92	707	1	0.14	3	4	6.79	-4.43	12
Terai-Duar savanna and grasslands	35	C	NM	34,500	7	GR	94	2	2.13	376	3	0.80	3	4	6.15	-4.44	12
Mizoram-Manipur-Kachin rainforests	50	C	NM	135,200	1	TRF	149	2	1.34	580	6	1.03	3	4	6.59	-4.44	12
Sumatra lowland rainforests	82	C	NM	258,300	1	TRF	159	1	0.63	463	5	1.08	3	4	6.43	-4.55	12
Tenasserim-South Thailand semi-evergreen rainforests	53	C	NM	96,900	1	TRF	178	3	1.69	560	4	0.71	3	4	6.60	-4.58	12
Meghalaya subtropical forests	11	C	NM	41,600	1	TRF	113	0	0.00	453	5	1.10	3	4	6.34	-4.63	12
Brahmaputra Valley semi-evergreen forests	8	C	NM	56,600	1	TRF	122	2	1.64	372	2	0.54	3	4	6.20	-4.69	12
Northwestern thorn scrub forests	24	C	NM	487,500	13	DS	90	1	1.11	405	2	0.49	3	4	6.20	-4.95	12
Central Indochina dry forests	72	C	NM	319,000	2	TRF	165	2	1.21	491	2	0.41	3	4	6.49	-4.98	12
Chin Hills-Arakan Yoma montane rainforests	48	C	M	29,600	1	TRF	102	0	0.00	414	3	0.72	3	4	6.25	-4.99	12
Sundaland heath forests	90	C	NM	76,200	1	TRF	105	1	0.95	353	1	0.28	3	4	6.13	-5.21	12
Myanmar coastal rainforests	49	C	NM	65,200	1	TRF	124	2	1.61	357	0	0.00	3	4	6.18	-5.26	12
South Iran Nubo-Sindian desert and semi-desert	43	C	NM	40,500	13	DS	34	0	0.00	86	0	0.00	4	1	4.79	-5.48	13
East Afghan montane coniferous forests	30	C	NM	7,300	5	TEF	22	0	0.00	123	0	0.00	4	1	4.98	-5.67	13
Central Tibetan Plateau alpine steppe	41	C	NM	13,600	10	GR	34	0	0.00	122	0	0.00	4	1	5.05	-5.75	13
Northwestern Himalayan alpine shrub and meadows	37	C	M	46,900	10	GR	50	0	0.00	139	0	0.00	4	1	5.24	-5.94	13
Thar desert	46	C	NM	238,300	13	DS	63	0	0.00	141	0	0.00	4	1	5.32	-6.01	13
Indus Valley desert	47	C	NM	19,500	13	DS	36	0	0.00	190	0	0.00	4	1	5.42	-6.12	13
Sunderbans freshwater swamp forests	9	C	NM	16,400	1	TRF	55	0	0.00	189	0	0.00	4	1	5.50	-6.19	13
Orissa semi-evergreen forests	5	C	NM	22,200	1	TRF	59	0	0.00	215	0	0.00	4	2	5.61	-6.31	14
East Deccan dry evergreen forests	6	C	NM	25,400	2	TRF	66	0	0.00	230	0	0.00	4	2	5.69	-6.39	14
Irrawaddy freshwater swamp forests	63	C	NM	15,100	1	TRF	53	0	0.00	269	0	0.00	4	2	5.77	-6.47	14
Northern dry deciduous forests	19	C	NM	58,200	2	TRF	68	0	0.00	261	0	0.00	4	2	5.80	-6.49	14
Red River freshwater swamp forests	66	C	NM	10,700	1	TRF	77	0	0.00	276	0	0.00	4	2	5.87	-6.56	14
Narmada valley dry deciduous forests	20	C	NM	169,500	2	TRF	78	0	0.00	276	0	0.00	4	2	5.87	-6.56	14
Chhota-Nagpur dry deciduous forests	18	C	NM	122,100	2	TRF	77	0	0.00	278	0	0.00	4	2	5.87	-6.57	14
Upper Gangetic plains moist deciduous forests	17	C	NM	262,600	1	TRF	81	0	0.00	293	0	0.00	4	2	5.92	-6.62	14
Central Deccan plateau dry deciduous forests	21	C	NM	239,400	2	TRF	82	0	0.00	298	1	0.34	4	3	5.94	-5.53	15
Khathiar-Gir dry deciduous forests	16	C	NM	266,400	2	TRF	81	0	0.00	299	1	0.33	4	3	5.94	-5.53	15
Tonle Sap-Mekong peat swamp forests	62	C	NM	29,300	1	TRF	79	0	0.00	301	1	0.33	4	3	5.94	-5.53	15
Tonle Sap freshwater swamp forests	65	C	NM	25,900	1	TRF	84	0	0.00	299	1	0.33	4	3	5.95	-5.54	15

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	Island/Continental	Montane/Non-montane															
Baluchistan xeric woodlands	44	C	NM	255,200	13	DS	67	1	1.49	348	0	0.00	4	3	6.03	-5.62	15
Kayah-Karen montane rainforests	51	C	M	119,200	1	TRF	168	1	0.60	568	2	0.35	4	4	6.60	-5.35	16
South China-Vietnam subtropical evergreen forests	75	C	NM	37,500	1	TRF	102	2	1.96	602	0	0.00	4	4	6.56	-5.64	16
Irrawaddy moist deciduous forests	67	C	NM	137,900	1	TRF	118	0	0.00	342	1	0.29	4	4	6.13	-5.72	16
Southern Borneo freshwater swamp forests	89	C	NM	36,600	1	TRF	125	0	0.00	361	1	0.28	4	4	6.19	-5.78	16
Chao Phraya lowland moist deciduous forests	70	C	NM	20,300	1	TRF	137	1	0.73	368	0	0.00	4	4	6.22	-5.82	16
Lower Gangetic plains moist deciduous forests	10	C	NM	253,500	1	TRF	126	1	0.79	383	0	0.00	4	4	6.23	-5.83	16
Northern Khorat Plateau moist deciduous forests	69	C	NM	16,800	1	TRF	103	0	0.00	390	0	0.00	4	4	6.20	-6.89	16
Northern Thailand-Laos moist deciduous forests	68	C	NM	42,000	1	TRF	134	0	0.00	379	0	0.00	4	4	6.24	-6.93	16
Sumatra freshwater swamp forests	88	C	NM	18,000	1	TRF	130	0	0.00	391	0	0.00	4	4	6.26	-6.95	16
Sumatra peat swamp forests	85	C	NM	87,100	1	TRF	130	0	0.00	391	0	0.00	4	4	6.26	-6.95	16
Peninsular Malaysia peat swamp forests	87	C	NM	3,600	1	TRF	183	0	0.00	381	0	0.00	4	4	6.34	-7.03	16
Peninsular Malaysia rainforests	80	C	NM	125,000	1	TRF	193	0	0.00	452	0	0.00	4	4	6.47	-7.16	16
Luang Prabang montane rainforests	52	C	M	71,600	1	TRF	131	0	0.00	541	0	0.00	4	4	6.51	-7.20	16

¹Biome type: 1, Tropical and subtropical moist broadleaf forests; 2, Tropical and subtropical dry broadleaf forests; 3, Tropical and subtropical coniferous forests; 4, Temperate broadleaf and mixed forests; 5, Temperate coniferous forests; 7, Tropical and subtropical grasslands, savannas and shrublands; 9, Flooded grasslands and savannas; 10, Montane grasslands and shrublands; 13, Deserts and xeric shrublands; 14, Mangroves

²Biome group: TRF, tropical/subtropical forests; TEF, temperate forests; GR, grasslands, savannas and shrublands; DS, deserts and xeric shrublands

³Richness: range 1 is <Q1, range 2 is Q1–Q2, range 3 is Q2–Q3, range 4 is >Q3 (i.e. a lower range indicates a lower species richness; see Fig. 3)

⁴Endemicity: range 1 is >Q3, range 2 is Q2–Q3, range 3 is Q1–Q2, range 4 is <Q1 (i.e. a lower range indicates higher endemism; see Fig. 3)

⁵See Fig. 3 for the 16 groupings of the ecoregions by endemism range and richness range.