
GLOBAL ANALYSES

THE ANALYSES presented here are designed to give a broad overview of the data collected on restricted-range species and the Endemic Bird Areas where they occur, and to indicate where there are global patterns and trends which may be of conservation importance. Analyses by political unit are also presented because most conservation action is nationally based.

RESTRICTED-RANGE BIRD SPECIES

How many restricted-range bird species are there?

- *More than a quarter of all the birds of the world have restricted breeding ranges.*

A surprisingly high number—2,623 landbird species, 28% of all landbirds (27% of all birds)—are judged to have had a breeding range of 50,000 km² or less throughout historical times (Figure 1), and therefore qualify as restricted-range species in this study. Of these, 62 are now extinct.

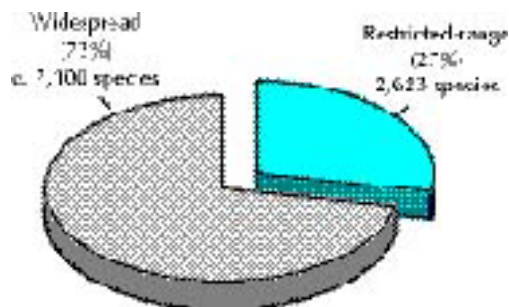


Figure 1. Breeding ranges of the world's bird species.

Where do restricted-range bird species occur?

- *Approximately equal numbers of restricted-range species inhabit islands and continental areas.*

As might be expected, many restricted-range species (53% of the total) occur on islands but almost equal

numbers (47%) are found in continental areas. Of the island species, most (69%) occur on oceanic islands with fewer (31%) on continental islands (Figure 2).

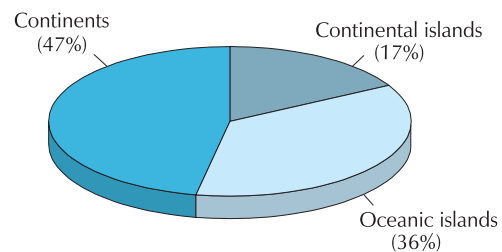


Figure 2. The division between islands and continents of restricted-range landbirds. Continental islands are defined as islands which were once part of continents and which generally lie on a continental shelf less than 200 m below sea-level. Oceanic islands are defined as islands which have never been connected to a continental area by a land-bridge and which are generally volcanic in origin.

What types of birds are restricted-range species?

- *Restricted-range species are very diverse, and include the majority of the landbird families.*

Restricted-range species are found in most landbird families (96 out of the 145 recognized by Morony *et al.* 1975), with some families having significantly higher or lower numbers of such species than might be predicted (Table 1). Those which have unusually high numbers include Drepanididae (Hawaiian honeycreepers: a family which has undergone remarkable adaptive radiation and speciation in an isolated island ecosystem), Zosteropidae (white-eyes: classic small-island colonizers), Paradisaeidae (birds-of-paradise: mostly confined to New Guinea with restricted and/or patchy ranges in the mountains at definite altitudinal zones) and Rhinocryptidae (tapaculos: occurring mainly in the cooler, humid parts of South America at altitudes above 1,000 m).

Endemic Bird Areas of the World

Table 1. Bird families with significantly high or low numbers of restricted-range species. Families are listed only if more than 50% or fewer than 10% of all their species have restricted ranges.

Family		No. of restricted-range species	Total no. of species	% of family
High numbers of restricted-range species				
Drepanididae	Hawaiian honeycreepers	30	30	100
Mesoenatidae	Mesites	3	3	100
Zosteropidae	White-eyes	79	99	80
Todidae	Todies	4	5	80
Paradisaeidae	Birds-of-paradise	29	44	66
Rhinocryptidae	Tapaculos	19	32	59
Megapodiidae	Megapodes	11	19	58
Tytonidae	Barn owls	9	17	53
Low numbers of restricted-range species				
Hirundinidae	Swallows, martins	8	89	9
Paridae	Tits	5	53	9
Anatidae	Ducks, geese, swans	11	158	7
Ardeidae	Hérons, egrets, bitterns	4	66	6
Meropidae	Bee-eaters	1	26	4
Threskiornithidae	Ibises, spoonbills	1	34	3
Dendrocolaptidae	Woodcreepers	0	48	0
Otididae	Bustards	0	25	0
Ciconiidae	Storks	0	19	0
Pteroclididae	Sandgrouse	0	16	0
Gruidae	Cranes	0	15	0
Remizidae	Penduline tits	0	12	0
Recurvirostridae	Avocets, stilts	0	11	0

Other families with significant high numbers of restricted-range species include Columbidae, Psittacidae, Trochilidae, Furnariidae, Formicariidae, Mimidae, Muscicapidae and Meliphagidae. Families with significantly low numbers include Accipitridae, Falconidae, Charadriidae, Rostratulidae, Bucconidae, Picidae, Tyrannidae, Alaudidae, Motacillidae and Ploceidae.

Families were tested at the 95% level for the proportion of restricted-range species being significantly different to the average for all landbirds (28%), using the binomial distribution or normal approximation, as appropriate.

Landbird families which have no restricted-range species (Table 1) tend to have characteristically large species occurring at low densities in open habitats (such as grassland, wetlands and arid areas), and have large breeding ranges; many are nomadic or migratory in their habits.

What habitat-types do restricted-range bird species prefer?

- Most restricted-range species occur in forest.

Overall, 71% of all restricted-range species occur in forested habitats with smaller numbers (13%) in 'scrub' habitats (this descriptor often covers dry woodland/forest habitats as well as secondary vegetation). Grassland (4%) and wetland (3%) are relatively much less important (Figure 3).

How many restricted-range bird species are threatened and why?

- More than half of all restricted-range species qualify as threatened or Near Threatened. The majority of these are affected by habitat loss and alteration.

A very high proportion of restricted-range species are classified as threatened (31%, compared to 4% for birds which do not have restricted ranges; 11%

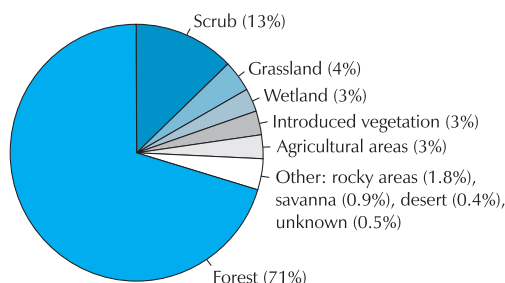


Figure 3. Habitats of restricted-range bird species. All species were coded for broad habitat-types used. Equal weight was given where multiple types were allocated.

for all birds) and Near Threatened (19% compared to 5%; 9% overall) (Figure 4). The threatened restricted-range species are divided between the three categories of threat—16% Critical, 22% Endangered and 61% Vulnerable—in similar proportions to those for all threatened species.

Although habitat loss, more specifically loss of forest, is the greatest threat to restricted-range species (affecting 54% of all threatened restricted-range species), many (27%) are judged to be threatened

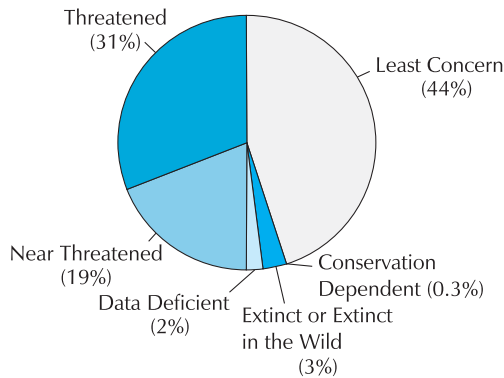


Figure 4. Status of restricted-range bird species.

owing to the intrinsic vulnerability of having very small ranges and/or populations, and smaller numbers are affected by hunting (6%) and introduced species (5%) (Figure 5).

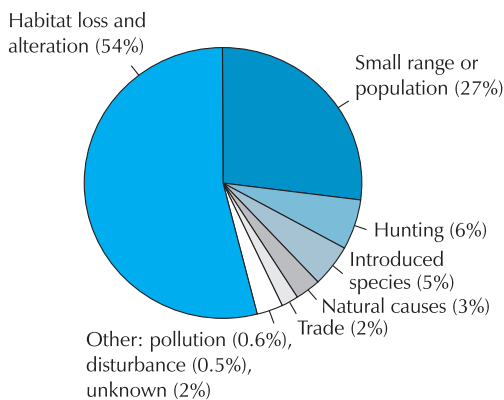


Figure 5. The different threats that act on threatened restricted-range bird species. All species were coded for major threats affecting them. Equal weight was given where multiple types were allocated.

ENDEMIC BIRD AREAS

How many EBAs are there?

- 218 EBAs have been identified, all with at least two restricted-range bird species confined to them.

Endemic Bird Areas by definition encompass the breeding ranges of two or more restricted-range species. A total of 218 such areas have been identified, covering the ranges of 93% of restricted-range birds (2,451 species, 25% of all birds) and partially covering the ranges of a further 2% (65 species). (The remaining restricted-range species are covered by 138 Secondary Areas, see p. 653; these cover the disjunct ranges of the restricted-range species which also occur in EBAs, as well as the entire ranges of 98,

or 4% of, restricted-range species. A further nine species of unknown provenance are presumed to have restricted breeding ranges; see Appendix 1, p. 724.)

In many EBAs (c.60%) all the restricted-range species have broadly similar habitat requirements and distributions, but in others (c.40%) there are distinct differences in species' distributions related to habitat requirements and to geography; many of these EBAs have smaller areas of finer-scale endemism within their boundaries, such as islands within archipelagos or separate ranges within larger mountain systems.

Where are the EBAs?

- The tropics are by far the most important zone for EBAs.

EBAs are scattered around the world but the majority (77%) are situated within the tropics and subtropics, with very few at temperate latitudes (Figure 7). As might be expected with approximately equal numbers of island and continental restricted-range species, there are also approximately equal numbers of island EBAs (105) and continental EBAs (113). Of the island EBAs, 70% are on oceanic islands, with 30% on continental islands. Of the continental EBAs, 42% are largely in montane areas, 35% in lowland areas and 24% embrace both lowland and mountains (Figure 6).

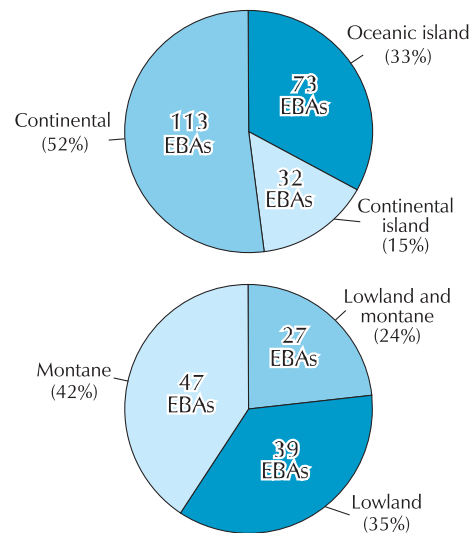


Figure 6. The division between continental and island EBAs, and (for continental areas only) between lowland and montane EBAs. See Figure 2 for island definitions. The altitudinal division between lowland and montane varies between EBAs but is generally c.1,000 m.

Endemic Bird Areas of the World

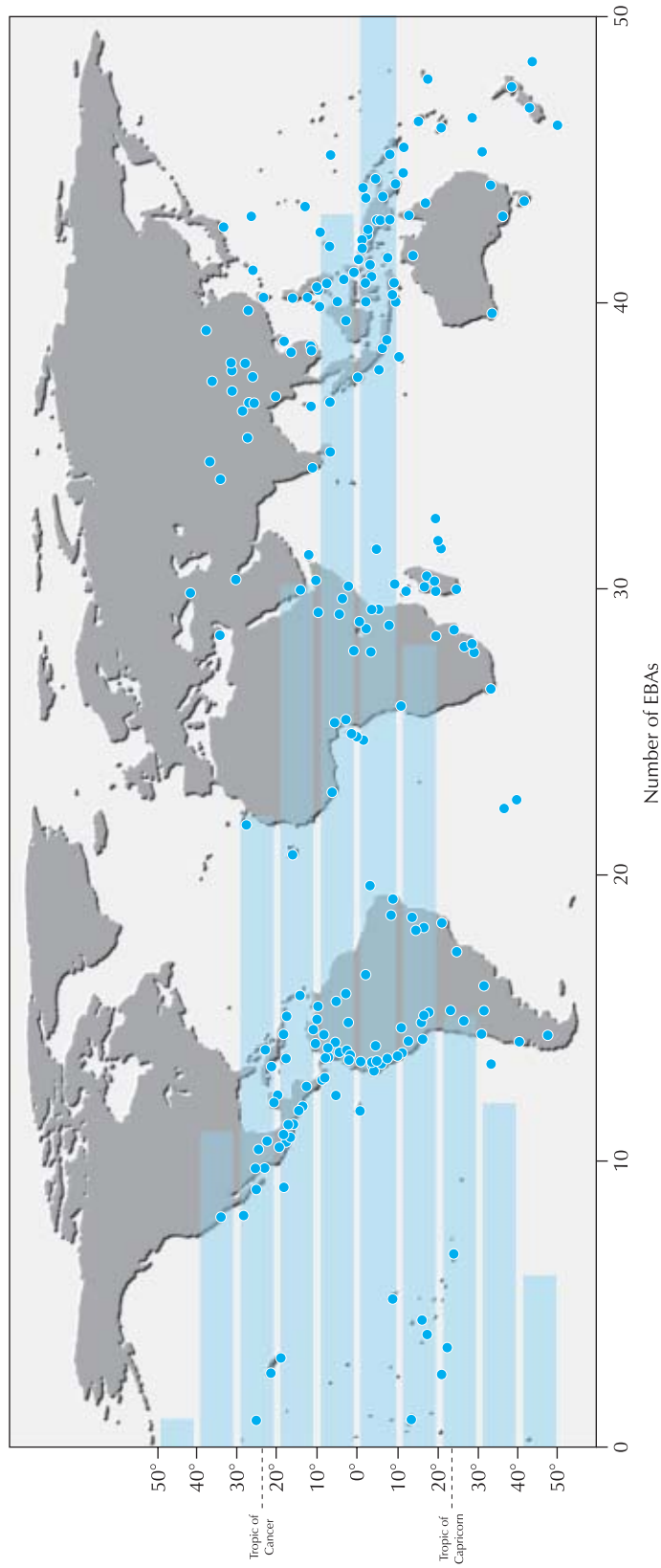


Figure 7. The location and latitudinal distribution of EBAs. Dots indicate the centre of each EBA; histogram shows the frequency of these at 10° intervals.

How unique are the EBAs?

- Several EBAs are particularly distinct at the generic level, having five or more endemic genera.

Some of the restricted-range species which occur in EBAs may be the sole representatives of their genera and therefore may be considered as more unique than others—and thus the overall uniqueness of EBAs, based on their complement of restricted-range species, also varies. New Caledonia (EBA 201) and Hispaniola (EBA 028) are especially distinct in having endemic monospecific families (represented by Kagu *Rhynochetos jubatus* and Palmchat *Dulus dominicus* respectively), a degree of evolutionary separation shared with only 13 other (widespread) bird species in the world. Many other EBAs have endemic genera and therefore have particularly unique avifaunas at this taxonomic level; these include Sulawesi in Indonesia (EBA 166) with 12 endemic genera and the Atlantic forest lowlands of Brazil (EBA 075) with 10 (Table 2).

Table 2. EBAs ranked by their numbers of endemic genera. All species within these genera have restricted ranges.

Rank	No. of endemic genera	EBA no. and name
1	12	166 Sulawesi
2	10	075 Atlantic forest lowlands
3=	9	178 Central Papuan mountains
3=	9	094 East Malagasy wet forests
5	8	020 Costa Rica and Panama highlands
6	7	030 Lesser Antilles
7	6	028 Hispaniola
8=	5	027 Jamaica
8=	5	217 Central Hawaiian islands
8=	5	218 Hawai'i

What are the key habitats in EBAs?

- The key habitats in EBAs are tropical moist forest.

With the majority of restricted-range birds being forest species, the key habitat in the majority (83%) of EBAs is forest, mostly tropical lowland forest (32% of all types) and montane moist forest (24% of all types)—although temperate and subalpine forest (18%, but mostly in the tropics, where it is present at high altitudes) and tropical dry forest (15%) are also important (Figure 8). Grassland is the key habitat in only 12 EBAs, wetlands in five and desert in two.

How many restricted-range species do EBAs support and how extensive are they?

- Most EBAs support 2–10 restricted-range bird species and are under 30,000 km² in size.

EBAs vary in the number of restricted-range species which they support. The majority (63% of continental EBAs and 50% of island ones) have 2–10 restricted-range species occurring within their boundaries (Figure 9). Several EBAs have outstand-

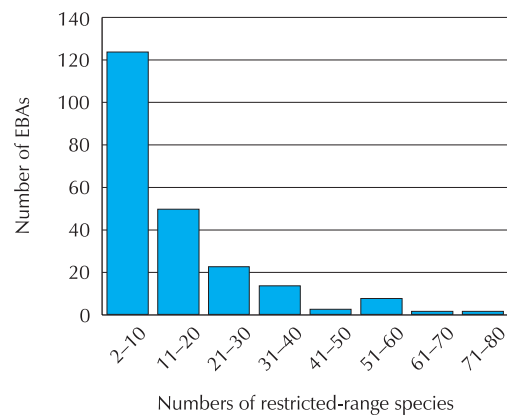


Figure 9. The numbers of restricted-range species in EBAs.

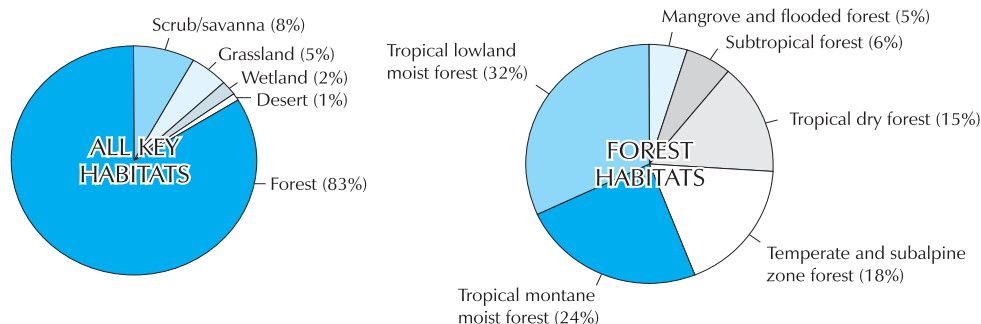


Figure 8. Key habitats of EBAs. All EBAs were coded for the main habitat-types used by restricted-range species and one key habitat-type was selected from these. Where forest was the key type equal weight was given to different forest types where multiple types were allocated.

Endemic Bird Areas of the World

ing numbers of restricted-range species (Table 3); these include the Solomon group in the Pacific (EBA 198: 79 species, of which 62 are confined to this EBA), the Chocó in Colombia and Ecuador (EBA 041: 62 species, including 51 endemics) and the Atlantic forest lowlands in Brazil (EBA 075: 55 species, including 52 endemics).

The size of EBAs varies considerably, ranging from the tiny Hawaiian island of Laysan (EBA 216) which occupies an area of less than 4 km², to the South-east Chinese mountains (EBA 141) which covers over 600,000 km². Overall, more than 50% of EBAs are of less than 30,000 km² in area. In general, island EBAs are smaller than continental ones: 33% of island EBAs (i.e. 35 EBAs, all but one oceanic) have an area of less than 1,000 km² (there are no continental EBAs this small), and 61% of all island EBAs are under 10,000 km² (only 9% of continental EBAs are in this size range). There are a few, very large, island EBAs, notably Sulawesi in Indonesia (EBA 166) and the Central Papuan mountains (EBA 178) which both have an area estimated at 190,000 km². Small continental EBAs include the Darién highlands (EBA 024) and the Andean ridge-top forests (EBA 047) at under 4,000 km².

Overall, EBAs total c. 14,500,000 km². Thus their 2,451 restricted-range species (25% of the world's

birds) were historically totally confined to c. 10% of the world's land area (Box 1).

One would expect larger EBAs to have more restricted-range species than smaller ones, and continental EBAs to have more species than island ones (see 'Biodiversity and Priority-setting', pp. 14 and 15). Therefore the outstanding EBAs in this regard are those which have more species than might be predicted for their size, treating continental, continental-island and oceanic-island EBAs separately (Figure 11). These include the Java and Bali forests (EBA 160) with 34 species in 18,000 km², the Banda Sea Islands (EBA 165) with 41 species in 7,100 km², the East Caroline Islands (EBA 192) with 20 species in 580 km² and Laysan island (EBA 216) with five species in only 4 km². EBAs with fewer species than expected include Cyprus (EBA 121) with two species in 9,300 km², the North Island of New Zealand (EBA 206) with five species in 120,000 km² and the South Island of New Zealand (EBA 207) with seven species in 110,000 km². In the case of Cyprus, the degree of endemism is high at the subspecific level, and it has been speculated that further endemic forms may have been lost owing to the great reduction of woodland habitat since human settlement. Many of New Zealand's endemic birds have (or historically had) ranges of more than 50,000 km²

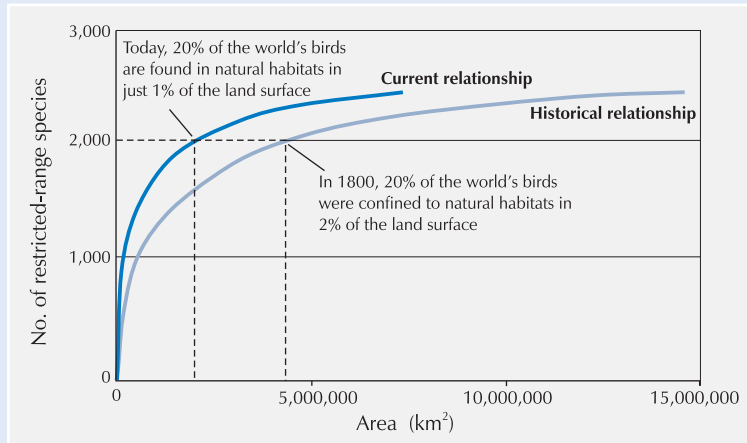
Table 3. EBAs ranked by their numbers of restricted-range species. Where EBAs have the same number of species, higher ranking has been given to those with more species confined to that EBA (if the ranking is by total number of species) or to those with a higher total number of species (if the ranking is by number of species confined to that EBA).

Ranked by total no. of restricted-range species			Ranked by no. of restricted-range species confined to EBA		
Rank	No. of spp.	EBA no. and name	Rank	No. of spp.	EBA no. and name
1.	79	198 Solomon group	1.	62	198 Solomon group
2.	62	041 Chocó	2.	52	075 Atlantic forest lowlands
3.	55	075 Atlantic forest lowlands	3.	51	041 Chocó
4.	55	045 Tumbesian region	4.	49	020 Costa Rica and Panama highlands
5.	54	166 Sulawesi	5.	45	045 Tumbesian region
6.	54	195 New Britain and New Ireland	6.	42	166 Sulawesi
7.	53	178 Central Papuan mountains	7.	39	178 Central Papuan mountains
8.	52	020 Costa Rica and Panama highlands	8.	39	154 Mindanao and the Eastern Visayas
9.	51	154 Mindanao and the Eastern Visayas	9.	36	064 Tepuis
10.	43	171 Northern Moluku	10.	36	106 Albertine Rift mountains
11.	41	165 Banda Sea islands	11.	35	195 New Britain and New Ireland
12.	40	151 Luzon	12.	31	105 Tanzania–Malawi mountains
13.	38	064 Tepuis	13.	28	027 Jamaica
14.	38	158 Sumatra and Peninsula Malaysia	14.	27	086 Cameroon mountains
15.	37	106 Albertine Rift mountains	15.	26	171 Northern Moluku
16.	37	105 Tanzania–Malawi mountains	16.	25	202 Fiji
17.	36	202 Fiji	17.	24	151 Luzon
18.	35	027 Jamaica	18.	24	030 Lesser Antilles
19.	35	164 Timor and Wetar	19.	24	157 Bornean mountains
20.	35	038 Colombian East Andes	20.	23	164 Timor and Wetar
21.	34	030 Lesser Antilles	21.	23	028 Hispaniola
22.	34	028 Hispaniola	22.	23	124 Sri Lanka
23.	34	160 Java and Bali forests	23.	22	201 New Caledonia
24.	31	201 New Caledonia	24.	22	031 Galápagos
25.	30	200 Vanuatu and Temotu	25.	21	076 Atlantic forest mountains

Box 1. Land area occupied by restricted-range species.

Plotted here is the relationship between the numbers of restricted-range species and the land area which they occupy, by taking the smallest and richest EBAs first. Shared restricted-range species are assigned equally between EBAs. For the *historical relationship*, the complete area of the EBA polygon has been

used. For the *current relationship*, this area has been reduced according to the estimated habitat loss of the EBA (see Figure 10). For EBAs with severe habitat loss, the area has been reduced by 95%; for major habitat loss, 70%; moderate, 30%; limited, 5%; unquantified/possible, 0%.



Historically, the world's 2,451 restricted-range bird species (c.25% of the total number of bird species) were confined to c.14,500,000 km² (c.10% of the world's land area)¹ and 2,000 of these (c.20% of all species) were confined to less than 4,000,000 km² (c.2% of the land area).

Today, the same restricted-range species are present in only c.7,300,000 km² of remaining natural habitat (c.5% of the world's land area) and c.20% of those species are found in less than 2,000,000 km² (c.1% of the land area). Many other widespread species will also occur in these same areas.

¹ In *Putting biodiversity on the map* (ICBP 1992) it was estimated that the world's restricted-range birds (25% of all species) were confined to a smaller proportion, 5% (not 10%), of the earth's land surface. This considerable discrepancy relates to differences between that original study and the present one in determining both the boundaries and the size of EBAs (see p. 26). This has resulted in there now being many more large EBAs (particularly in Asia) which have affected the proportion of the world's land surface occupied by 25% of the world's birds, but not the proportion occupied by 20%. This value has been taken as an arbitrary point on the curve before the gradient rapidly declines, and beyond which large increases in area contribute relatively few additional species.

and thus do not qualify as having restricted ranges for this project.

How threatened are EBAs?

- Most EBAs have lost more than half of their key habitats and have threatened or extinct restricted-range species.

Nearly half (47%) of all EBAs are estimated to have lost more than 50% of their key habitats, and more than 10% of EBAs have lost over 90% (Figure 10). Overall, the areas of natural habitats within EBAs are estimated to total only c.7,300,000 km². Thus today 25% of the world's birds are found in only c.5% of the land area of the world which has these natural habitats remaining (Box 1).

Most EBAs (85%) have one or more threatened or extinct restricted-range species (Figure 12), and in 23 EBAs all restricted-range species are threatened. The Atlantic slope of Alagoas and Pernambuco (EBA

071) in Brazil is one particularly threatened EBA, with one species already classified Extinct in the Wild and its remaining 12 restricted-range species

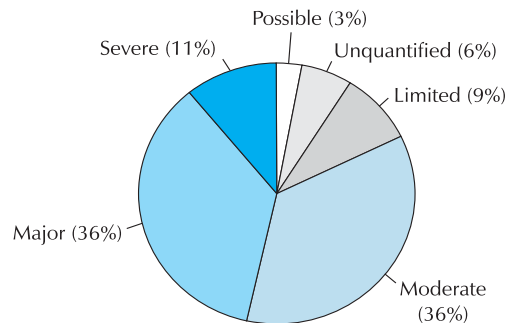


Figure 10. Estimated habitat loss in EBAs. (Severe: >90% of habitat lost. Major: >50% to 90%. Moderate: >10% to 50%. Limited: 0–10%.)

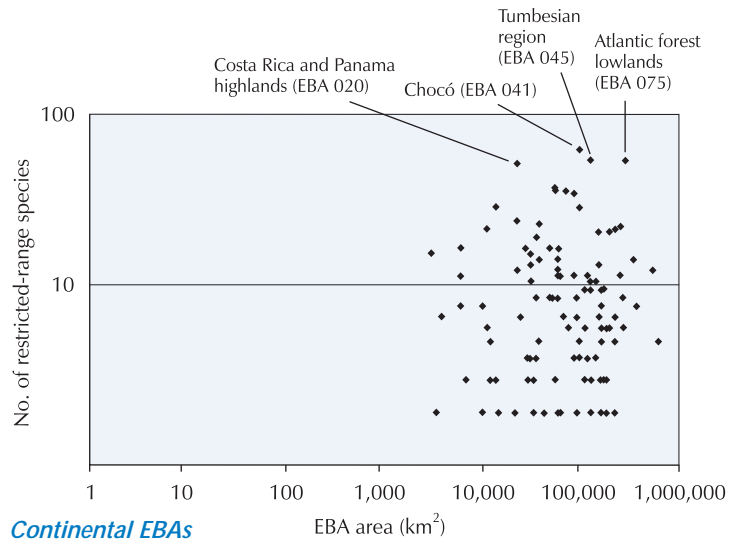
Endemic Bird Areas of the World

Figure 11. The relationship between numbers of restricted-range bird species and the size of EBAs.

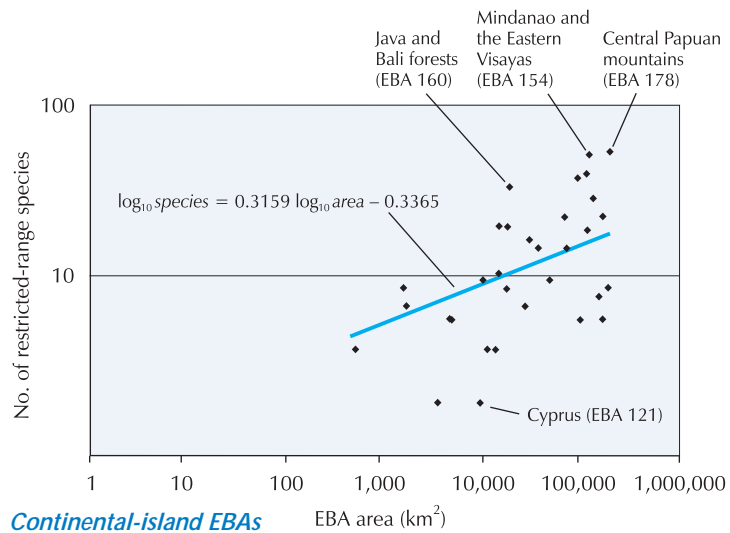
The number of species present in an area is commonly a function of its size, often expressed as $S = cA^z$ where S is species number, A is the area and c and z are constants. An arithmetic plot of species number against area is curved, with the number of species increasing more slowly in larger areas. Species numbers and area are usually plotted on log scales to show a linear relationship between the two:

$$\log_{10} S = z \log_{10} A + \log_{10} c$$

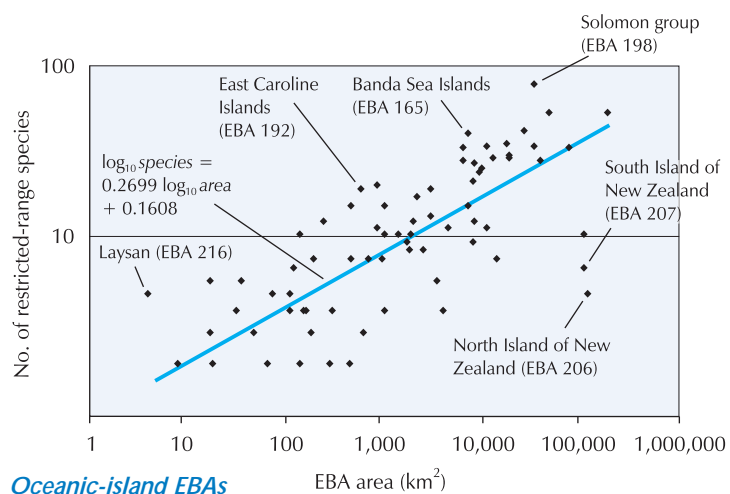
This relationship proves to be significant for the number of restricted-range species and the area of EBAs for the island EBAs ($p < 0.01$) but not for the continental ones. It has been noted for islands that a tenfold increase in area usually results in a doubling of the number of species (equivalent to a linear relationship between the log-species and log-area with a slope of 0.301, i.e. $\log_{10} 2$). This is approximately the case for the island EBAs, and outstanding ones in terms of numbers of species per unit area are therefore those with high residual values about the straight lines which show the predicted relationship between species and area.



Continental EBAs



Continental-island EBAs



Oceanic-island EBAs

Global Analyses

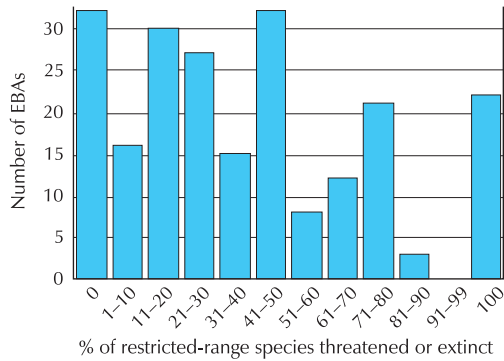


Figure 12. The proportions of restricted-range bird species in EBAs which are threatened or extinct.

all judged to be threatened with extinction. The Atlantic forest lowlands of Brazil (EBA 075) scores highest for the number of threatened restricted-range species (31), for the number which are highly threatened (18) and for the number which are highly threatened and endemic (18). The Central Hawaiian Islands (EBA 217) and Negros and Panay (EBA 152) in the Philippines also score highly for numbers which are highly threatened and endemic (Table 4).

Table 4. EBAs ranked by their numbers of threatened restricted-range species. Under A and B, where units are ranked above others with the same score, this is because weighting has been given either to the threatened species total (in B) or to the degree of endangerment within the species total (in A). Under C, priority where scores are tied has been given to units with higher numbers of endemic species categorized as Vulnerable or as Near Threatened.

A: Ranked by total no. of threatened restricted-range species			B: Ranked by no. of restricted-range species categorized as Critical or Endangered			C: Ranked by total no. of species covered by B that are also endemic to the EBA in question		
No. of spp.	EBA no.	EBA name	No. of spp.	EBA no.	EBA name	No. of spp.	EBA no.	EBA name
1.	31	075 Atlantic Forest lowlands	1.	18	075 Atlantic Forest lowlands	1.	18	075 Atlantic Forest lowlands
2.	22	154 Mindanao and the Eastern Visayas	2.	12	217 Central Hawaiian islands	2.	10	217 Central Hawaiian islands
3.	20	105 Tanzania–Malawi mountains	3.	12	152 Negros and Panay	3.	8	152 Negros and Panay
4.	18	217 Central Hawaiian islands	4.	9	151 Luzon	4.	6	105 Tanzania–Malawi mountains
5.	18	151 Luzon	5.	8	038 Colombian East Andes	5.	6	045 Tumbesian region
6.	17	041 Chocó	6.	7	198 Solomon group	6.	6	198 Solomon group
7.	15	045 Tumbesian region	7.	7	051 Peruvian High Andes	7.	6	071 Atlantic slope of Alagoas and Pernambuco
8.	14	152 Negros and Panay	8.	6	154 Mindanao and the Eastern Visayas	8.	5	051 Peruvian High Andes
9.	14	038 Colombian East Andes	9.	6	105 Tanzania–Malawi mountains	9.	5	087 Western Angola
10.	14	198 Solomon group	10.	6	045 Tumbesian region	10.	5	102 Mauritius
11.	14	094 East Malagasy wet forests	11.	7	071 Atlantic slope of Alagoas and Pernambuco	11.	5	212 Marquesas
12.	12	071 Atlantic slope of Alagoas and Pernambuco	12.	6	218 Hawai'i	12.	5	098 Comoros
13.	12	086 Cameroon mountains	13.	6	040 Colombian inter-Andean slope	13.	5	032 Caripe–Paria region
14.	11	051 Peruvian High Andes	14.	6	150 Mindoro	14.	4	154 Mindanao and the Eastern Visayas
15.	11	084 Upper Guinea forests	15.	6	087 Western Angola	15.	4	094 East Malagasy wet forests
16.	11	106 Albertine Rift mountains	16.	5	041 Chocó	16.	4	151 Luzon
17.	11	130 Eastern Himalayas	17.	5	102 Mauritius	17.	4	030 Lesser Antilles
18.	9	040 Colombian inter-Andean slopes	18.	5	212 Marquesas	18.	4	038 Colombian East Andes
19.	9	218 Hawai'i	19.	5	098 Comoros	19.	4	100 Granitic Seychelles
20.	9	030 Lesser Antilles	20.	5	032 Caripe–Paria region	20.	4	201 New Caledonia
21.	9	056 High Andes of Bolivia and Argentina	21.	5	037 Nechí lowlands	21.	4	156 Palawan
22.	8	087 Western Angola	22.	4	094 East Malagasy wet forests	22.	4	218 Hawai'i
23.	8	150 Mindoro	23.	4	030 Lesser Antilles	23.	4	150 Mindoro
24.	8	100 Granitic Seychelles	24.	4	056 High Andes of Bolivia and Argentina	24.	4	143 Annamese lowlands
25.	8	156 Palawan	25.	4	100 Granitic Seychelles	25.	4	040 Colombian inter-Andean slopes

Endemic Bird Areas of the World

EBAs with severe or major habitat loss have a significantly higher percentage of threatened and extinct species than those with moderate or limited loss ($p < 0.05$). However, it should be noted that the number of EBAs having a combination of severe/major habitat loss and a small proportion (0–20%) of threatened/extinct restricted-range species is fewer than would occur by chance (χ^2 analysis, $p < 0.05$); this is perhaps because habitat loss has been used to infer threatened status of some poorly known species in some of these EBAs.

How well known are the EBAs?

- The majority of EBAs are judged to be incompletely known.

In terms of ornithological information (i.e. information relating to the distribution, habitat requirements and altitudinal ranges of restricted-range species), 110 EBAs (50%) are judged to be incompletely known. A further 37 (17%) are considered to be poorly known, while only 71 (33%) are considered well known, with most parts having been sampled by ornithologists (Figure 13).

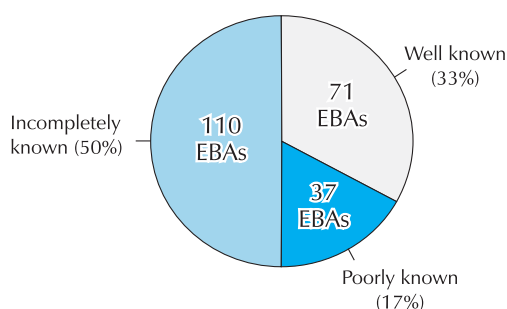


Figure 13. Knowledge of EBAs.

COUNTRIES

Which countries are most important for numbers of restricted-range bird species?

- Of the 150 countries which have restricted-range species, Indonesia has the most with over 400.

In total, restricted-range species are found in the majority of the countries of the world (Figure 15)—in 150 out of 231 geopolitical units (as listed in Appendix 2, p. 725). Some countries have exceptionally high numbers of restricted-range species. For example, five South American countries (Venezuela, Colombia, Ecuador, Brazil and Peru), the Philippines and Papua New Guinea each have over 100 restricted-range birds occurring within their territories; Indonesia leads with 403 (Figure 14).

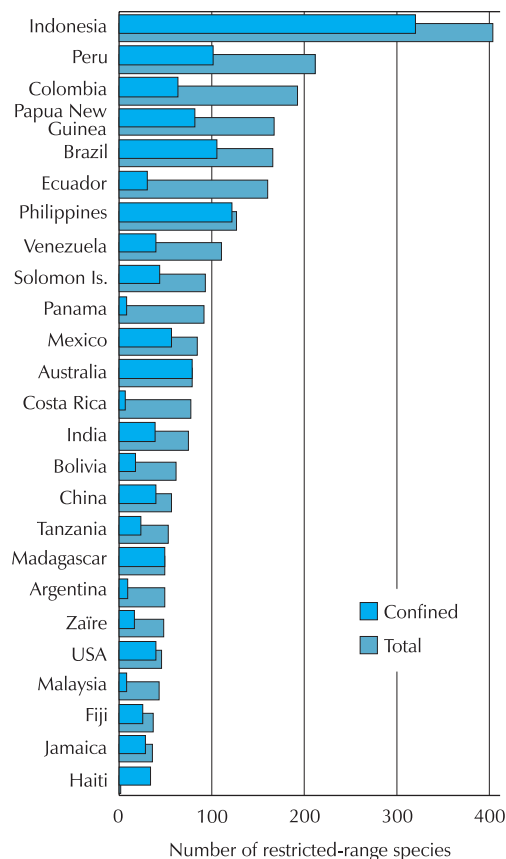


Figure 14. Countries with the highest numbers of restricted-range bird species.

Which countries are most important for numbers of threatened restricted-range bird species?

- Of 106 countries which have threatened restricted-range species, the Philippines and Indonesia are the most important.

Threatened restricted-range species are found in 106 geopolitical units; the Philippines leads with 67 threatened restricted-range species, and Indonesia is a close second with 66. A further two countries—Brazil and Colombia—have more than 50 threatened restricted-range species (Figure 16).

Such analyses are, of course, inevitably biased against the smaller countries or island nations with smaller avifaunas; few of these appear in this ranked list (a notable exception is French Polynesia at under 4,000 km²). Nevertheless, many of the tiny countries of the world have their own highly threatened single-island endemics (especially in the Pacific region, e.g. Cook Islands, Northern Mariana Islands, Tonga, Western Samoa). It is important to emphasize that

Global Analyses

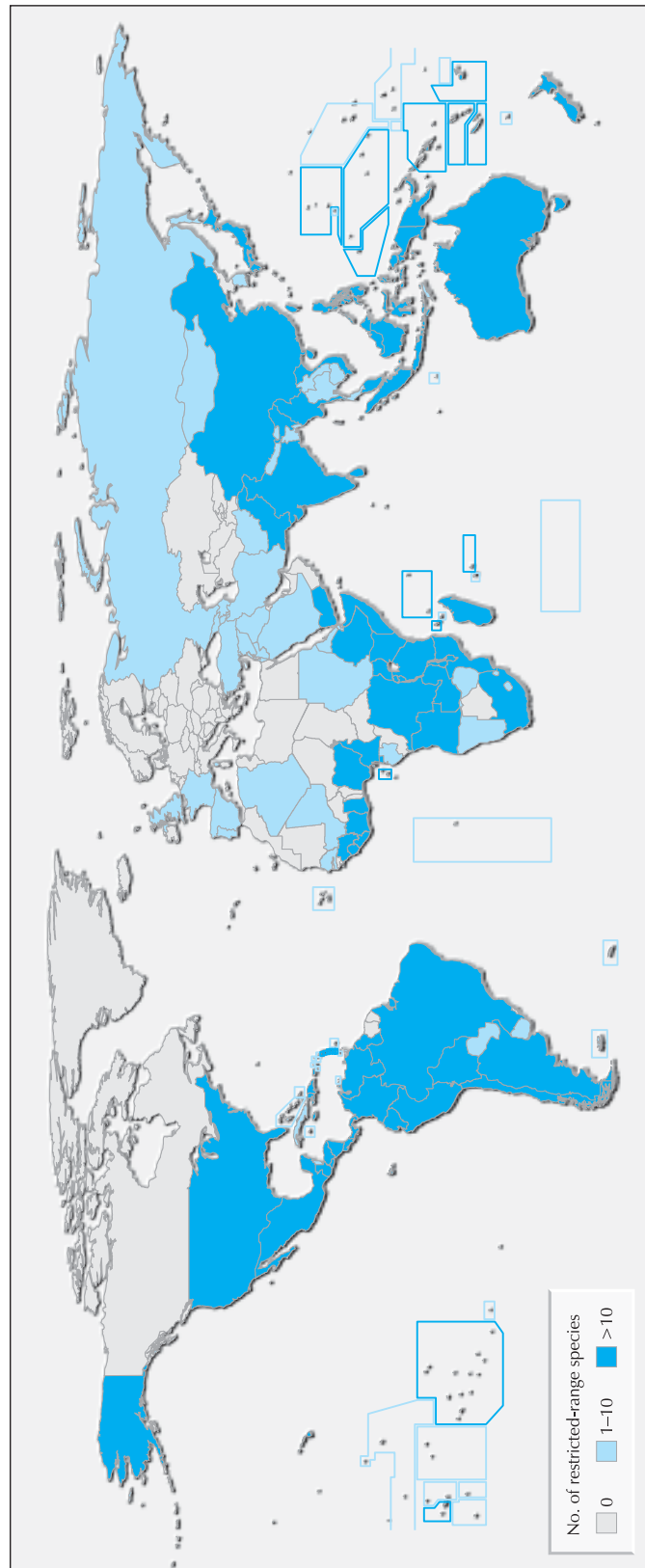


Figure 15. Countries where restricted-range species occur.

Endemic Bird Areas of the World

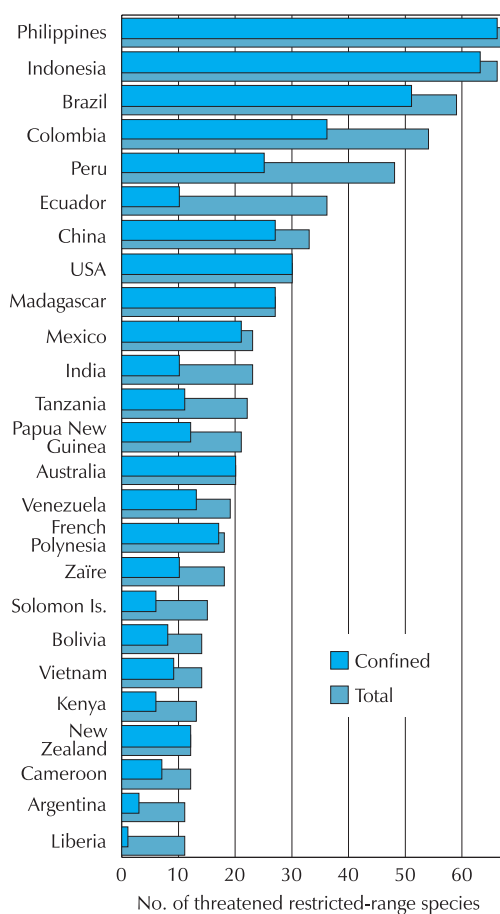


Figure 16. Countries with the highest numbers of threatened restricted-range bird species.

the survival of these species relies solely on conservation action within the EBAs or Secondary Areas of these countries.

Which countries are most important for numbers of EBAs?

- Indonesia is the most important country for numbers of EBAs, with 24.

The top countries for numbers of EBAs are similar to those for numbers of restricted-range species (Figure 17). Indonesia, three South American countries (Colombia, Brazil and Peru), Mexico, China and Papua New Guinea have more than 10 EBAs within their territories. Australia also ranks highly, having eight EBAs (which lie entirely within its borders).

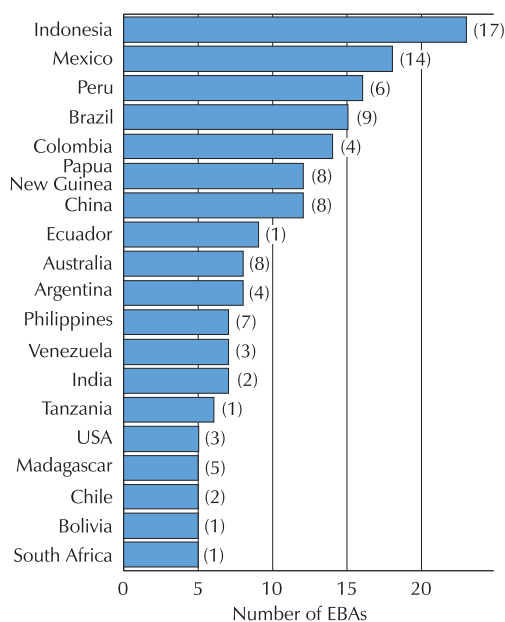


Figure 17. Countries with the highest numbers of EBAs (number of EBAs found entirely within each country's borders is also shown in brackets).