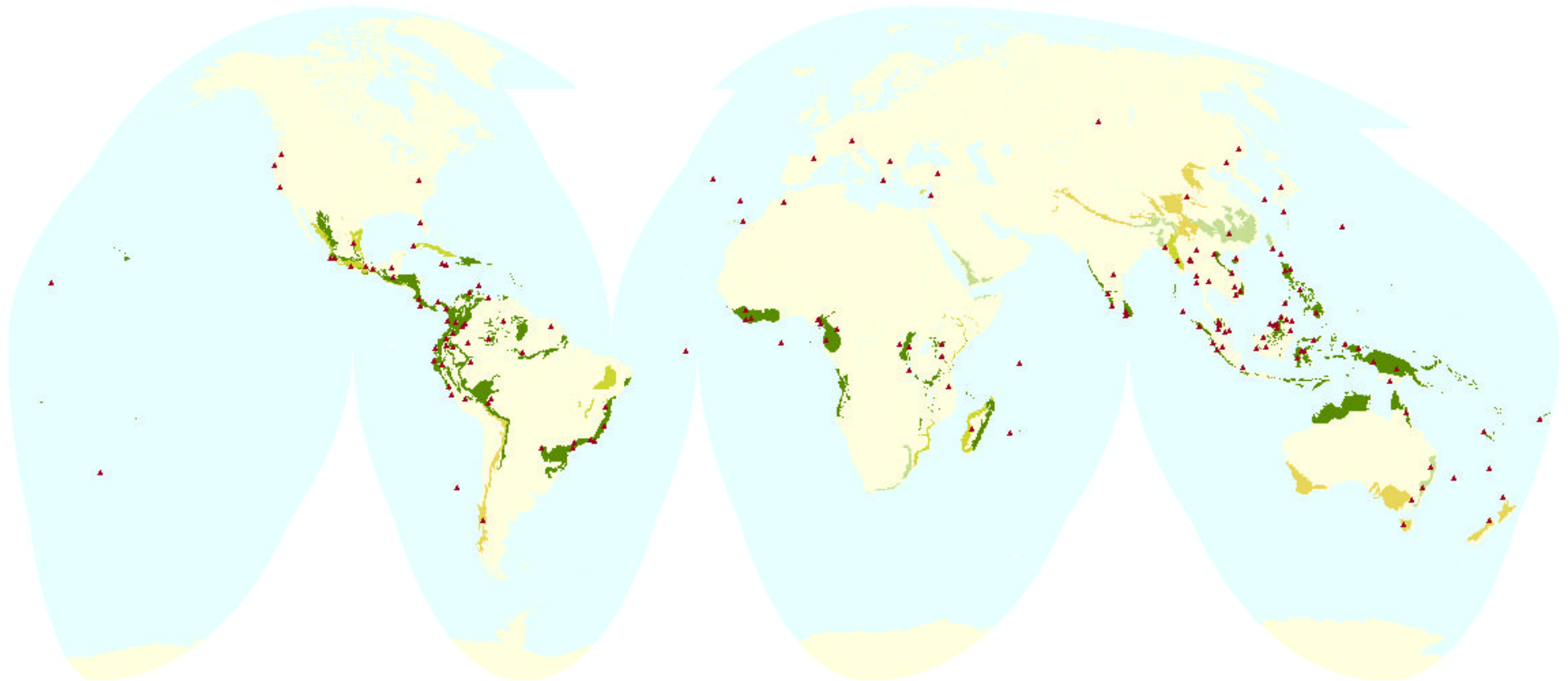


## Endemic Bird Areas and Centers of Plant Diversity in Forests



**Map Projection:** Interrupted Goode's Homolosine

**Citation:** World Resources Institute - PAGE, 2000

**Notes:**

- ▲ Centers of plant diversity
- Key habitat of endemic bird areas
  - Tropical moist forest
  - Tropical dry forest
  - Subtropical forest
  - Temperate and subalpine zone forest

### Map Description:

In an attempt to prioritize areas of particular conservation importance to these birds, BirdLife International has identified 218 endemic bird areas (EBAs) worldwide (Stattersfield et al., 1998:24). More than one quarter of all birds of the world have restricted breeding ranges, that is, they are confined to areas of less than 50,000 km<sup>2</sup> (the size of Costa Rica). Restricted-range birds include 816 species currently classified as threatened; this number represents more than one half of all restricted-range birds, and 74 percent of all threatened bird species. Forests provide the habitat for 83 percent of all EBAs. This map shows the distribution of EBAs, and the various forest ecosystems in which they are found. The size of EBAs varies widely, from tiny islands of a few square kilometers to the southeastern Chinese mountains, which cover over 600,000 km<sup>2</sup>. Most are under 30,000 km<sup>2</sup>. The majority support between 2 and 10 restricted-range species, but a few outstanding EBAs support 50 species or more. Nearly half of all EBAs are estimated to have lost more than 50 percent of their key habitats, and more than 10 percent have lost over 90 percent. The relevance of EBAs to conservation goes beyond restricted-range bird species. Analysis by BirdLife International has established that EBAs partially encompass the ranges of many widespread threatened bird species and that they include the key habitats and sites for many more widespread species, including some important migrant species.

This map also shows the strong spatial association between the EBAs and centers of plant diversity (CPDs). Diversity of plant life is an essential attribute of most terrestrial ecosystems. Like birds, plants influence decisions regarding conservation priorities, because they have dispersed to, and diversified in, all regions of the world, and they occur in virtually all habitat types and altitudinal zones. Identifying sites of high plant diversity is an approach to determining which areas should receive priority conservation action. The Worldwide Fund for Nature (WWF) and the World Conservation Union (IUCN) have identified 234 priority centers of plant diversity (CPDs) worldwide (WWF and IUCN, 1994). About 73 percent of all centers of plant diversity are found in forests. The close association of EBAs and CPDs reinforces the validity of mapping biodiversity hotspots, at least with respect to endemism. According to BirdLife International, 70 percent of CPDs overlap in some way with EBAs, and 60 percent of EBAs overlap with CPDs. However, some significant sites do not show any overlap, and both studies stress the limitations of using selected species, or collections of species, as proxy indicators of overall biodiversity.

### Analytical Overview:

BirdLife International defines an endemic bird area as "An area which encompasses the overlapping breeding ranges of restricted-range bird species, such that the complete ranges of two or more restricted-range species are entirely included within the boundary of the EBA. This does not necessarily mean that the complete ranges of all of an EBA's restricted-range species are entirely included within the boundary of that single EBA, as some species may be shared between EBAs." (Stattersfield et al., 1998:24.)

WWF and IUCN identified centers of plant diversity using the following criteria. The sites had to be either particularly species-rich or contain a large number of endemic species. The mainland centers had to contain at least 1,000 vascular plant species (estimated), with 100 or more endemics; the island centers had to contain at least 50 endemics or at least 10 percent of the flora had to be endemic. Additional characteristics considered in selecting the centers included: an important gene-pool of plants having value, or potential value, to humans; a diverse range of habitat types; a significant proportion of species adapted to special soil conditions; and under threat of large-scale devastation. Because the centers designate sites that are of global botanical importance, some sites were omitted that would have qualified if assessed from a national perspective.

### Source:

1. Worldwide Fund for Nature and World Conservation Union. 1994, Centres of Plant Diversity: A Guide and Strategy for their Conservation. 3 volumes. Cambridge, UK: IUCN Publications Unit.
2. Stattersfield, A.J., M.J. Crosby, A.J. Long, and D.C. Wege. 1998. "Endemic Bird Areas of the World: Priorities for Biodiversity Conservation". Birdlife Conservation Series No. 7: 846.