

Cosmopolitan species



www.peregrinefund.org/explore_raptors/

Biogeography

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Biogeographic boundaries



FIGURE 15.2 The Wallace region of southeastern Asia and Australia and several of the biogeographic lines that have been proposed to separate the Australian and Oriental regions. The northeastern range limits of the Australian group, the monsoonal and meso-tidal, are also shown (after Ziswiler, 1978 and other sources).

Biogeography

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faunal



floral



floral+faunal

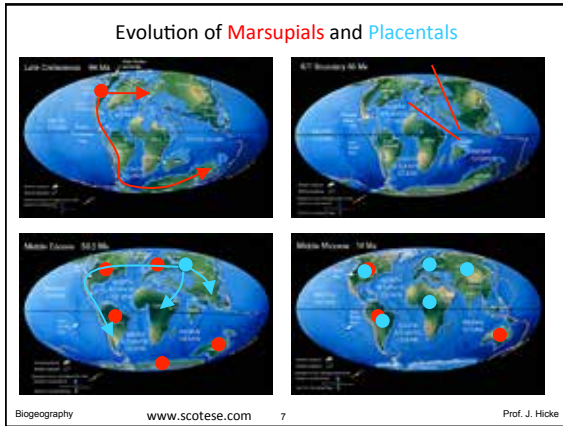


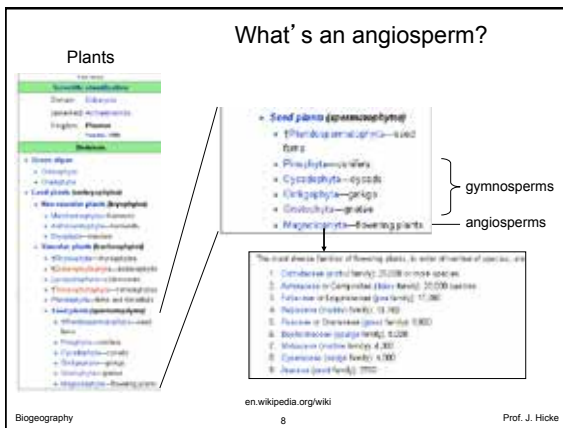
FIGURE 15.3 The world's faunal realms, floral realms, and their combined floral and faunal biogeographic regions (a number of others).

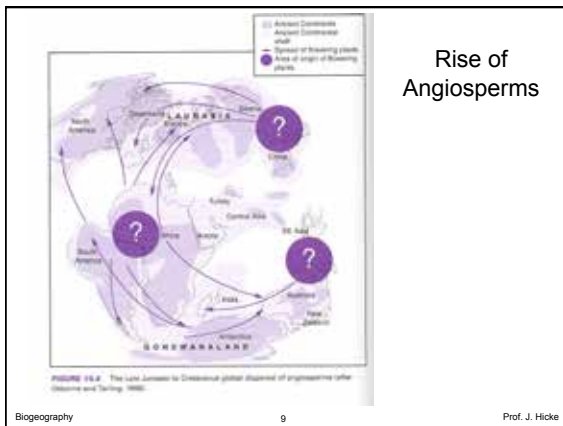
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Biogeographic realms







Distribution of pines and southern beeches



Long dispersal distances, ocean barriers prevented cold-adapted angiosperms to colonize Northern Hemisphere high latitudes

100 pine species, only several southern beech species


FIGURE 14.9 The Late Cretaceous–Early Tertiary distribution of the southern beeches (Phyllocladus and Nothofagus). The northern distribution of the Nothofagus.

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Biogeographic Mapping and Conservation Planning: World Wildlife Fund (WWF) Ecoregions

"Biodiversity ignores national and other political boundaries, so a more relevant conservation planning unit is required - WWF addresses this need with ecoregions." (www.worldwildlife.org/science/ecoregions)


Ability to focus conservation efforts strategically is hindered by a global map of biodiversity with sufficient biogeographic resolution to reflect the complex distribution of natural communities (Olson et al., 2001)



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Figure 2.2 Hierarchy of spatial units used in conservation assessment framework.



Kingdom → Phylum → Class → Order → Family → Genus → Species

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World Wildlife Fund (WWF) Ecoregions

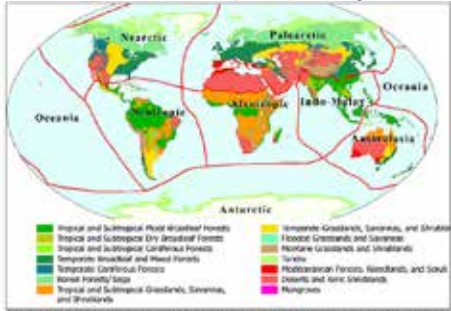


Figure 1. The ecoregions are categorized within 14 biomes and eight biogeographic realms to facilitate representation analysis.

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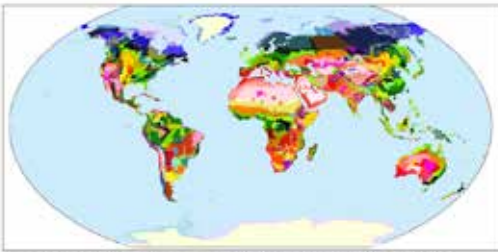


Figure 2. The map of terrestrial ecoregions of the world recognizes 867 distinct units, roughly a fourfold increase in biogeographic discrimination over that of the 193 units of Ulwardy (1975). Maps of freshwater and marine ecoregions are similarly needed for conservation planning.

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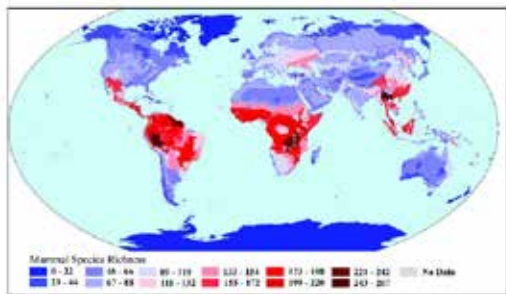


Figure 3. The relative richness of terrestrial mammal species by ecoregion is depicted. Warmer colors denote ecoregions containing richer assemblages.

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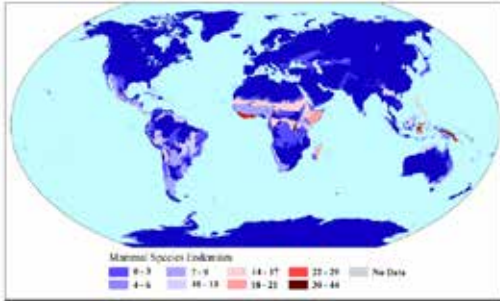


Figure 4. The level of species endemism for terrestrial mammals shows different patterns than that of richness. Warmer colors denote ecoregions containing more endemic species.

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Biogeographic Mapping and Conservation Planning:
World Wildlife Fund (WWF) Ecoregions

WWF Global 200

“...a first attempt to identify a set of ecoregions whose conservation would achieve the goal of saving a broad diversity of the Earth’s ecosystems. These ecoregions include those with exceptional levels of biodiversity, such as high species richness or endemism, or those with unusual ecological or evolutionary phenomena.”

www.worldwildlife.org/science/ecoregions/g200.cfm

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Biogeographic Mapping and Conservation Planning:
World Wildlife Fund (WWF) Ecoregions

WWF Global 200 vision:

Identify and map priority areas critical to maintaining biodiversity

The vision should fulfill these basic tenets of conservation biology:

- **Representation** of all distinct natural communities within conservation landscapes and protected areas networks
- Maintenance of **ecological and evolutionary processes** that create and sustain biodiversity;
- Maintenance of **viable populations of all native species**; and
- Conservation of **blocks of natural habitat large enough** to be resilient to large-scale stochastic and deterministic disturbances and long-term changes.

www.worldwildlife.org/science/ecoregions/visions.cfm

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