

# Brief Note on Species Abundance and Diversity

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## Perspective

Species diversity is determined not only by the number of species found within a biological community (species richness), but also by the relative abundance of individuals found within that community. The number of individuals per species is known as species abundance, while relative abundance refers to the evenness of individual distribution among species in a community. Two communities with the same number of species may have different relative abundances. For example, each community may include five species and 300 individuals, but in one, all species are equally common (e.g., 60 individuals of each species), whereas in the other, one species outnumbers the other four by a substantial margin.

These aspects of species variety react to diverse environmental conditions in different ways. A region with a limited range of habitats is typically species-poor; nonetheless, the few species that are able to occupy the region may be numerous due to lower competition for resources with other species. Trends in species richness can reveal a lot about a region's history and present environment. Because of its harsh environment, the Antarctic continent has few species; however, oceanic islands have few species because they are difficult to reach or, as in the case of the Lesser Sunda Islands in south-central Indonesia, because they are of recent origin and organisms have not had enough time to establish them.

Species richness is also influenced by global gradients. The most noticeable gradient is latitudinal: the tropics have more species than the temperate and polar zones. This gradient is frequently explained by ecological considerations. Higher temperatures, more predictable weather, and longer growing seasons all work together to produce a more appealing environment, allowing for a wider diversity of species. Tropical rainforests are the most diverse habitats, tropical grasslands are more diverse than temperate grasslands, and tropical or subtropical deserts support a greater diversity of species than temperate deserts. Trends in species richness can reveal a lot about a region's history and present environment. Because of its harsh environment, the Antarctic continent has few species; however, oceanic islands have few species because they are difficult to reach or, as in the case of the Lesser Sunda Islands in south-central Indonesia, because they are of recent origin and organisms have not had enough time to establish themselves [1-5].

Another element that influences a specific area's species richness is the distance or barrier that separates it from possible sources of species. The chances of species reaching remote sea islands or lonely valleys are slim. Animals, particularly those that do not fly, are less likely to do so than plant species. The temperature and vegetation of the Lesser Sunda Islands are similar to that of eastern Java, but there are significantly fewer completely terrestrial creatures. This is due to the fact that, while Java has previously been connected to a bigger landmass, the Lesser Sundas have not. Plants and seeds have been carried across the seas, but only a few species of creatures without wings have made it to these islands. Another element that influences a specific area's species richness is the distance or barrier that separates it from possible sources of species. The chances of species reaching remote sea islands or lonely valleys are slim. Animals, particularly those that do not fly, are less likely to do so than plant species. The temperature and vegetation of the Lesser Sunda Islands are similar to that of eastern Java, but there are significantly fewer completely terrestrial creatures. This is due to the fact that, while Java has previously been connected to a bigger landmass, the Lesser Sundas have not. Plants and seeds have been carried across the seas, but only a few species of creatures without wings have made it to these islands.

## References

1. Abdellaoui, Mohammed, Arthur E. Attema and Han Bleichrodt. "Intertemporal tradeoffs for gains and losses: An experimental measurement of discounted utility." *The Economic Journal* 120 (2010):845-866.
2. Bell, Kathleen P., Daniel Huppert and Rebecca L. Johnson. "Willingness to pay for local coho salmon enhancement in coastal communities." *Marine Resource Economics* 18 (2003):15-31.
3. Boyle, Kevin J., and Richard C. Bishop. "Valuing wildlife in benefit-cost analyses: A case study involving endangered species." *Water resources research* 23 (1987):943-950.
4. Bradford, Michael J., and James R. Irvine. "Land use, fishing, climate change, and the decline of Thompson River, British Columbia, coho salmon." *Canadian J Fisheries Aquatic Sciences* 57 (2000):13-16.
5. Cameron, Trudy Ann, and J. R. DeShazo. "Demand for health risk reductions." *J Environ Econ Manag* 65 (2013):87-109.

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