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Annotated Bibliography

Nestedness of Biotas

Bolger, D.T., A.C. Alberts, and M.E. Soulé. (1991). Occurrence patterns of bird species in habitat fragments: sampling, extinction, and nested species subsets. American Naturalist 137: 155-166.

This paper gave a basic understanding of the theory of nestedness and its implications in fragmented habitats. But it failed to substantiate the viability of the principle.

Patterson, B.D. and W. Atmar. (1986). Nested subsets and the structure of insular mammalian faunas and archipelagos. Biological Journal of the Linnean Society 28: 65-82.

The paper presented a very flawed argument in environmental science. The author postulates that a fragile community is representative of a healthy species community. Although this theory is applicable in some ecosystems, it may not apply in most.

Wright D.H. and J.H. Reeves. (1992). On the meaning and measurement of nestedness of species assemblages. Oecologia 92: 416-428.

The author just established the hypothesis of Patterson etal but failed to give a strong argument to validate this theory. The author tried to introduce the "single large" side of the "Single Large Or Several Small" (SLOSS) continuum in their arguments.

Skaggs, R.W. and W.J. Boecklen. (1996). Extinctions of montane mammals reconsidered: putting a global-warming scenario on ice. Biodiversity and Conservation 5: 759-778.

The paper was trying to debunk the hypothesis put forward by McDonald and Brown in the paper entitled “Using montane mammals to model extinctions due to global change”. The author gave valid arguments and predicted that existing models of extinction must look forward to additional studies of ancient and present species distributions.

MacDonald, K.A. and J.H. Brown. (1992). Using montane mammals to model extinctions due to global change. Conservation Biology 6: 409-415.

The paper just reinforces the argument that conservation science needs to be attached with biological science inorder to be accepted by the scientific community. Predictions based on population estimates could be questionable at the least.

Cutler A. (1991) Nested Faunas and Extinction in Fragmented Habitats. Conservation Biology Volume 5 Issue 4 Page 496 - December 1991 doi:10.1111/j.1523-1739.1991.tb00357.xVolume 5 Issue 4

The paper was trying to discuss the paper entitled "nested subset model" by Patterson & Atmar. The author presented some ideas and tried to introduce his definitions of nestedness parameters – “widespread species may be absent from otherwise rich faunas (holes), and uncommon species may occur in depauperate faunas (outliers)”. He still failed to give a valid argument to substantiate the nestedness model.

Kodric-Brown, JH Brown (1993). Highly structured fish communities in Australian desert springs. Ecology 74:6 pp. 1847-1855, 1993. D 04668

The author presented his paper describing a perfect nestedness scenario in the present term. But he failed to utilize the hypothesis in the context of extinction analysis.

Fischer J and Lindenmayer DB., (2005). Perfectly nested or significantly nested – an important difference for conservation management. Oikos Volume 109 Issue 3 Page 485 - June 2005 doi:10.1111/j.0030-1299.2005.13674.xVolume 109 Issue 3

This paper has been the most acceptable in addressing what constitutes nestedness. The authors argued that nestedness needs to be analysed and interpreted carefully, especially in an applied conservation context. They proposed alternative conservation models which consider the various ecological parameters are likely to be more informative for conservation management than nestedness analyses.