

Intermediate disturbance hypothesis

The intermediate disturbance hypothesis (IDH) was first described by Connell (1978) as a mechanism that allows the maintenance of diversity in tropical forest and coral reefs. Recent literature has suggested that this mechanism may be much broader in its scope than previously recognized. Roxburgh et al. (2004) demonstrated that the IDH is a complex of different mechanisms that can allow the coexistence of many species. Roxburgh used three models 1) spatial within-patch 2) spatial between-patch 3) purely temporal, to demonstrate possible coexistence mechanisms for different species at intermediate disturbance. These results point out that mechanisms other than dispersal and competition could create the increase in diversity seen from disturbance. In 2006 Kadmon and Benjamini demonstrated that a neutral model of species, which are ecologically identical, can show the same disturbance induced diversity. In Connell's 1978 paper he seemed somewhat skeptical of the other models he proposed and the focus of his discussion was IDH. His skepticism may have been appropriate, and while the other mechanism described may contribute to diversity, this may only be inside the context of disturbance.

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