CONSERVATION BIOGEOGRAPHY AND EXTINCTION DEBTS

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Conservation biogeography is the science that places biogeography at the service of conservation, i.e. it refers to the application of biogeographical principles, theories, and approaches (i.e. those concerned with the distributional dynamics of taxa individually and collectively) to problems concerning the conservation of biodiversity.

I briefly review the scope of conservation biogeography before turning to review a specific theme, the extinction estimate shortfall. Despite long standing concerns of an impending mass extinction event we have surprisingly poor resolution on contemporary rates of species extinction owing to fundamental limitations of data (so called Linnean and Wallacean shortfalls) and theory.

In this presentation I focus on the problem of estimating extinction as a result of habitat loss and fragmentation. Lag effects mean that the full consequences of these processes may take generations to take effect, generating extinction debts. I discuss a protocol for estimating extinction debt, illustrated by a case study system.