

A METAPOPOPULATION MODEL FOR WHALE-FALL SPECIALISTS

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Despite very limited sampling of whale falls worldwide, more than 60 new species have been found on lipid-rich whale skeletons and in no other habitat. Thus, there is evidence of a significant suite of whale-fall specialists which require whale falls to complete their life cycles. If whale-specialists do exist, the whaling industry must have drastically reduced the availability of their habitats at the deep-sea floor. To explore the effects of whaling on whale-fall habitat loss and the consequent potential for whale-fall species extinctions, we developed a metapopulation model for whale-fall communities based on standard metapopulation assumptions. Changes in the abundance and size of live whales can be incorporated into the model to explore the consequences of whaling on species persistence within an archipelago of whale-fall habitats.