

## Island Life:

### Coming to Grips with the Insular Nature of Southeast Alaska

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**ABSTRACT:** Because Southeast Alaska is dominated by the numerous islands of the Alexander Archipelago, effective management of the Tongass National Forest will require a new vision of planning that accounts for the peculiarities associated with islands and island life. First, the apparently deep history of persistence of some organisms in the region is due to Pleistocene coastal refugia and heightens the probability that a substantial number of divergent insular lineages, such as the Haida ermine (*Mustela haidarum*), are endemic to this region. Second, coastal refugia significantly affected the assembly of biotic communities in the region. In particular, biogeography of the archipelago more closely resembles the dynamics typical of oceanic rather than land bridge islands. Third, because extinction and speciation rates are elevated on islands, considerable effort must be focused on identifying and then avoiding the loss of endemic populations to preserve future options in the face of changing environmental conditions (i.e., maintain the evolutionary potential of these lineages to respond to shifting conditions). Fourth, explicitly factoring spatial scale (ranging from islands within islands to island groups) and temporal scale (ranging from ecological to evolutionary time) into management plans and associated action is critical to the maintenance of well distributed populations on the Tongass. Finally, the lack of available baseline information on endemics, exotics, and emerging pathogens continues to be a primary limitation to effective management in the region.