

FEATURE ARTICLES

NEST ATTRIBUTES, AGGRESSION, AND BREEDING SUCCESS OF GULLS IN  
SINGLE AND MIXED SPECIES SUBCOLONIES

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*Abstract.* We investigated attributes of nests, aggressive interactions, and reproductive success in mixed and single species subcolonies of Great Black-backed Gulls (*Larus marinus*) and Herring Gulls (*L. argentatus*) on Appledore Island, Maine. Distances to the nearest neighboring nest were smaller for *L. argentatus* than *L. marinus*, with greatest distances between nests at edges of subcolonies in both species. More *L. argentatus* nests had natural screens (vegetation or rock >30 cm tall) adjacent to them than did *L. marinus* nests, but screen presence did not differ among nest positions within the colony. Clutch size did not differ between species; however, hatching success (number of chicks hatched per nest) was higher in *L. argentatus* than *L. marinus*. Fledging success (number of chicks fledged per nest) of *L. marinus* was greater at nests with heterospecific neighbors, whereas the opposite was true for *L. argentatus*. For both species, the frequency of aggressive interactions was lower at nests with *L. argentatus* neighbors. Overall, *L. marinus* nesting near *L. argentatus* experienced less aggression and greater reproductive success than those nesting among conspecifics, where intraspecific aggression was relatively high. *L. argentatus* nesting near *L. marinus* experienced more aggression and lower reproductive success than those nesting among conspecifics, where intraspecific aggression was relatively low. The costs and benefits of nesting in mixed species colonies may depend on the relative size and aggressiveness of the heterospecifics. Interactions with *L. marinus* in mixed species colonies may be contributing to the current declines of *L. argentatus* throughout New England.

*Key words:* aggression, interspecific competition, *Larus argentatus*, *Larus marinus*, mixed species colonies, nest characteristics, population trends.