## SEASONAL DISTRIBUTION OF FORAGING GULLS AT FLORIDA LANDFILLS

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ABSTRACT.—The spatial distribution of foraging Laughing Gulls (Larus atricilla) and migrant Herring and Ring-billed gulls (L. argentatus, L. delawarensis) was studied at two landfills near Tampa Bay during 1981–1982. I determined the distribution of gulls on the active dumping face by dividing the surface into seven regions, observed in the presence and absence of bulldozers. Randomly selected gulls were followed to their landing locations and the species and age-classes of their 10 nearest neighbors were recorded. Log-linear analyses were used to test for random distributions of gulls among species, age-classes, locations, and bulldozer activities. Interactions between species and age, species and bulldozer, species and location, and age and bulldozer were significant for fall, winter, and spring seasons; in summer, only age-related interactions were significant. Consistent positive associations of adult Laughing Gulls with bulldozers, Herring Gulls with the top edge of the face, and Laughing Gulls with the bottom edge of the face were observed; other distributional patterns changed seasonally. Species differences in feeding method, morphology, and behavior contribute to observed distributional patterns.

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