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Notes on the relationships of island area and distance from mainland to the presence of Herring Gull colonies in Lake Nipigon, Ontario.—Breeding colonies of most gulls and terns are more common on islands than on mainland (Bent, U.S. Natl. Mus. Bull. 113, 1921; Tinbergen, *The Herring Gull's World*, Basic Books, New York, New York, 1961). This observation is most often explained in terms of avoidance of predation (Strong, *Auk* 31: 22–49, 178–200, 1914; Burger and Lesser, *Ibis* 120:433–449, 1978). Avoidance of predation by birds (e.g., American Crows, *Corvus brachyrhynchos*; Common Ravens, *Corvus corax*; Great Blue Herons, *Ardea herodias*) and by mammals (e.g., humans; dogs, *Canis familiaris*; red fox, *Vulpes vulpes*; mink, *Mustela vison*; otter, *Lutra canadensis*) may be important in explaining the island preference of Herring Gulls (*Larus argentatus*) (cf. Harris, *Ibis* 106: 432–456).

Other factors are involved in colony selection by gulls and terns, such as proximity to feeding areas, vegetation type and plant density (Burger and Lesser, 1978), height above water level (McNicholl, *Auk* 92:98–104, 1975; Southern, *Auk* 94:469–478, 1977), exposure to open water (Burger and Lesser, 1978), and suitability of nesting substrates (Ludwig, *Auk* 91:575–594, 1974).

The reconnaissance nature of this study precludes discussion of the relative influences upon colony selection of factors other than island area and distance from mainland. This paper reports on the relationships of island area and distance from mainland to the presence of Herring Gull breeding colonies in Lake Nipigon, Ontario.

Methods.—Research was conducted along with a study of the island biogeography of seed plants in Lake Nipigon. The area is described by Timoney (*Can. Field-Nat.* 97:16–25, 1983).

From mid-June to mid-August 1979, the presence or absence of Herring Gull breeding colonies was noted for 48 islands. A colony or pair was recorded present if at least one nest with incubated eggs or young was observed. If no nests, or only abandoned nests were observed, no colony was recorded. Island areas were determined by planimeter from Canada NTS maps (scale = 1:50,000). Distance from mainland was measured as the shortest distance between an island's shore and the mainland shore.

Results.—Islands ranged in size from <0.1 ha to 19.4 ha and in distance from mainland from 50 m to 10.5 km. Distance from mainland and island area were not correlated significantly ($r = 0.22$, $0.2 > P > 0.1$). No mainland colonies were found.

Island area bore no linear correlation with presence-absence of Herring Gull colonies (Kendall's Tau, two-tailed P , Mann-Whitney U -test: $\rho = 0.05$, $P = 0.76$). The six smallest islands (all <0.1 ha) also were the lowest and flattest and were subject to inundation. None of these low-lying islands supported a Herring Gull colony. Timoney observed waves or spray saturating four of these islands. The meager heights above water and the near barrenness of the other two small islands (with only mosses and *Potentilla norvegica* in rock cracks, and saxicolous lichens) suggest that they too were inundated regularly.

Even with these six smallest islands omitted, area (ranging from 0.1 to 19.4 ha) was still not correlated significantly with Herring Gull colonies ($\rho = -0.19$, $P = 0.32$).

The rank correlation statistics tested for a linear relationship between colony presence and area; but, as Burger and Lesser (1978) have shown for Common Terns (*Sterna hirundo*), islands intermediate in size may be preferred. Harris and Matteson (Univ. Wisconsin Sea Grant Technical Report No. 227, 1975) found the densest Herring Gull colonies in Lake Superior on islands intermediate in size. The two densest colonies found on Lake Nipigon were on intermediate-sized islands (0.4, 1.1 ha).

The data suggest that islands between 0.1 and 6.0 ha may be more favorable nesting sites than islands <0.1 or >6.0 ha (Kruskal-Wallis test, $\chi^2 = 6.9$, $df = 2$, $0.05 > P > 0.03$). No breeding colonies were observed on the six islands <0.1 ha, while 17 of the 35 islands between 0.1 and 6.0 ha supported Herring Gulls. Of the seven islands >6.0 ha, one supported Herring Gulls. Conclusions based on these results should be considered tentative as non-significant results ($P > 0.10$) were obtained when tests were run on data split into various objective size classes.

Herring Gulls on Lake Nipigon seem to nest on islands intermediate in size. Small islands are subject to inundation and colonies on large islands may be more susceptible to predation.

The occurrence of Herring Gull breeding colonies was correlated positively with distance from mainland ($\rho = 0.47$, $P = 0.0032$). All 12 sample islands within 1.1 km of the mainland lacked colonies, and all four islands beyond 6.5 km supported colonies. Islands supporting Herring Gull colonies were located significantly farther from the mainland than islands lacking colonies (Kruskal-Wallis test, $\chi^2 = 8.6$, $df = 1$, $P < 0.005$). The average distance from mainland of the 18 islands supporting Herring Gull colonies was 4.0 km (SD = 2.8), and that for the 30 islands lacking colonies was 1.9 km (SD = 1.8).

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Interactions between House Sparrows and Common Ground-Doves on Walker's Cay, Bahamas.—Between 14 and 16 March 1984, we observed at least eight male and seven female House Sparrows (*Passer domesticus*) around the hotel on Walker's Cay (27°17'N, 78°25'W) at the north end of the Bahama Islands. Previous records of House Sparrows from the Bahamas have included an unsuccessful introduction at Nassau on New Providence in the 1870s (Brudenell-Bruce, *The Birds of the Bahamas*, Taplinger Publ. Co., New York, New York, 1975) and scattered records of individuals on New Providence and Grand Bahama (Brudenell-Bruce, 1975, *American Ornithologists' Union, Check-list of North American birds*, 6th ed., Allen Press, Lawrence, Kansas, 1983). Recent records are believed by Brudenell-Bruce to be of birds that had "stowed away" on boats from Florida. Emlen (*Ornithol. Monogr.* 24, 1977:128) lists House Sparrows as "common . . . permanent residents in urban Freeport and around hotels," although none was seen on his transect routes on Grand Bahama. Emlen (1977:9) also recorded the species on other north, south, and east