Herring Gulls, Larus argentatus, Nesting on Sandusky Bay, Lake Erie, 1989

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**ABSTRACT.** One of the largest herring gull (*Larus argentatus*) nesting populations on the Great Lakes is located in an urban setting on Sandusky Bay in the Ohio portion of Lake Erie. The survey reported here, carried out in 1989, indicated a population of 4,250 nests. The population has expanded from a focal point on Turning Point Island to coal piles at the Lower Lake Dock Company, rooftops in downtown Sandusky and breakwalls near Cedar Point. Comparison with data from a survey performed in 1976 indicates the population has grown at an average annual rate of 11.9% during the past 13 years. The population may now be expanding into suboptimal nesting areas.

**INTRODUCTION**

A nesting population of herring gulls (*Larus argentatus*) on the south shore of Sandusky Bay near Sandusky, OH has expanded to the point where the birds are creating various nuisance problems as well as causing some damage at industrial sites. Gulls at the Lower Lake Dock Company (LLDC) have created the most problems, causing power outages through perching activities at the transformer station and disrupting the activity of workers through aggressive defense of nests and young.

In conjunction with evaluations of methods to reduce the problems caused by gulls, a census of gull nesting activity was undertaken in the area in 1989. The objective was to obtain an estimate of the size and extent of the herring gull nesting population on Sandusky Bay.

**RESULTS**

About 70% (2,964) of the 4,250 herring gull nests estimated to be on Sandusky Bay were located on Turning Point Island and the adjacent breakwalls (Table 1). Turning Point Island had a mean density of 1,120 nests/ha. Nesting at the nearby LLDC facility (178 nests) was primarily on top of the north coal pile and along the conveyor belts adjacent to Sandusky Bay (Fig. 1). Turning Point Island and the adjacent breakwalls, Cedar Point Marina (CPM) breakwalls, and rooftops where herring gulls nested, 1989.

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Table 1

Estimated number of herring gull nests in the vicinity of Turning Point Island (TPI), Lower Lake Dock Company (LLDC) and Cedar Point Marina (CPM), Sandusky, Ohio 1989.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>0 egg</th>
<th>1 egg</th>
<th>2 eggs</th>
<th>3 eggs</th>
<th>chicks</th>
<th>Unk</th>
<th>Estimated nesting population</th>
<th>Estimated no. of nests/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPI</td>
<td>10 May</td>
<td>7</td>
<td>6</td>
<td>14</td>
<td>112</td>
<td>29</td>
<td>0</td>
<td>2,800 ± 124*</td>
<td>1,120</td>
</tr>
<tr>
<td>TPI Breakwall (east-west)</td>
<td>10 May</td>
<td>10</td>
<td>10</td>
<td>16</td>
<td>102</td>
<td>5</td>
<td>0</td>
<td>143</td>
<td>453</td>
</tr>
<tr>
<td>TPI Breakwall (north-south)</td>
<td>24 May</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>21</td>
<td>67</td>
</tr>
<tr>
<td>LLDC</td>
<td>8 May</td>
<td>50</td>
<td>28</td>
<td>26</td>
<td>74</td>
<td>0</td>
<td>0</td>
<td>178</td>
<td>—</td>
</tr>
<tr>
<td>Sandusky Rooftops Displayco</td>
<td>22 May</td>
<td>16</td>
<td>17</td>
<td>13</td>
<td>28</td>
<td>0</td>
<td>20</td>
<td>94</td>
<td>130</td>
</tr>
<tr>
<td>Americup</td>
<td>1 June</td>
<td>25</td>
<td>31</td>
<td>33</td>
<td>17</td>
<td>0</td>
<td>1</td>
<td>107</td>
<td>192</td>
</tr>
<tr>
<td>CPM Breakwalls South</td>
<td>11 May</td>
<td>5</td>
<td>14</td>
<td>67</td>
<td>409**</td>
<td>89</td>
<td>0</td>
<td>584</td>
<td>1,669</td>
</tr>
<tr>
<td>Center</td>
<td>11 May</td>
<td>5</td>
<td>10</td>
<td>38</td>
<td>231**</td>
<td>18</td>
<td>0</td>
<td>302</td>
<td>575</td>
</tr>
<tr>
<td>North</td>
<td>11 May</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Miscellaneous†</td>
<td>11 May-1 June</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>13</td>
<td>18</td>
<td>—</td>
</tr>
</tbody>
</table>

TOTAL                      | 4,250    |       |       |        |        |        |     |                              |                           |

* Sixteen transects, 29 to 61 m-long and covering 6.0% of the 2.5-ha island, were run. Standard error determined by simple random sample of clusters: ratio to size estimate (Cochran 1977).

** Includes three 4-egg nests on the south breakwall and one 4-egg nest on the center breakwall.

† Ten nests on Cedar Point causeway 0.5 km south of Cedar Point Marina; four on Sheldon Marsh sand spit and two on Big Island Marsh, 8 and 2 km, respectively, southeast of Cedar Point Marina; one on lawn and one on rooftop in downtown Sandusky.

Sandusky Bay, although about 200 were observed in the area. Most ring-bills were in subadult plumage.

Turning Point Island has a rubble substrate with some shrubs, small trees and herbaceous vegetation, bordered by riprap (Scharf et al. 1978). Most gull nests were on the rubble substrate, the remaining ones being located in flat areas among the riprap. The breakwalls typically consisted of large, odd-shaped boulders, with no vegetation, and gull nests were confined to the occasional flat, horizontal surfaces. The exception was part of the South breakwall at Cedar Point Marina that contained a rubble substrate with herbaceous vegetation similar to that on Turning Point Island. Here, the nesting-density of 1,669 nests/ha was highest in Sandusky Bay, higher than on the other breakwalls or on Turning Point Island (Table 1).

Roof top-nesting gulls were observed primarily on light-colored gravel surfaces, but about 5% of the nests were on metal surfaces. At the LLDC, most nests were on the piles of gravel-sized coal (Fig. 2).

Nesting was initiated earlier on Turning Point Island and the Cedar Point Marina breakwalls than at the other localities. For example, on the surveys of 10-11 May, 13% of the nests on Turning Point Island and the Cedar Point Marina breakwalls had newly-hatched young. None of the nests at the LLDC facility had hatched young by 8 May and none of the nests on the rooftops had hatched young by 22 May (Displayco) or 1 June (Americup) (Table 1).

DISCUSSION

Scharf et al. (1978) surveyed all nesting areas of colonial waterbirds in U.S. waters of the Great Lakes during 1976-77 and reported 26,719 and 29,406 herring gull nests for the respective years. The Sandusky Bay colony, confined entirely to Turning Point Island, contained 963 and 878 nests in 1976 and 1977, respectively. The estimate in 1989 of 2,964 nests at Turning Point Island...
herring gull colonies on the Great Lakes is unknown, but it is probable that the Sandusky Bay colonies represent one of the largest nesting concentrations. The fact that the nesting population has expanded to factory roofs and the coal piles suggests that optimum nesting sites on Turning Point Island and the breakwalls are fully occupied. Paynter (1963) in Massachusetts and Monaghan and Coulson (1977) in England previously have documented rooftop nesting by herring gulls subsequent to rapid growth of colonies in nearby traditional nesting habitat located on islands and along shorelines. The only other documented rooftop nestings by herring gulls in the Great Lakes region were two small (<50 nests) colonies discovered in 1985 near Lake Huron in Ontario (Blokpoel and Smith 1988).

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LITERATURE CITED


