Incidence of Oil Contamination on Breeding Common Terns—Although much has been written about the effects of massive oil spills on birds (e.g. Bourne, 1968; Nelson-Smith, 1972: 145) little information exists on the incidence or effects of chronic oil contamination. Since even very small amounts of oil on the plumage of incubating birds may contaminate eggs and reduce their hatchability (Hartung, 1965; Albers, 1977; Szaro and Albers, 1977) knowledge of such chronic situations may be necessary to understand fully the influence of oil on bird populations. In this note I present data on the extent of oil tar contamination on breeding Common Terns (Sterna hirundo) on eastern Long Island Sound from 1973 to 1976.

Adult terns were trapped at the nest and examined for oil contamination during banding. The terns came from a colony, with a 1976 population of 2,300 pairs of Common Terns and 950 pairs of Roseate Terns (Sterna dougallii), on Great Gull Island, located at the mouth of Long Island Sound between New York and Connecticut.

Common Terns routinely forage up to 20 km from Great Gull; however much of their feeding is done closer to the colony. In addition they feed more frequently in the relatively clean waters to the south and east than to the north along the moderately polluted Connecticut coast.

Table 1. Incidence of oil contamination on Common Terns.

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<th>Year</th>
<th>n</th>
<th>Percent oiled</th>
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<tbody>
<tr>
<td>1973</td>
<td>1,206</td>
<td>0.74%</td>
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<tr>
<td>1974</td>
<td>1,379</td>
<td>1.60%</td>
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<tr>
<td>1975</td>
<td>1,463</td>
<td>0.75%</td>
</tr>
<tr>
<td>1976</td>
<td>1,260</td>
<td>0.85%</td>
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</table>
Contamination of the plumage of breeding Common Terns at Great Gull Island was infrequent (Table 1). In only one year (1974) was more than one percent of the birds oiled. This increase followed an oil spill of unknown origin the previous winter that contaminated much of the Great Gull shoreline; most of the oil washed away before the 1974 breeding season.

Most of the contaminated birds had only small (1-2mm) oil spots. The worst case examined had a 39 x 19mm tar mass on its belly and a broad oil smear across one wing. This had apparently not interfered with nesting because the bird was trapped over newly-hatched young.

It should be pointed out that the birds examined were preselected in that they were individuals sufficiently vigorous to have carried breeding at least as far as incubation when they were trapped. More severely oiled birds may not attempt to breed at all and would not have been examined. Additionally, Common Terns molt on the wintering grounds so that oil contamination might have occurred in Long Island Sound or the waters frequented during migration and winter.

Only comparative studies will provide an idea of whether the contamination reported here is high or not. Such studies would also be of use in assessing the effect of offshore oil drilling operations on east coast waterbirds in the future.

I would like to thank the many people who participated in the banding. I am especially grateful to Helen Hays, the Director of the Great Gull Island Project, for allowing my participation in the project and the use of data. H. Hays, D. Willard, and an anonymous reviewer improved the manuscript. This is publication No. 50 of the Great Gull Island Project.

LITERATURE CITED


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