presumably swallowed the prey. An adult Herring Gull flew rapidly towards the jaeger, which took off quickly, but the gull soon caught up with it. The jaeger managed to stay above the gull and outmaneuvered it successfully. The technique of gaining height and staying above a predator to avoid capture has been noted by Rudebeck (Oikos 2: 65–88; 3:204–231, 1950–51) and Campbell (Condor 77:485, 1975). The gull broke off its chase and landed on the water.

Incidents where gulls actively pursue jaegers and steal their food are apparently not widespread, and the submissive behavior of the jaegers in giving up their prey at North Point is of interest in this context. Parasitic Jaegers breed on arctic tundra, where small birds, including passerines and shorebirds, comprise the major portion of their diet (Maher, Pac. Coast Avif. No. 37, 1974). For most of the remainder of the year the species is pelagic and obtains much food through piracy. While on the tundra, the jaeger is unlikely to come into contact with any concentrations of gulls, whereas at sea, the jaeger assumes the role of the aggressor in stealing food from gulls. On the flats on James Bay, however, jaegers can find an abundant food supply (small sandpipers) which they are accustomed to and adept at catching, but do so in areas where they may come into contact with local concentrations of gulls. Hatch (Auk 87:244–254, 1970) noted that gulls stealing fish from terns appeared to be more responsive to another gull chasing a tern than to a tern with a fish, suggesting that the sight of a chase may stimulate a gull to investigate a possible food source. A similar behavioral response of Herring Gulls to jaegers chasing shorebird prey on the coastal flats in James Bay could have led to the observed instances of piracy. I do not know whether piracy is general amongst adult Herring Gulls on James Bay, or whether the instances observed involved 1 or a few individuals which had specialized in this behavior, as may occur elsewhere (Hatch, op. cit.).

The lack of response by jaegers to piracy by gulls may also have reflected an extremely abundant and easily obtainable food resource, so that it was not worthwhile for jaegers to expend energy and perhaps risk injury in fleeing or defending their prey. On the other hand, the food item was large enough to make it energetically worthwhile for the gull to respond to hunting jaegers and to attempt to steal their prey. These considerations were thought to be of importance in the examples of piracy discussed by Bird et al. (Wilson Bull. 85:480–482, 1973) and by Payne and Howe (Wilson Bull. 88:349–351, 1976).

It thus appears that cleptoparasitism involving unusual pairs of species may appear where they are brought together in the presence of locally abundant prey large enough to be worthwhile stealing by the aggressor and plentiful enough not to be worthwhile defending by the victim.

I should like to thank H. Boyd for critical comments on an earlier version of the manuscript.—R. I. G. Morrison, *Canadian Wildlife Service, 2721 Highway 31, Ottawa, Ontario, Canada, K1G 3Z7.* *Accepted 30 Sept. 1977.*

Wilson Bull., 90(4), 1978, pp. 650–652

The use of feeding areas outside of the territory of breeding Black Oystercatchers.—Cleland Island, off the west coast of Vancouver Island, B.C. is a breeding site for approximately 50 pairs of Black Oystercatchers (*Haematopus bachmani*). For 3 consecutive summers (1970–73) I investigated the foraging of these birds and I observed that, at times, 1 or both of a pair of breeding birds leave their territory and fly to a

distant reef or island. At first I thought that this only occurred early in the season when pairs were still establishing territories and winter flight patterns were still operating. In this note I report observations of extra-territorial feeding during all stages of the breeding season. The use of distant feeding areas by oystercatchers was noted by Webster (Wilson Bull. 53:141–156, 1941) during the incubation period. His observations off the Alaskan coast suggested that such trips were discontinued as soon as the chicks were hatched.

I observed 24 trips involving 6 different pairs of breeding birds. Trips on 26 May and 2 June were made by both members of a pair whose territory was then unoccupied. Twenty-two trips occurred later in the season and involved only 1 of each pair. Three of these trips were made when eggs were in the nest while the other 19 trips were made when chicks were present.

In each case, 1 of the pair would be foraging or roosting and then would give a "*queep, queep*" call and take off on a consistent route to a distant reef. It seemed that different birds headed for different reefs. In one observation period, a member of one pair left in a straight line course toward an island approximately 1 km to the northeast while a bird from another pair left its territory heading north toward another island. The birds could be observed through a telescope and they often followed predictable routes until out of sight. The birds often spent 20 min or more away from the nest and they often returned carrying a large food item for the young. This was usually a mussel (*Mytilus californianus*) but sometimes was a large limpet (*Notoacmaea* sp.). In a few cases the birds returned without food. Such trips were observed in both morning and afternoon, and in all months, May to August inclusive.

Since the Black Oystercatcher spends considerable time defending a large territory which usually includes a section of shore for feeding, it seems unusual for the birds to leave and search for food elsewhere. On the other hand, Heppleston (J. Anim. Ecol. 40:651–672, 1971) found evidence that European Oystercatchers (*H. ostralegus*) were at times unable to obtain sufficient food from shore habitats and had to supplement their diet with food from elsewhere; in this case, neighboring fields. My observations suggest that trips made by birds on Cleland Island may be linked to the availability of food in the feeding territory. The birds fed mainly on intertidal molluscs, especially on mussels (*M. californianus* and *M. edulis*) throughout the year (Hartwick, Can. J. Zool. 54:142–155, 1976). Their foraging activity generally shows a bimodal pattern with a peak before and after low tide. Such a pattern has been observed in a number of species of oystercatchers. New Zealand oystercatchers (*H. unicolor* and *H. ostralegus finschi*) show a similar pattern over the tidal cycle when feeding on tua-tuas (*Amphidesma subtriangulatum*) (Baker, J. Life Sci. Contr. R. Ont. Mus. No. 96, 1974). Such patterns have also been noted by Tinbergen and Norton-Griffiths (Br. Birds 57: 64–70, 1964) for European Oystercatchers feeding on mussels. Based on feeding rate data, Norton-Griffiths (Behaviour 34:55–114, 1969) found no connection between the pause in feeding activities and the availability of food. In the case of Black Oystercatchers, slack water at low tide is usually accompanied by diminished feeding rates or often by roosting. Low tide seems to be a period of low food availability. In the case of a low, low tide, especially in the summer, most of the intertidal area is in the process of drying and no mussels are available except in pools. Mussels begin gaping as the tide rises and they become washed by waves at which time they are again vulnerable to the Black Oystercatcher (Hartwick, Can. J. Zool. 54:142–155, 1976). Although the birds feed on many other items, their foraging appears to be keyed to the vulnerability of their major prey, the mussel. Thirteen of the 22 trips were made within

an hour of low tide and those trips that were made at other times occurred either before the mussel bed was washed by waves or during tides of short range and high surf when there was little opportunity for the birds to forage safely.

No attempts were made to follow the birds and I can only assume that foraging was better in the areas they headed for. Certainly large mussels were not available in their feeding territories when they were observed to bring such items back on these trips. While the energetic advantages of such trips seem questionable, such trips appear to be a normal part of the activities of breeding oystercatchers. The significance and relationship of these trips to the general dispersion patterns of the species must remain in question.—E. B. HARTWICK, *Dept. of Biological Sciences, Simon Fraser Univ., Burnaby, B.C. V5A 1S6.*

Wilson Bull., 90(4), 1978, p. 652

Screech Owl predation on a Common Flicker nest.—Two cypress Wood Duck (*Aix sponsa*) nesting boxes (3 m above ground level and facing opposite directions) erected on the same creosote pole at Pearl River Waterfowl Refuge in Mississippi, were selected by a red phase Screech Owl (*Otus asio*) and a Common Flicker (*Colaptes auratus*) as nest sites in April 1977. The owl laid 2 eggs and was incubating them in 1 nest box when the flicker began laying a series of 6 eggs in the other box. The owlets hatched just before the flicker young did. The owl fed the owlets other food items until she discovered the flickers in the next box. Five babies had hatched and begged constantly. The owl flew into the flickers' nest box and removed the young birds 1 by 1 to feed her owlets. This process took several days. The flickers continued during this time to feed their surviving young. Not until all flicker young were taken by the owl did they fail to return to the nest box. Half-eaten flickers were found in the owl nest box. —MARY C. LANDIN, *USAE Waterways Experiment Station, Vicksburg, MS 39180.* *Accepted 6 Oct. 1977.*

Wilson Bull., 90(4), 1978, pp. 652–653

Red Bobwhites in Oklahoma.—On 2 September 1973, I collected an erythristic female Bobwhite (*Colinus virginianus*) 3 km NE of Southard (Blaine Co.), west-central Oklahoma. Its plumage was deep chestnut-red except for 3 white feathers on the central upper chest (= "crop patch") and black markings as follows: median crown feathers almost totally black, nape feathers moderately so; upper wing coverts, chest and belly feathers mottled; flank feathers heavily barred; tertials and upper rump feathers with wide, irregular subterminal bands; upper tail coverts with black narrowly bordering rachis on either side; under tail coverts heavily mottled, especially toward the center; legs and bill black. Rectrices, primaries, and secondaries were solid brownish-gray.

Little subcutaneous fat was found during skinning, yet the bird weighed 183.5 g. Average weight of 8 adult females in the University of Oklahoma collection was 174.2 g, so the specimen appeared to be healthy. The single intrauterine egg measured 26 × 20 mm (fully developed eggs ($n = 59$) in the U.S. National Museum averaged 30 × 24 mm [Bent, U.S. Natl. Mus. Bull. 162, 1932]). Measurements were: wing 114, tail 61, culmen