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Piracy by Ring-billed Gulls on Dunlin.—On 16 December 1987, I observed Ring-billed Gulls (*Larus delawarensis*) and Black-bellied Plovers (*Pluvialis squatarola*) pirating Dunlin (*Calidris alpina*) during a heavy rain at Bolinas Lagoon, California. Dunlin normally feed at the water's edge preying on polychaetes, amphipods, insects, and small bivalves (Page, pers. obs.); they rarely eat fish. However, during my observations, the Dunlin appeared to be searching specifically for arrow gobies (*Clevelandia los*). Fish being captured and eaten were generally equal to or less than the length of the Dunlin's culmen (mean culmen = 37.9 ± 2.7 mm [SD], N = 35; Warnock, unpubl. data). Often Dunlin had difficulty swallowing the fish, and this facilitated kleptoparasitism. Dunlin lost 16 (44%) of the 36 fish they captured during 26 attempts by the kleptoparasites. Twenty-three kleptoparasitic attempts were made by Ring-billed Gulls with a success rate of 65%. Black-bellied Plovers were successful once during two attempts, and once a Dunlin stole a fish from another. Kleptoparasitic attempts were initiated by Ring-billed Gulls standing within 5 m of the feeding Dunlin. Gulls did not chase Dunlin for more than 50 m, and if unsuccessful, the gull landed immediately and resumed watching the feeding Dunlin. Black-bellied Plovers used different attack methods. Both times the plovers were feeding within 1 m of the Dunlin at the moment the latter caught a fish. The plover then ran toward the Dunlin and attempted to snatch the fish from its bill. The unsuccessful plover immediately resumed feeding after the attempt at kleptoparasitism.

The rash of piracy directed toward the Dunlin represents instances of opportunistic kleptoparasitism by visually oriented feeders. During normal feeding, Dunlin prey items are usually not visible when being consumed. This may make them less susceptible to piracy by gulls (Payne and Howe 1976) and plovers. The heavy rainfall may have resulted in a decrease in invertebrate activity (Pienkowski 1981) causing Dunlin to exploit food sources not normally used. In a review of Dunlin stomach contents, Burton (1974) mentioned only one instance of a fish being consumed. On the Bolinas Lagoon in northern California, fish were not found in 30 samples of stomach-pumped Dunlin (Page and Stenzel, unpubl. data), although I have occasionally (<10 times in over three years of extensive observations) seen Dunlin take small fish at this location.

Gulls frequently steal food from shorebirds at Bolinas Lagoon (pers. obs.) and other locations (Brockmann and Barnard 1979, Barnard and Thompson 1985). Interspecific kleptoparasitism in shorebirds is rarer. When it does occur, the aggressor tends to be a visual feeder rather than a tactual one and the contested prey tends to be large rather than small. Many species of shorebirds are tactile feeders. One would predict that shorebirds, when tactile feeding on larger, more visible prey items, will more likely be kleptoparasitized by birds which are visual feeders. Observations of kleptoparasitic behavior by gulls and shorebirds on the Bolinas Lagoon support the above prediction. Shorebirds which switch from small, easily swallowed prey items to larger, more visible, harder to handle prey items must balance the benefits of an energy rich meal to the costs of increased kleptoparasitism.

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Food and winter territories of Northern Mockingbirds.—In the northeastern United States, the Northern Mockingbird (*Mimus polyglottos*) may be the only species that maintains a territory throughout the winter. Mockingbirds localize their activities within small territories centered on fruit resources that are defended against conspecifics and often against other frugivorous species (Moore 1978). The fruit resources decline through the winter due to consumption and fruit drop. Despite the food decline, the birds generally are able to remain on a single site throughout the winter. This suggests that the birds have been selected for an ability to compensate for the decline. Two possible proximate mechanisms to achieve this are: (1) assessment of the fruit supply in the fall with establishment of a territory large enough to contain sufficient resources for the winter, or (2) continual adjustment of territories during the winter as the fruit supply declines. This study was designed to test whether mockingbird behavior was consistent with the first mechanism and to document the pattern of food decline through the winter. The primary winter food resource for mockingbirds in the northeast is multiflora rose fruit (*Rosa multiflora*) (Stiles 1982).

To test the hypothesis that mockingbirds establish initial territories with sufficient food resources to survive the winter, we: (1) determined the multiflora rose berry supply on several territories, (2) monitored the changing availability of this resource, and (3) determined the territory size periodically through the winter. If the hypothesis was correct, we should find that each territory, regardless of size, encompasses at least some threshold minimum in the amount of food resources and, that the density of food resources is inversely proportional to territory size. Furthermore, there should be little change in territory size through the winter, and any changes in territory size should have no relationship to the pattern of declining food resources.

Methods.—We studied seven mockingbirds on the Purchase College campus of the State