

The fourth hunt was observed at 11:00 on 18 March 1978. A Brown Jay, pursued by two caracaras which were alternately making passes at it, flew over a road in level flight at less than 20 m. The jay dove into a 5 m tree and was followed by one of the caracaras, which hopped from limb to limb while the other flew around the tree. The jay then flew from the tree, pursued by both caracaras, and perched in another small tree 100 m away. At least one of the raptors perched in this tree, looking down into it for 20 sec before flying off, followed by the other caracara. The duration of this encounter was about 2 or 3 min.

Although we did not see caracaras catch Cattle Egrets or other large birds during these four hunts, we believe they sometimes succeed. We found evidence that caracaras at one nest had been feeding heavily on Cattle Egrets. On 21 March 1978 we found remains of four Cattle Egrets lying below and hanging in a palm occupied by one of two fledgling caracaras which were raised at this nest-site about 1 km from the site of one of our hunting observations. A Cattle Egret had been plucked by a raptor on the ground nearby. That only one of 12 Cattle Egret long bones, and none of the slender leg bones, was broken, may be taken as evidence that the egrets were not collected as highway carrion. Other remains present included those of a lizard (*Ctenosaur* sp.) and a second lizard of the same or similar species. Of eight pellets found, seven contained white feathers and one those of an Indigo Bunting (*Passerina cyanea*), three contained fur, and five contained lizard scales. One contained a vertebral spine of an iguanid, one contained a small rodent jaw, and one a piece of a grasshopper (Orthoptera) leg. Indigo Buntings and the large lizards are frequently road-killed in the region. On two of five occasions we noted caracaras feeding on road-kills, comprising a *Ctenosaur* sp. and an *Iguana* sp.

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Florida Red-shouldered Hawk robs American Crows.—The following interactions were noted while my wife and I were following the breeding behavior of Florida Red-shouldered Hawks (*Buteo lineatus alleni*) and a pair of American Crows (*Corvus brachyrhynchos*) in January and February 1981, at the Hendrie Ranch, 24 km S of Lake Placid, Highlands Co., Florida. Both species foraged near a water hole where walking catfish (*Clarias batrachus*) were concentrated due to a drought. River otter (*Lutra canadensis*) fed on the fish over a 3-week period and crows scavenged fish heads left by the otter. On 19 January six to eight crows had retrieved seven fish heads from the water edge and were removing an eighth, when a Red-shouldered Hawk landed among them. The crows moved 15–30 cm away. The hawk seized the catfish and flew off to a tree. Four days later an otter, attended by two crows, had finished eating and was walking up the bank when a red-shoulder landed almost on top of it. There was no fish head and the hawk flew off. On a following morning I watched a crow retrieve two heads from the water and struggle to hold both in its bill. A red-shoulder swooped on the crow which dropped both heads, one of which was seized by the hawk.

The crows sometimes cached fish heads in clumps of grass in the nearby pasture. A crow, attended by two others, had pulled a catfish head from the grass when a red-shoulder alighted within 15 cm. This time its back was to me, wings slightly out, and tail spread over the

grass, looking from side-to-side as five crows quickly joined the first three. Two crows briefly assumed agonistic postures with bills lowered and feathers of head and neck raised. After a few moments, the crows started to leave and the hawk flew off with the fish head.

While walking near the water hole on 2 February I saw a crow flying toward its nest, then being built, with a black lump in its bill, pursued by a Red-shouldered Hawk. Ten min later I noted two crows pulling up pieces of sod which they wadded in their bills. They had just left to fly back to the nest when the hawk attacked as before and pursued them over the water. Within 15 min one of the crows took a piece of sod, larger than the others, to the branch of a tree. Here, with the sod held in its feet, it delivered blows with its bill. The hawk swooped a third time, nearly hitting the crow and again with no effect. Although Florida Red-shouldered Hawks use "clumps of grass roots" in their nests (Nicolson, Wilson Bull. 42:32-35, 1930), the hawks I watched did not start to build their nest until 2.5 weeks later. I wondered if the hawk, on seeing the crows handle the sods, thought that they had some kind of prey.

I have encountered no previous accounts of Red-shouldered Hawks robbing or attempting to rob American Crows. Brockman and Barnard (Anim. Behav. 27:487-514, 1979), in their review of kleptoparasitism, give no mention of *B. lineatus* in a list that includes many raptors.—LAWRENCE KILHAM, Dept. Microbiology, Dartmouth Medical School, Hanover, New Hampshire 03755. Accepted 15 Mar. 1982.

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Feeding behaviors and efficiencies of Common and Forster's terns.—Aerial feeding, either by plunge-diving or hover feeding, has been described for Common Terns (*Sterna hirundo*) (LeCroy, Wilson Bull. 84:201-202, 1972; Dunn, Nature 244:520-521, 1973; Erwin, Ecology 58:389-397, 1977), Sandwich Terns (*S. sandvicensis*) (Dunn 1973; Rodgers, Wilson Bull. 87:420, 1975), Royal Terns (*S. maximus*) (Rodgers 1975, Erwin 1977), Forster's Terns (*S. forsteri*) (Salt and Willard, Ecology 52:989-998, 1971; Rodgers 1975), and Crested Terns (*S. bergii*) (Feare, Condor 77:368-370, 1975). Herein we describe a previously unreported feeding strategy for Forster's Terns, and compare its efficiency to that of aerial feeding by both Forster's and Common terns.

Data were collected from 4-23 August 1980 and involved 6 h 34 min of actual observation time. Study sites were northern and southern beaches of Wallops Island, Accomack Co., Virginia and a bridge over a causeway leading from the mainland to Chincoteague Island, Virginia, (Accomack County; 75.5°W, 38°N). The first two sites hosted only Common Terns, while the third was used almost exclusively by Forster's Terns.

We made 81 and 82 individual observations of Common and Forster's terns, respectively, predominately between 06:00 and 11:00. We recorded species of each bird, total number of dives, number of successful dives, number of foraging dives while in flight, and use of a technique previously unreported for Forster's Terns—diving for food directly from a perch on the bridge, approx. 5 m above the surface of the water. In this latter technique a tern stood on the edge of the railing with head lowered to the level of its feet, and tail extending directly along the longitudinal axis of the body. Searching was done by turning the head from side to side, scanning, with the bill oriented downward. When a prey item was spotted, the tern opened its wings slightly, then quickly closed them, and then dropped from its perch to the water. During the dive, the wings unfolded enough to facilitate slight changes in course. Up to six individuals simultaneously fed in this manner.

At the bridge site Forster's Terns were feeding both aerially and from perches. The aerial feeders were feeding within 3 m of the bridge, presumably taking the same prey resources