and Zimmermann, Principes, J. Palm. Soc. 18:67–68, 1974). The higher concentrations of sugars in hickory sap may indicate that sieve tubes of the phloem are, at least in part, the source; whereas the dilute sap of maples, black walnuts, sycamores and hop-hornbeams probably comes principally from xylem vessels. From borings made in trees (maples, elms, hackberries and red oaks) used by Yellow-bellied Sapsuckers in spring in Michigan, Tate (1973) found the sugar concentration of the sap to average about 3%. Kilham (Auk 81:520–527, 1964) reported that birches (*Betula* spp.) are the main sources of sap for Yellow-bellied Sapsuckers in summer in central New Hampshire, and found that phloem exudate from yellow birch (*B. lutea*) contained about 19% sugar.

Yellow-bellied Sapsuckers preferentially used the lower and middle height categories in all 3 study areas (Fig. 1). Moreover, they most often exploited living limbs in the 13–25 cm range in all 3 areas, but also used trunks of trees in the lowland. Larger limbs at lower heights may yield more sap per unit time for the birds.

Apparently Yellow-bellied Sapsuckers forage on hickory trees during spring migration because the exudate is relatively high in sugars. Why they forage in the middle and lower portions of the canopy on larger limbs needs further study, but at least for hickory trees, the phloem may be thicker in this region and thus the flow rates of exudate possibly higher.—JOSEPH B. WILLIAMS, *Dept. Natural Science, Pepperdine Univ., Malibu, California 90265.* (Present address: *Dept. Biology, Joseph Leidy Laboratory of Biology G7, Univ. Pennsylvania, Philadelphia, Pennsylvania 19104.*) *Accepted 16 Oct. 1979.*

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Mallards capture and eat American toads.—For more than 2 years I have kept Mallards (*Anas platyrhynchos*) in cages at the edge of a pond in the deer enclosure at the Field Station for the Study of Animal Behavior, Duke University, Durham, North Carolina. In addition to the caged ducks, 7 females and 3 males released in summer 1978 remained on the pond, and they spent much of their time near the cages.

As my son, Karl, and I approached the pond at 10:45 on 1 April 1979, we heard a chorus of the common American toad (*Bufo americanus*). The sky was clear and the temperature an unseasonally warm 25°C. We could see 30 or 40 toads in the shallow water near the duck cages, but when we approached for closer examination, the toads moved out from land. No duck showed any interest in the toads at the time.

The chorus continued, and we noticed that the larger toads were floating in the water with their legs outstretched. They retained this position and remained immobile as we approached; they were still too far from land to catch without a net.

At 11:30 Karl observed a female Mallard catch a large toad in the water. Immediately a male Mallard tried to take it from her, and there was a tug-of-war over the prey. The female maneuvered the immobilized toad into position in her mouth, the toad's legs dangling from the sides of her bill and after several attempts succeeded in swallowing it head first. The activity excited 4 other female ducks and another male; there were 7 ducks stalking, catching and swallowing toads. Male Mallards relied more on stealing toads from females than on capturing their own. A toad captured from behind was immobilized by being beaten on the surface of the water, after which it was manipulated in the mouth until it could be swallowed head first. Swallowing required considerable effort because of the large size of the toads; it usually took place in the water, but 1 male Mallard carried a toad onto land and swallowed it there. In 15 min the ducks caught and consumed at least 12 toads. They abruptly stopped feeding on toads and moved out toward the center of the pond at about 11:45.

Meanwhile, the chorus was reduced in volume, and many toads were in amplexus very close to land where the shallow water was filled with strings of toad eggs. Some pairs would move away when gently prodded with a stick, but others would not move. We had no difficulty picking up a pair of toads in amplexus.

McAtee (U.S. Dept. Agric. Bull. No. 720, 1918) found that 90.53% of the stomach contents of wild Mallards is vegetable matter; the remains of frogs were found in 19 of 1578 Mallard stomachs examined. The Black Duck (*Anas rubripes*) consumes more animal food than the Mallard, about 25%, mostly molluscs (McAtee 1918), and may eat small toads (Bent, Life Histories of North American Waterfowl, Pt. 1. U.S. Natl. Mus. Bull. 126, 1923).

Our observations are most remarkable since large toads are generally avoided by predators (Lutz, *in* Venomous Animals and Their Venoms, Vol. II, W. Bucherl and E. Buckley, eds., Academic Press, New York, New York, 1971). They secrete anti-predator venoms, bufotenine and 5-OH tryptamine (Low, *in* Evolution in the Genus *Bufo*, W. F. Blair, ed., Univ. Texas Press, Austin, Texas, 1972), through orifices over the parotid glands (Chen and Chen, J. Pharm. Exper. Therap. 47:281–293, 1933). The Mallards captured and swallowed the large toads with avidity. We saw no evidence that the toads were distasteful or irritating to the ducks, nor did we observe any regurgitation of toads that had been swallowed.

These observations were made while I was conducting research supported by the National Science Foundation, Grant PCM79-00582.—NANCY S. MUELLER, *Dept. Biology, North Carolina Central Univ., Durham, North Carolina 27707.* *Accepted 20 Aug. 1979.*

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Dipper swallowed by trout.—On 24 June 1976, we caught a Dolly Varden trout (*Salvelinus malma*) in Big Creek, a stream adjacent to the University of Idaho's Taylor Ranch Field Station. The stomach of the fish contained a Dipper (*Cinclus mexicanus*). Predation by fish on Dippers has, to our knowledge, never been reported. The predacious Dolly Varden eats fish (Roos, Trans. Am. Fisheries Soc. 88:253–260, 1959), small mammals and birds (Dymond, The Trout and Other Game Fishes of British Columbia, Can. Dept. Fisheries, Ottawa, Ontario, 1932). Since Dippers feed on fry (Bent, U.S. Natl. Mus. Bull. 195:103, 1948), they would be in frequent contact with predatory fish.—CHARLES L. ELLIOTT AND STEVE PECK, *Coll. Forestry, Wildlife and Range Sciences, Univ. Idaho, Moscow, Idaho 83843.* (Present addresses: CLE *Dept. Botany and Range, Brigham Young Univ., Provo, Utah 84602 and* SP *240 Parkview Dr., Burlington, Wisconsin 53105.)* *Accepted 24 Sept. 1979.*

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Team-hunting and food sharing in Parasitic Jaegers.—Parasitic Jaegers (*Stercorarius parasiticus*) breed regularly in arctic Alaska (Bailey, Colorado Mus. Nat. Hist. Popular Ser. No. 8, 1948; Pitelka, Arctic and Alpine Res. 6:161–184, 1974). They take a wide variety of animals as prey, but during the breeding season specialize either on birds, or birds and small mammals (Maher, Pac. Coast Avif. 37, 1974). At other breeding locales Parasitic Jaegers are known to rely heavily on kleptoparasitism of seabirds (Arnason and Grant, Ibis 120:38–54, 1978).

Parasitic Jaegers regularly team-hunt in pairs or small groups. Team-hunting occurs as: (1) three or more jaegers hunting near one another, but acting singly (group hunting), or (2)