In spring, large aggregations have been seen in the vicinity of Oklahoma City, notably the 39 birds counted by John G. Newell and Tom Shires on 25 May 1968 in a flooded field in Canadian County just west of Lake Overholser, and the 43 birds counted by Newell in the same area the following day (26 May).

Most Dunlin sightings in Oklahoma have been in Oklahoma, Canadian, and Tulsa counties, but there are records also for Sequoyah, Rogers, Washington, Osage, Bryan, Marshall, Love, Murray, Cleveland, Payne, Alfalfa, and Beaver counties. The fact that no sightings have been reported from southwestern Oklahoma and from the western nine-tenths of the Panhandle may be indicative of absence of observers rather than of Dunlins.

Like all "peeps," the Dunlin is gregarious while migrating. Shorebirds with which it has been observed to associate in Oklahoma include most of the species mentioned above, the Long-billed Dowitcher (*Limnodromus scolopaceus*), and the American Golden Plover (*Pluvialis dominica*). No one has reported seeing any sort of courtship behavior among Dunlins in Oklahoma, nor has anyone observed a Dunlin in juvenal plumage, a plumage to be looked for in the early part of the southward migration, and one characterized by small dark spotting throughout the breast and belly. A bird observed by O. W. Letson and his wife Ethel at Recreation Lake in Mohawk Park, Tulsa, on 5 and 6 September 1954 (1955, Proc. Oklahoma Acad. Sci., 36: 83-84; 1955, Audubon Field Notes, 9: 37), was gray above but black on the belly—an example, it would seem, of abnormally delayed postnuptial molt.

10731 N. WESTERN, OKLAHOMA CITY, OKLAHOMA 73114. 15 MAY 1975.

FOOD HABITS OF THE COMMON MERGANSER IN WINTER

BY BERTIN W. ANDERSON AND MICHAEL G. REEDER

The Common Merganser (*Mergus merganser*), a large duck especially adapted for catching fish, is abundant in late fall and winter on many Oklahoma reservoirs. At the Salt Plains National Wildlife Refuge in Alfalfa County, north-central Oklahoma, where we studied the species' winter food habits between November 1969 and March 1972, it was among the commonest of waterfowl. During the three winters we saw it chiefly on the main reservoir in the refuge and on a mile-long stretch of the Salt Fork of the Arkansas River below the reservoir dam (Anderson and Timken, 1972, J. Wildl. Mgmt., 36: 1127-33). We observed feeding behavior on 83 occasions ranging from one to eight hours in duration and collected 142 specimens. All food from the stomachs and esophagi of these we removed, weighed, and identified.

The gizzard shad (*Dorosoma cepedianum*) was by far the commonest food item, though some sunfish (*Lepomis* sp.) were caught (Table I). Common Mergansers are opportunistic feeders, hence they prey on whatever is most readily

Table I

Stomach and esophageal contents of 142 Common Mergansers collected at the Salt Plains National Wildlife Refuge in Alfalfa County, north-central Oklahoma

Food Item	No. of Fish	% of Total No. of Fish	Weight in Grams	% of Total Weight
Dorosoma cepedianum	105	95	1,146	97
Lepomis sp.	2	2	25	2
Unidentified fish	3	3	7	1
Totals	110	100	1,178	100

obtainable. Occasionally they catch a game fish, but they do not seem to seek such species out—a statement that probably applies to the whole of the bird's extensive winter range. In the Northern Great Plains, 87% of identified fish remains found in Common Mergansers were of rough or forage species (Timken and Anderson, 1969, J. Wildl. Mgmt., 33: 87-91).

When the air temperature at our study area dropped to 10°F. or lower, the moving, heavily saline water below the reservoir dam did not freeze, and large concentrations of shad gathered in the deeper pockets. Here many shad that were dead or swimming about in a disoriented manner near the surface provided a good food supply for such fish-eating birds as Common Goldeneyes (*Bucephala clangula*), Herring Gulls (*Larus argentatus*), Ring-billed Gulls (*L. delawarensis*), and Bald Eagles (*Haliaeetus leucocephalus*), as well as for the mergansers.

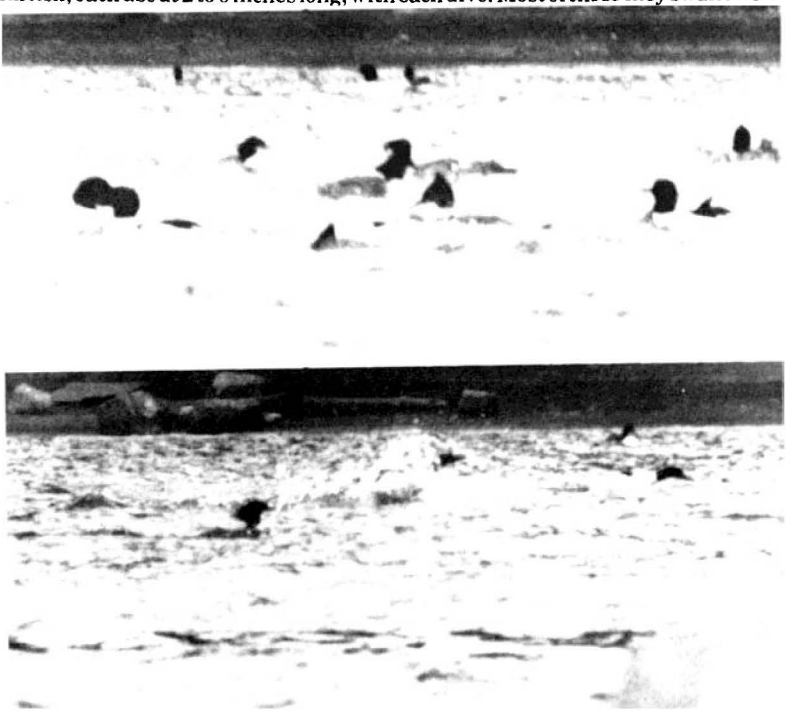
During the first and third winters we observed large numbers of mergansers (up to 500 on one occasion) feeding below the dam. In the second winter, however, we saw few mergansers there despite the fact that dead and floundering shad were more numerous along that stretch than they were in the first winter or the third. The second winter was the only one in which we saw large numbers of dead and floundering shad in the reservoir itself, so we deduced that when food was readily available there the mergansers preferred the reservoir to the relatively confined feeding spot below the dam. When there were few shad in the reservoir, the mergansers congregated below the dam, where the fish were numerous and concentrated.

The mergansers spent the night on the reservoir. Usually they fed twice a day: shortly after dawn and shortly before sunset (Anderson, Reeder, and Timken, 1974, Condor, 76: 472-76). The favored feeding spot on the river was immediately below the spillway. When intent on feeding just below the dam, the birds usually alighted not there, but 50 to 100 feet downstream from it, where they swam about with heads up. If some birds already had alighted, incoming flocks settled readily. If cars or people moved about along the shore, all the birds

usually flew up, but parked cars and people lying or sitting motionless seemed to bother them very little. If undisturbed, they moved upstream soon after alighting. As they approached their favorite feeding place many of them put their heads under water (see photo). We frequently observed this behavior and were convinced that the mergansers were looking for fish.

If incoming birds found others already feeding just below the spillway, they moved upstream rapidly soon after alighting, as if afraid that all the food would be gone before they got there. "Standing up" in the water, they "ran" forward, keeping their wings folded when making short runs, but flailing the surface with their wings if making a long run.

On reaching the favored feeding spot, they dived repeatedly, catching two to six fish, each about 2 to 6 inches long, with each dive. Most of these they swallowed



COMMON MERGANSERS FEEDING

Photographed by Bertin W. Anderson on the Salt Fork of the Arkansas River just below the Salt Plains Reservoir dam in Alfalfa County, north-central Oklahoma. In upper picture drake at front center, with head under water, is looking for fish; in lower picture two drakes are "running" on the water, one (at right) with wings pressed close to sides, the other with wings flailing the surface.

after returning to the surface. After consuming all they wanted, they floated or flew downstream where, standing in shallow water or on a low mudbank, they rested. On mild days they often flew back to the reservoir after a short rest, but on cold days they lingered along the river, sometimes for several hours. In bad weather the afternoon feeding period sometimes started as early as 1400 and it seemed to us that the birds moved back and forth more often than usual, as if requiring more food when circumstances were adverse. Proof of this would, of course, require marking birds and watching them.

If mergansers feeding below the spillway were disturbed while feeding, they usually flew back to the reservoir for a short time, then returned to the favored feeding spot.

529 NORTH BROADWAY, BLYTHE, CALIFORNIA 92225; ROUTE 2, VERMILLION, SOUTH DAKOTA 57069. 18 AUGUST 1975.

GENERAL NOTES

Birds killed at a TV tower near Coweta, Oklahoma in the fall of 1976.—In the fall of 1976 personnel at the KUTL TV tower 2 miles north of Coweta, Wagoner County, northeastern Oklahoma, telephoned me whenever they saw dead birds under the tower. As a result of their calls I visited the tower several times between 1 September and 30 October. The birds that I found did not differ greatly from those found there in the fall of 1974 (Norman, 1975, Bull. Oklahoma Orn. Soc., 8: 25-27) and 1975 (Norman, 1976, Bull. Oklahoma Orn. Soc., 9: 20), the most noteworthy of them being two Yellow Rails (*Coturnicops noveboracensis*) picked up on 27 September and 3 October and a Bay-breasted Warbler (*Dendroica castanea*) picked up on 27 September. On the two rail specimens I have reported briefly (1976, Bull. Oklahoma Orn. Soc., 9: 33). The weather was in no way exceptional throughout the period, a surprising fact related to it being that a cold front in mid-October was not accompanied by a heavy kill at the tower.

On 1 September I found only one bird, a Pied-billed Grebe (*Podilymbus podiceps*). On 14 September I again found only one bird, this time a Red-eyed Vireo (*Vireo olivaceus*). Between 14 and 20 September (exact date or dates not recorded), four birds were picked up for me — a Sora Rail (*Porzana carolina*), 2 Carolina Wrens (*Thryothorus ludovicianus*), and a parulid or vireonid whose mangled remains were unidentifiable. The plumage of this specimen's upperparts was olive in tone; but the bill-remains were not by any means flat enough or wide enough for a small flycatcher of the genus *Empidonax*.

In Table I (which see) the total of 24 birds shown as having been picked up by me on 20 September includes the four just mentioned (each indicated in the table by an asterisk). Notable among these are the two Carolina Wrens, a species believed to be strictly non-migratory in Oklahoma, if not throughout its range. Quite possibly these wrens killed themselves not at night but while chasing each other recklessly during daylight or twilight hours.

The fact that the Philadelphia Vireo (*Vireo philadelphicus*) was found on four dates in 1976 as well as on several dates in 1974 and 1975 suggests that this bird migrates through Oklahoma in considerable numbers. It is to be looked for from 20 September to 15 October (see Table I) and in spring from 28 April to 18 May (Sutton, 1974, A check-list of Oklahoma birds, Stovall Mus. Sci. & Hist., Univ. Oklahoma, Norman, p. 34). The Bay-breasted Warbler found on 27 September (male in first