

GENERAL NOTES

Migration of the Anhinga in Texas.—Most general reference books give the impression that the Anhinga, or Water-turkey (*Anhinga anhinga*), is a more or less permanent resident of the Gulf States. Bent (1922. *U.S. Nat. Mus. Bull. No. 121*) states that "throughout the southern portion of its range, in the Gulf States and in tropical America, the water-turkey is a resident throughout the year" and that its winter range includes most of the breeding range. However, there is a southward movement with the approach of winter, at which time "the water-turkeys withdraw from their northern breeding grounds and spend the winter in Florida and the Gulf States. At this season they become more gregarious and are often about in large flocks."

Strecker (1912. *Baylor Univ. Bull.*, 15:11), summarizing the status of the Anhinga in Texas, says it is a "rather common resident of the eastern and southern part of the State." However, the species is very definitely migratory and uncommon or absent in winter in most of the State. There are a number of records of migrant flocks of Anhingas on the Texas coast listed in the *Audubon Magazine's* "Season" reports by George G. Williams, and the *Gulf Coast Migrant*, a mimeographed bulletin issued by Williams, contains many references to migratory Anhingas observed in the past 10 years. These references indicate that there is a definite spring and fall migration, in the daytime, along the coast, parallel to the line of the Gulf. In the past 10 years, a few Anhingas have been noted in winter in the Houston-Galveston Bay region and in bottomlands at the mouth of the Guadalupe River. There are other scattered winter records for the Texas coast. In the lower Rio Grande valley, the species is a permanent resident but, according to L. Irby Davis, is never plentiful. Griscom and Crosby (1925. *Auk*, 42:520) failed to find Anhingas in the Brownsville region in winter. They found no records for the period between December 5 and March 18. Presumably the great majority of the Anhingas seen in Texas in summer or during migration periods winter in Mexico.

Most of the spring migrants pass through the coast region during the first half of April. Flocks of migrating Anhingas have been seen at Rockport as early as March 8 by Mrs. Jack Hagar and as late as May 20 at Cove (at the northern tip of Galveston Bay, Chambers County) by A. K. McKay. Autumn migrants, in sizeable flocks, have been seen by McKay at Cove as early as September 3 and as late as mid-November. Some birds have been seen near Cove in December and January, but the species is not a regular winter resident in that area.

At the Aransas National Wildlife Refuge, in Aransas and Refugio counties, several large flocks have been observed. On April 4, 1941, Everett Beaty and I observed one group, estimated at well over 1,000 birds, flying north at about 11:30 a.m. over the Refuge headquarters. The general movement of the flock was northward, following the shore line of San Antonio Bay. The group was rather compact but ranged, vertically, from about 200 to 500 feet above the ground. These birds soared a great deal, interspersing the soaring with a few wing beats. Occasionally, different sections of the flock, containing from 25 to 100 birds, would sideslip in unison, spiraling downward a hundred feet or so, finally rejoining the main body of the group. The soaring and circling movements reminded us of White Pelicans (*Pelecanus erythrorhynchos*) in maneuvers over south Texas in winter. With all these evolutions, the passage of the flock was slow. We estimated that it took the flock over 10 minutes to cover the distance from Refuge headquarters to a point two miles north.

Following this flock was a group of about 100 Broad-winged Hawks (*Buteo platypterus*) which, although soaring in circles at intervals, kept within a few

hundred yards of the Anhingas. A few of the hawks were actually a part of the Anhinga flock, staying at the edge of the group, but mimicking their movements even to circling and spiralling downward with units of the main group. In the *Gulf Coast Migrant*, April 1941 issue, there is a report of 1,000 Anhingas and 100 Broad-winged Hawks observed at Dickinson, Galveston County, on the same date. Since Dickinson is about 135 miles northeast of Refuge headquarters and flock movements are slow, this was probably not the group of birds described above.

Another flock of several hundred Anhingas, accompanied by a large number of Broad-winged Hawks, was seen passing over the Refuge by Beaty on April 8, 1942. Earl W. Craven observed a migrant group of about 1,250 Anhingas over the Refuge April 2, 1945.

I watched a flock of 20 flying about 300 feet up, as it passed south over Tivoli, Refugio County, October 17, 1941. The flock did considerable circling, but the general movement of flight was southwest. The birds were moving parallel to a highway, and I kept pace with them in an auto. This flock covered one mile in about seven minutes.—JAMES O. STEVENSON, *Fish and Wildlife Service, Chicago, Illinois*.

Road-runner preys on Poor-will.—On March 9, 1943, around 1:30 p.m. as I was driving along the trail about a mile northwest of Tule Tank, on the Cabeza Prieta Game Range, Yuma County, Arizona, I noticed some feathers of a Poor-will (*Phalaenoptilus nuttalli*) lying in the road. A short distance down the trail, I saw a Road-runner (*Geococcyx californianus*) running along, carrying something in its beak. When I gave chase, it dropped its burden, which proved to be the still warm carcass of a Poor-will, intact save that most of the viscera had been removed (and probably eaten), and a number of the larger wing feathers had been torn out. I find no previous reference in the literature to Road-runners preying on birds of this family.—GALE MONSON, *Fish and Wildlife Service, Parker, Arizona*.

Starling and Brown Thrasher stealing food from Robins.—The systematic theft of food from weaker or otherwise vulnerable species of birds has often been noted among aquatic birds and birds of prey, much less often among passerines. In two cases that I recently observed, the victim was an American Robin (*Turdus migratorius*), a species exceptionally skilful in obtaining food from the sod but apparently not able or not inclined to resist robbery by more aggressive species.

While crossing the University of Michigan campus shortly after noon on April 22, 1946, I noticed a Starling (*Sturnus vulgaris*) run at a Robin and drive it away from the worm it had begun to dig up. Apparently the Starling failed to get the food that time, but in the next five minutes the Starling made four more raids, all of them successful. The Robin did not attempt to fight or to defend the food; it simply moved off a foot or two and continued to forage. The Starling each time quickly devoured the stolen food and then resumed walking about rapidly and erratically in characteristic starling-fashion, but keeping within six or eight feet of the Robin. As soon as the Robin found a worm and started to pull it out, the Starling ran over quickly and crowded the Robin away from the food. The six- to eight-foot range was apparently just enough to enable the Starling to get to the spot before the Robin could swallow a newly-discovered worm. On one occasion the Starling finished the worm while about 15 inches from the Robin, then moved off to the six-foot range. After the fourth successful raid, the Starling flew 150 yards north to a big elm tree, where it apparently had a nest.

On April 28, at 9:25 a.m., I watched a female Brown Thrasher (*Toxostoma rufum*) on the lawn near my house make two similar successful raids on a Robin digging worms there. Again the Robin made no attempt to defend the food.—JOSSELYN VAN TYNE, *University of Michigan Museum of Zoology, Ann Arbor, Michigan*.