

mice in quick succession and be ready for a second meal in 3 hours." The inaccessibility of food is probably the primary factor causing death of Barn Owls during periods of adverse winter weather in the northern part of the bird's range. A thick covering of snow on the ground accentuates the Barn Owl's difficulty in finding mice since the latter move about chiefly beneath the snow. The amount of snow covering is presumably the decisive factor in survival of Barn Owls. Low temperatures may be incidental in that they normally follow periods of heavy snowfall.—PAUL A. STEWART, *Dept. of Zoology and Entomology, Ohio State University, Columbus 10, Ohio, January 16, 1952.*

**Hail damage to wildlife in southwest Oklahoma.**—Late in the afternoon of October 5, 1951, an unusually severe hail storm accompanied by high winds and rain hit southwestern Oklahoma. The area of this storm extended from Wellington, Texas, eastward to Lone Wolf, Oklahoma, and varied in width from three to ten miles. The area of the most severe damage occurred between the towns of Reed and Granite in Greer County, Oklahoma. In this area of about 110 square miles, cotton was completely destroyed, windows of many homes were shattered, and shingles were beaten off roofs. Tree shelterbelts in full foliage were completely denuded, branches and twigs storm-pruned, and whole areas of bark stripped from the trunks of the trees. The hail stones measured between one inch and one and one-half inches in diameter. The hail fell for about ten minutes and covered the ground to a depth of two to three inches. It was followed by a downpour of rain which varied throughout the storm area from .8 to 2.5 inches. Total precipitation, including hail, was three to four inches.

On October 8th, three days after the storm, State Game Ranger Clem Patillo, of Mangum, accompanied by game technicians Richard De Arment and Walter Stidham, of Clinton, inspected wildlife habitat improvement plots for storm damage. In the course of this inspection they visited a farm two miles north and one mile west of Mangum, Oklahoma. This farm is on flat land—an old flood-plain of Elm Fork of the Red River—and is bordered on the south by a dense tree shelterbelt, 120 feet wide and one mile long. In this shelterbelt they found the following dead wildlife: 45 Swainson's Hawks (*Buteo swainsoni*); 1 immature Red-tailed Hawk (*Buteo jamaicensis*); 1 Cooper's Hawk (*Accipiter cooperii*); 30 Crows (*Corvus brachyrhynchos*); 3 Barn Owls (*Tyto alba*); 3 Mourning Doves (*Zenaidura macroura*); 4 Cottontail Rabbits (*Sylvilagus audubonii*); and 1 Wood Rat (*Neotoma floridana*). In addition, 4 living Swainson's Hawks were found with broken wings.

One-half mile north of the first shelterbelt is another, less dense than the first, which is 60 feet wide and one-half mile long. Fifteen Swainson's Hawks, but no other forms of dead wildlife, were found here.

A second farm, one mile west of the first, was visited. It comprises 160 acres and is west of the Red River. Along the weedy fencerows of cultivated land on this farm were three coveys of Bobwhite Quail (*Colinus virginianus*) which had been killed. These coveys were huddled in groups under clumps of sunflowers, ragweeds, Russian thistles, and such brushy cover as the fencerow afforded. One of the coveys contained 22 quail; one 11; and the third, 8. In addition, 9 dead jackrabbits (*Lepus californicus*) were found in various places in an 80-acre pasture.

I visited the first shelter-belt mentioned above two weeks after the storm, and found the damage as described by the men who visited it earlier. The four injured Swainson's Hawks were still there and appeared to be recovering slowly. Injuries appeared to

be broken wrist bones in one or both wings, but the birds reacted violently to handling, and, rather than risk further injury to the birds, only obvious injuries were noted. The bodies of the dead birds were so badly decomposed that it seemed wise not to handle them to determine the nature of the fatal injuries. The injured hawks apparently had been using some of the dead crows for food, but there was no evidence that they had eaten the bodies of their own kind.

Forty-four of the 47 hawks and two of the three owls were found in the eastern one-half mile of the shelterbelt. The cultivated land of this farm lies north of the tree belt. It is almost flat but with a very gentle slope to the southeast. The gentle slope of the land allowed the eastern half-mile of the belt to be flooded while the western half-mile was not. The reason that most of the hawks were found in this eastern portion of the belt may be that many of the injured hawks that were knocked to the ground were either drowned or so thoroughly drenched that they died from exposure. Or, perhaps, the hawks may have been concentrated in that particular area because of the abundance of rodents and grasshoppers in an adjoining alfalfa field. All the crows were found in the western unflooded portion of the tree belt. No doubt hawks of all kinds in the storm area suffered heavy losses since hawk migration was in full swing and this is the section of Oklahoma through which the main body of the migration occurs. There were also numerous reports throughout the storm area of small birds, squirrels, rabbits, quail, wood rats, field mice, and other forms of wildlife which had been killed by this storm.—GLENN JONES, 1115 West Garver St., Norman, Oklahoma, November 21, 1951.

**A possible hybrid between the Hooded Merganser and the Red-breasted Merganser.**—On April 14, 1951, I saw several male and female Red-breasted Mergansers (*Mergus serrator*) on Lake Vadnais, part of the water system of St. Paul, Minnesota. Accompanying them was another bird, closely resembling a male Red-breasted Merganser in its typical merganser profile, dark head with ragged crest, white collar and reddish-brown breast. This bird was noteworthy in that, behind the eye on each side of its head, it possessed a white patch, in the same position and of the same size and shape as the white patches on the head of a male Hooded Merganser (*Lophodytes cucullatus*). These white areas were not so sharply marked off from the dark head as in Hooded Mergansers, but were nevertheless well defined. None of these birds carried on any courting during the period of observation.

The available literature mentions no Hooded Merganser × Red-breasted Merganser hybrids. Ball (1934. *Peabody Mus. Nat. Hist. Yale Univ. Bull.*, 3:3-26), however, has described a Hooded Merganser × American Goldeneye (*Glaucionetta clangula*) hybrid.—JOHN G. ERICKSON, 611 N. Lilac Drive, Minneapolis, Minnesota, October 29, 1951.