

Valley", over a period of nearly fifty years. The Anderson specimens listed herein make a good contribution to the flight of 1905-1906. And they also show a strong flight during the winter of 1909-1910 which seems not to have been hitherto recognized as a major flight.—T. C. STEPHENS, *Sioux City, Iowa*.

The 1932 Fall Flight of Ducks through Northwestern Iowa.—In connection with some waterfowl studies carried on in Clay and Palo Alto Counties, Iowa (Virgin, Round, Lost Island, Trumbull, and Elk Lakes, Green and Brown Sloughs) data were obtained on the 1932 fall flight of the species listed below. Clay and Palo Alto Counties are representative of the best waterfowl country in the state. Reference in this note is meant only to migrants, not to ducks breeding in the area.

Wood Duck. *Aix sponsa* (Linnaeus). The total number of these ducks seen did not exceed one hundred. They were observed from September 15 to October 12, being most numerous from October 9 to 12.

Hooded Merganser. *Lophodytes cucullatus* (Linnaeus). The flight of this species, if it can be called a flight, coincided with that of the Wood Duck. Possibly twenty-five were seen.

Ruddy Duck. *Erismatura jamaicensis rubida* (Wilson). This duck was seen frequently from September 28 to October 17. Probably several thousand passed through the region during the season. They were most abundant from October 11 to 17.

Shoveller. *Spatula clypeata* (Linnaeus). Shovellers were observed from September 27 to November 10, with the greatest numbers noted between October 12 and 19. They were quite common until forced southward by a three-day blizzard beginning November 8.

Baldpate. *Mareca americana* (Gmelin). Although this duck was not present in large numbers it was taken frequently by hunters. It was observed from October 1 to 17, particularly the last four days of the period.

Red-breasted Merganser. *Mergus serrator* (Linnaeus). Observations made on this duck were similar to those of the Wood Duck and the Hooded Merganser. Hardly enough were seen to constitute a true flight. About twenty birds were killed or observed between October 13 and 18.

Buffle-head. *Charitonetta albeola* (Linnaeus). Very few of these ducks were seen. A number were reported as having been killed around October 15.

Blue-winged Teal. *Querquedula discors* (Linnaeus). The heaviest flight of Blue-winged Teal occurred from October 15 to 22, and the birds were present in lesser numbers until forced out by the blizzard of November 8.

Gadwall. *Chaulelasmus streperus* (Linnaeus). Very few of these ducks were seen or taken, but the species was most conspicuous between October 16 and 21.

Lesser Scaup. *Nyroca affinis* (Eyton). This duck was plentiful throughout the fall until about November 10. The greatest numbers were observed from October 19 to 25.

Ring-necked Duck. *Nyroca collaris* (Donovan). Small numbers of this species were present during the month of October. They were almost always seen with the Lesser Scaup, and their flight, if a true flight, was at the same time.

Green-winged Teal. *Nettion carolinense* (Gmelin). Great numbers passed through this territory between October 21 and 25. Their presence was noted from the latter part of September until November 10.

Canvas-back. *Nyroca valisineria* (Wilson). This deep water bird was observed only on Virgin and Elk Lakes. Two flocks of between fifty and sixty were noted from October 25 to November 5. They were last seen November 10.

Redhead. *Nyroca americana* (Eyton). About two hundred birds of this diving species were seen on Virgin and Elk Lakes. The main flight was from October 27 to November 6. Between seventy-five and one hundred remained in that locality until November 10.

Pintail. *Dafila acuta tzitzihou* (Vieillot). Migrating birds were seen from the latter part of September until November 10. The Pintail was one of the most abundant species, the main flight extending from November 5 to 10.

Mallard. *Anas platyrhynchos* (Linnaeus). Our most plentiful and most popular duck was present in large numbers from the latter part of September throughout the fall and winter. The strongest flight took place between November 5 and 10.

Black Duck. *Anas rubripes tristis* (Brewster). Although few ducks of this species were taken, I suspect that migration was contemporaneous with that of the Mallard.

The fall flight of 1932 through this region was early. By the end of October all species of ducks except the Mallard and Pintail had reached the peak of their migration; the final flight of the latter two was precipitated by the snow storm and cold weather of November 8. Virtually the only ducks remaining after November 10 were several thousand Mallards that spent the winter on Round Lake.—LOGAN J. BENNETT, Ames, Iowa.

An August Day's Toll of Birds' Lives on Primary Iowa Roads.—

Like many other travelers by auto, the author at times has busied himself by counting the remains of dead birds on the road ahead. Several times he has pondered over the number of birds that might be destroyed in one day on the primary roads of the state. Last August (1932) opportunity was afforded to get an estimate of the numbers destroyed daily. Several days about the middle of August brought us successive heavy rains that, with the assistance of the auto wheels, swept the roads clean of all refuse. August 18 was mostly clear and the dead birds accumulated to remain on the highway. After the start at 7:30 a. m., August 19, the author, driving thirty miles on pavement north and west of Ames, counted as dead twenty-three English Sparrows and one adult Red-headed Woodpecker, victims of August 18. The locations of the remains were recorded by speedometer readings. On the morning of August 20 observations made during a drive over the same thirty miles added seventeen English Sparrows, four Red-headed Woodpeckers (three adult, one immature), and one Northern Flicker to the toll, as the kill of August 19. In those two days at least forty English Sparrows, five Red-headed Woodpeckers, and one Flicker were in the toll of bird lives taken over thirty miles of pavement; and the average was twenty-three birds per day. If the same ratio held true for each of the 7,290 miles of improved primary highways in Iowa, a day's kill in August might total 5,589 birds of which English Sparrows might number 4,860.—GEORGE O. HENDRICKSON, Iowa State College, Ames, Iowa.