

This is the third British Columbia record of a dead Trumpeter Swan in 1945. The first was that of a bird which had died of lead poisoning; a pathological examination of the second showed that death was due to intestinal parasites. Records of the British Columbia Game Commission indicate that the coyote is the greatest predator of the Trumpeter Swan. Horned Owls preying on juvenile birds cause the next largest number of mortalities, while the Golden Eagle ranks third. Local residents say the eagle is the worst predator. However, in this area the slower-flying Bald Eagle is more numerous than the Golden Eagle and its kills are probably fewer than those made by the coyote.—CARL R. EKLUND, *Captain, Arctic Desert Tropic Branch, Air Forces Center, Orlando, Florida.*

Occurrence of the Hudsonian Curlew on National Wildlife Refuges along the Atlantic Coast.—The distribution along the Atlantic Coast of National Wildlife Refuges, the majority of which have been established in the past ten years, gives their personnel an unusually good opportunity for observing the flight of the Hudsonian Curlew (*Numenius phaeopus hudsonicus*). The species has been reported from seven coastal refuges in six states from Massachusetts to Georgia. A résumé of data submitted by the refuge managers is here presented; the Brigantine and Cape Romain National Wildlife Refuges would appear to be important concentration points for the species.

Parker River Refuge, Plum Island Unit, Essex County, Massachusetts.

The first record of this curlew on the refuge following its establishment in December, 1942, was obtained in the summer of 1943. By July 21 the birds frequently were heard calling over the refuge marshes, J. S. Gashwiler reported, and three flocks were seen by him passing high overhead on August 5. The same observer estimated that 200 of these birds visited the refuge in their southern migration in 1943. Not more than 100 were seen by Mr. Gashwiler during the fall of 1944, with the first migrant observed July 20, and the last stragglers noted September 16. According to Charles Safford, of the Anna H. Brown Sanctuary, Plum Island, peak migration dates for curlews in this vicinity are August 3, 4, and 5, regardless of the weather.

Brigantine Refuge, Atlantic County, New Jersey.

This refuge was established in October, 1939. The first migrating curlews seen were 50 birds reported by W. P. Schaefer on May 13, 1940. Fall migrants were first noted by this observer on July 31, 1940; the peak was reached when 107 birds were observed on August 8; no curlews were seen after August 20. Albert Stadlmeir stated that the first migrants to reach the refuge in the spring of 1942 were 25 birds on April 18. Peak numbers occurred on May 10 when about a thousand curlews were seen, and the last observation that season was of five hundred birds, May 16. Numbers were less in 1943; the earliest observation was made on April 9 when 20 birds were counted; and 150 birds noted on April 30 proved to be the last of the season. Fall migrants numbering about 400 appeared on July 15, 1943, and the maximum number seen in a single day was 1,500, on August 15. Last noted were 200 birds, August 31. An estimated total of 5,000 curlews used the refuge in their 1943 fall flight, according to Mr. Stadlmeir. His first observation of this species the next spring was of 50 birds on April 5; the largest number seen was 500 birds, April 25, with 100 being the last seen April 29. The manager estimated that 600 birds used the area during this flight. In the fall of 1944, approximately 5,500 birds stopped on the area. First seen were 75

on July 6; a peak of 1,500 was reached August 10; and the last observation of the season was of 20 birds, September 15. The manager estimated that 3,000 curlews had passed through the refuge in their northern migration by the end of April, 1945. The first flock, numbering 50 birds, was seen March 25 and 400 curlews were present on April 10.

Chincoteague Refuge, Accomac County, Virginia.

Established in 1943, this refuge was under intermittent administration until the spring of 1945. In the spring migration of 1943, E. R. Clark noted that approximately 25 birds had used the area by the end of April. The first migrants were noted on April 30 when four birds appeared. Occasional individuals were seen in the late summer and fall of that year. J. H. Buckalew recorded 27 birds near the old Lighthouse Station, April 14, 1944, and a fair migration occurred that spring. This same observer saw 25 curlews on April 4, 1945, and estimated that some 500 birds had passed through the refuge by the end of the month.

Back Bay Refuge, Princess County, Virginia.

The Hudsonian Curlew has been reported by refuge personnel as a regular migrant through the area since the establishment of the refuge in 1938. The first migrants in 1940 were recorded by H. A. Bailey on April 17; he saw a large number of curlews moving northward during the week of April 27; and the migration was still on during the week of May 4. Larger numbers were noted by this observer in the spring of 1941. Refuge Manager Jack E. Perkins observed that the peak of curlew migration was reached in May, 1943, and recorded the species as abundant along the ocean shore in the fall of that year. His only record the following spring was of two birds seen April 30, 1944. The curlew continued scarce in 1944 and 1945; one bird was seen on April 12, 1945.

Pea Island Refuge, Dare County, North Carolina.

Seen as a spring and late summer migrant, the Hudsonian Curlew has never been reported in any numbers from this refuge, which was established in 1938. Former Refuge Manager, A. S. Walker, states that five birds were seen by him on April 27, 1937, and 20 on May 3, 1937, the year preceding formal establishment of the refuge. Twenty-five were present on April 25, 1940, and a small flight occurred that fall with peak numbers noted August 10. The first spring migrant in 1941 was seen on April 28 and only occasional birds were observed that year. No observations were recorded for 1942. The species was scarce in 1943, and the only record made was that of two birds on April 21. Mr. Walker reported four curlews on May 24, 1944, and estimated that not more than 25 used the area that year.

Cape Romain Refuge, Charleston County, South Carolina.

Although scattered individuals may be seen on the refuge any time during the year, the largest numbers are noted during May and August. Neil Hotchkiss, who visited the area on May 23, 1930—two years before its establishment as a refuge—reported 30 to 50 curlews on Raccoon Key, and noted that the species appeared rather numerous toward McClellansville. A flock of 1,000 curlews was recorded on Cape Island, February 24, 1936, by the manager, A. H. DuPre. Good flights occurred also on April 18 and May 22. The total for the season was estimated at some 5,000 birds. In 1937 Mr. DuPre reported approximately 5,500 birds in the spring migration. Large numbers were noted also that fall, and by

July 17 the species was more numerous than it had yet been noted at that time of the year. Little change was apparent in 1938; the first migrants were seen March 30, and an estimated 5,000 were present on May 3. Mr. DuPre reported the species as plentiful by July 30, 1938, as the fall migration got under way. The spring flights of 1939 and 1940 were smaller but large numbers of the birds were seen in the fall of 1940. In 1941 the spring migration was stronger than in the previous two years and the fall flight was considered normal. The northward movement through the refuge in 1942 was slow, but by the latter part of July, fair numbers of curlews were resting on the refuge during their southern migration. Again, in 1943, the species was late in coming to the refuge and few birds were seen in April. However, by the end of May, Mr. DuPre reported that curlews were considerably more abundant than they had been in several years; the flight that fall was fair. Due to personnel changes resulting from the war, observations in 1944 were less regular. William P. Baldwin noted a flock of 60 birds passing through the refuge on May 24, 1944, saw individual curlews on several occasions during the summer, and recorded a flock of 15 on August 8.

Blackbeard Island Refuge, McIntosh County, Georgia.

Records of the occurrence of the Hudsonian Curlew on this refuge date from 1941 when Refuge Manager Oscar Goodwin noted a flock of six birds, April 20. Dr. E. P. Creaser reported that the species was seen quite regularly during the months of November and December, 1941. Flocks of 75 to 300 were present during May, 1942, along the tidal flats, according to Refuge Manager, Joe Morton, and 200 were seen by him in December. The species appeared to be more numerous the following spring, and it was estimated that a thousand birds were on the refuge by the end of April, 1943. Mr. Morton recorded the first fall migrants on September 15 when 100 birds were counted; the last observation that season was 300, December 22, 1943. Fewer numbers were seen in 1944 when Refuge Manager, E. S. Jaycocks, estimated that approximately 600 birds used the refuge.—FAXON W. COOK, *Fish and Wildlife Service, Department of the Interior, Chicago 54, Illinois.*

Status of the Upland Plover in Lancaster County, Pa.—The ninth census of the Upland Plover (*Bartramia longicauda*) in northern Lancaster County, Pa., was taken under the most adverse agricultural conditions thus far met with in the plan. During all of July, 1945, with the exception of four or five days, there had been rain. Sixty per cent of the wheat, usually harvested the first week in July, was still drooping on the fields on August 8. Much clover and grass was still uncut and weeds, mostly chicory and Queen Anne's lace, covered tract 'B,' the Lancaster Municipal Airport, which is the favorite breeding and feeding ground of the Upland Plover in Lancaster County today. The low wheat stubble and grass fields, where the birds were found before, were almost entirely absent over the four tracts this year. Most probably for these reasons the count was less than a third of the high mark of 1941. The birds were probably scattered over more favorable feeding grounds. Some of them may have started their long journey through Texas toward Uruguay and Argentina two or three weeks ahead of time. Invariably, all have left Lancaster County by September 1.

The tracts charted in 1921, known to the writer to have been the best places for plover shooting prior to 1913, when the species was taken off the list of game birds, were covered, as usual, by well-qualified observers. These tracts are widely separated, from one and a half to two square miles each, in four different townships.