

fruits. On June 2, a friend reported all the berries eaten and a Cardinal (*Richmondia cardinalis*) biting at one of the red pedicels.

Although the attractiveness of the *Berberis bealei* clump under observation was undoubtedly enhanced by an adjacent water spray, its value as a late spring food supply for migratory and resident songbirds was strikingly evident. These observations seem to indicate that the many related species of evergreen barberries that are normally grown in this country, both native and foreign, should receive greater attention in food and cover plantings for songbirds.

[*Berberis bealei* (Fort.) DC. is synonymous with *Berberis* (*Mahonia*) *japonica* of horticulture which, in turn, is not to be confused with *Berberis thunbergii* DC. known as *B. japonica* by some authorities.]—GEORGE A. PETRIDES, *National Park Service, Washington, D. C.*

Fulvous Tree-duck in Louisiana.—Louisiana is so famous as a wintering ground for waterfowl that the importance of her nesting ducks often is overlooked. The Mottled Duck is the principal breeding duck of the Louisiana coastal marshes, and the Wood Duck is produced in large numbers in her extensive, wooded swamps. The Blue-winged Teal is an occasional nester, but not in significant numbers, whereas the Mottled Ducks and Wood Ducks produced in the state represent a considerable increment to our continental waterfowl population.

The Fulvous Tree-duck (*Dendrocygna bicolor fulva*) proves to be another nesting species for the state, although its importance has not been recorded heretofore. Oberholser states in 'The Bird Life of Louisiana' that the bird is fairly common in southern Louisiana, but is of irregular and local occurrence in summer, autumn, winter and spring. He suggests that it possibly breeds in the state, although no definite nesting records had appeared at the time of publication of his book in 1938.

Recent studies show this tree-duck to be a very common summer resident in southwestern Louisiana. Its range includes the coastal marshes from Morgan City to Sabine Lake, and virtually the entire Louisiana rice belt including Acadia, Vermilion, Jefferson Davis, Calcasieu and Cameron parishes. The species may be found throughout this region in summer and early fall, although concentrations tend to be localized. Occurrences east of this range must be considered occasional, while the bird is abundant in the Texas rice belt to the west. Winter records for the state are infrequent.

Tree-ducks appear in Louisiana early in summer. By the middle of July small flocks can be seen here and there in the rice fields, but at this time of year the birds are secretive and widely dispersed. Rice farmers reported that the ducks nest during this season. Federal game management agents have verified these reports, finding many instances where rice farmers had picked up tree-duck eggs and hatched them under hens. The U. S. Fish and Wildlife Service investigated these reports further during the summer of 1939. Several nests were found in Acadia Parish south of Crowley on August 13, marking the first definite nesting record for the state.

Further study showed that the Fulvous Tree-duck nests almost entirely in rice fields. Nesting occurs late in the season, usually after the middle of July, probably because the young rice does not offer sufficient nesting cover before that time. Nests are built on low rice-field levees or along dikes of larger canals. Not infrequently floating nests are built in standing rice. Floating nests are well-con-

structed rafts similar to those of the Pied-billed Grebe, averaging fifteen inches across and ten inches thick, the emersed portion being four or five inches high. Nests on rice levees are more simply constructed. Rice straw (stalks and blades of the rice plant) is the principal material used in all types of nests. Eggs vary from ten to fifteen in number, twelve to fourteen being the average clutch.

The young are distinctively marked, especially on the head and neck. Forehead and crown are a deep olive brown down to and including the eyes. Cheeks and throat are light buffy yellow, which color also extends in a band across the hind head below the crown. The dark coloration of the hind neck meets this light band at the nape, and extends across the ear region into the cheek, below and slightly behind the eye.

Many tree-ducks nests are located in fields of 'Early Prolific' rice, since this early-maturing variety offers the tallest cover during the start of the nesting season. Unfortunately, however, this rice is often harvested before the eggs in late nests hatch. Rather than see these eggs destroyed, rice farmers bring them home and hatch them under domestic hens. The young do well in captivity, and make interesting pets. When these hand-reared birds are allowed their freedom, most of them eventually rejoin their wild brethren.

During the month of September, tree-ducks become more conspicuous in rice fields. Flocks of ten to fifteen are a common sight. Many of these flocks probably represent family groups. Soon after the young can fly, these ducks begin to congregate in rice reservoirs and in ponds of the coastal marshes. Only at this time of year can the abundance of the tree-duck be appreciated. Even then, this bird at a distance is easily confused with the Glossy Ibis. The tree-duck presents a very un-ducklike appearance in flight, since its long legs, stretched out behind, remind one of a heron. The wing-beat is slow, and the bird is given to soaring and gliding. Its high-pitched, whistling call gives it the local name of 'Mexican Squealer' in Louisiana and Texas. The bird is also called 'Yankee Duck' or the French 'Canard Yankee' in parts of Louisiana.

The tree-duck cannot be classed as a sporting bird in Louisiana, since very few remain in the state until the start of the hunting season. After the fall-congregation period in September and early October, these birds disappear, probably migrating down the Texas coast. A few are killed in Cameron Parish during the first few weeks of every hunting season, but in most places the bird is so rare in winter as to be a curiosity. Tree-ducks respond readily to calling, and could be killed with ease during September and October. No decoys are necessary. The hunter merely has to walk the rice fields in early morning or late evening, waiting for the birds to fly over. This duck has a curious habit of flying in wide circles, one of which almost invariably brings the bird within range of the hunter. Under the present waterfowl regulations, the tree-duck enjoys almost complete protection from legal hunting. Illegal hunting is kept down by the widespread notion that this bird is unfit to eat. It has such a thin skin that the meat appears blue on a plucked bird, which may account for this impression.

This species is valuable to the farmer in consuming seeds of rice-field weeds. Reports of tree-ducks damaging rice are surprisingly rare, considering the abundance of the bird. It is the opinion of observers in the rice belt that the tree-duck has increased steadily during the past ten years. This is understandable since the bird receives ample protection, and is assured of abundant food, nesting cover, and water. It is not impossible that rice culture made possible the extension

of the nesting range of this bird into Louisiana, since most of this region had been prairie prior to cultivation.—JOHN J. LYNCH, *U. S. Fish and Wildlife Service*.

Spring migration on Farmington Bay, Utah.—Farmington Bay, at the southeast corner of Great Salt Lake, Utah, is a bird refuge consisting of several square miles of diked fresh-water ponds. It is bordered on the west by the briny, barren flats of the lake, and on the east by reeded marshes, meadowed fens, and verdured uplands extending to the Wasatch mountains a mile or more away. Vegetation consists chiefly of various species of bulrush, one of which (*Scirpus paludosus*) actually survives the brine of the lake itself, and salt grass (*Distichlis stricta*).

To check the bird arrivals I visited this bay frequently in the spring of 1942, and the records comprise an interesting chronology of this ornithologist's delight. How long the birds mentioned under February 27 had been there I am unable to say, but I first noted the others on the days indicated. I saw one Marbled Godwit on April 9, but none thereafter until April 25 when I counted a great flock of 804 individuals resting on the watered mud, a most pleasing experience. Here, then, is the list:

February 27: Nevada Red-wing (males) (*Agelaius phoeniceus nevadensis*); Lesser Snow Goose (*Chen hyperborea hyperborea*); Pintail (*Dafla acuta tzitzihoo*); California Gull (*Larus californicus*).

March 5: Wilson's Snipe (*Capella delicata*).

March 7: Killdeer (*Oxyechus vociferus vociferus*); Lesser Scaup Duck (*Nyroca affinis*); Blue-winged Teal (*Querquedula discors*); Baldpate (*Mareca americana*); Treganza's Heron (*Ardea herodias treganzai*); Redhead (*Nyroca americana*).

March 19: Lesser Yellow-legs (*Totanus flavipes*).

March 21: Coot (*Fulica americana*); Avocet (*Recurvirostra americana*); Ruddy Duck (*Erismatura jamaicensis rubida*); Greater Scaup Duck (*Nyroca marila*).

March 24: Nevada Red-wing (females in a flock).

March 28: White-faced Glossy Ibis (*Plegadis guarauna*); White Pelican (*Pelecanus erythrorhynchus*).

April 3: Long-billed Curlew (*Numenius americanus*).

April 5: Black-necked Stilt (*Himantopus mexicanus*); American Bittern (*Botaurus lentiginosus*).

April 7: Brewster's Snowy Egret (*Egretta thula brewsteri*).

April 9: Marbled Godwit (*Limosa fedoa*); Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*).

April 11: Western Willet (*Catoptrophorus semipalmatus inornatus*).

April 13: Shoveller (*Spatula clypeata*); Gadwall (*Chaulelasmus streperus*).

April 15: Eared Grebe (*Colymbus nigricollis californicus*).

April 18: Cinnamon Teal (*Querquedula cyanoptera*).

April 19: Pied-billed Grebe (*Podilymbus podiceps*).

April 25: Violet-green Swallow (*Tachycineta thalassina lepida*).

April 30: Black-bellied Plover (*Squatarola squatarola*); Black-crowned Night Heron (*Nycticorax n. hoactli*).

May 3: Bank Swallow (*Riparia riparia riparia*); Wilson's Phalarope (*Steganopus tricolor*); Caspian Tern (*Hydroprogne caspia imperator*); Forster's Tern (*Sterna forsteri*); Black Tern (*Sterna hirundo hirundo*); Western Sandpiper (*Ereunetes mauri*).

May 5: Rough-winged Swallow (*Stelgidopteryx ruficollis*).