

NARRATIVE REPORT

SALTON SEA MIGRATORY WATERFOWL REFUGE

BRAWLEY, CALIFORNIA

October, November, December, 1939 and January, 1940

Submitted by

LUTHER C. GOLDMAN
Jr. Refuge Manager

Note: The author was transferred from The Salton Sea Migratory Waterfowl Refuge to the Tule Lake Wildlife Refuge, California, from June 1 to October 9, 1939, as an assistant. Therefore, the remaining days of October (spent at Salton Sea Migratory Waterfowl Refuge) have been included in this quarterly report.

Many wading birds and gulls leave the Salton
Sea in the early morning to feed in the cultivated
fields and return again to roost at night. Note:
The darker birds at left are white-faced glossy ibises.

TABLE OF CONTENTS

I. GENERAL WEATHER CONDITIONS - - - - - 1-2

II. WILDLIFE

 A. Waterfowl- - - - - 3-5

 1. Late arrival

 2. Species observed

 3. Crop damage

 4. Botulism

 5. Study collection started

 B. Upland Game Birds - - - - - 5

 1. Dove and quail

 2. Little Brown crane

 3. Ring-necked pheasant

 C. Bird list - - - - - 6-8

 D. Mammals - - - - - 8

 1. Muskrat

 2. Raccoon

III. REFUGE DEVELOPMENT AND MAINTENANCE

 A. Physical Development - - - - - 9

 1. Additional posters placed

 2. More land desired

IV. PUBLIC RELATIONS - - - - - 10-11

I

GENERAL WEATHER CONDITIONS

Record breaking rains fell in Imperial Valley and on East and West mesas on September 4, 5, and 6. An average of six inches of rain fell in 48 hours, equivalent to a run-off of about 500,000 acre feet of water. The flood following the rain caused \$250,000.00 damage to the canal system of the Imperial Irrigation District alone. Other damage caused by the rain mounted into thousands of dollars. The storm and high water washed away two of the three important sandy islands in the southwest corner of the Refuge. (These islands have been used in the past by nesting terns and pelicans. Either the small island left will be overpopulated by the birds, or the birds will seek less favorable nesting grounds in the vicinity, they may even fly to some other place. It is believed that sand islands or rock islands might be made on this part of the Refuge.)

Following is given the weather for the months covered in this report:

October

Highest temp.----95°	Average high----89°	No precipitation
Lowest temp.-----51°	Average low-----56°	Clear weather

November

Highest temp.----92°	Average high----80°	Precipitation----.28
Lowest temp.-----14°	Average low-----49°	3 cloudy days

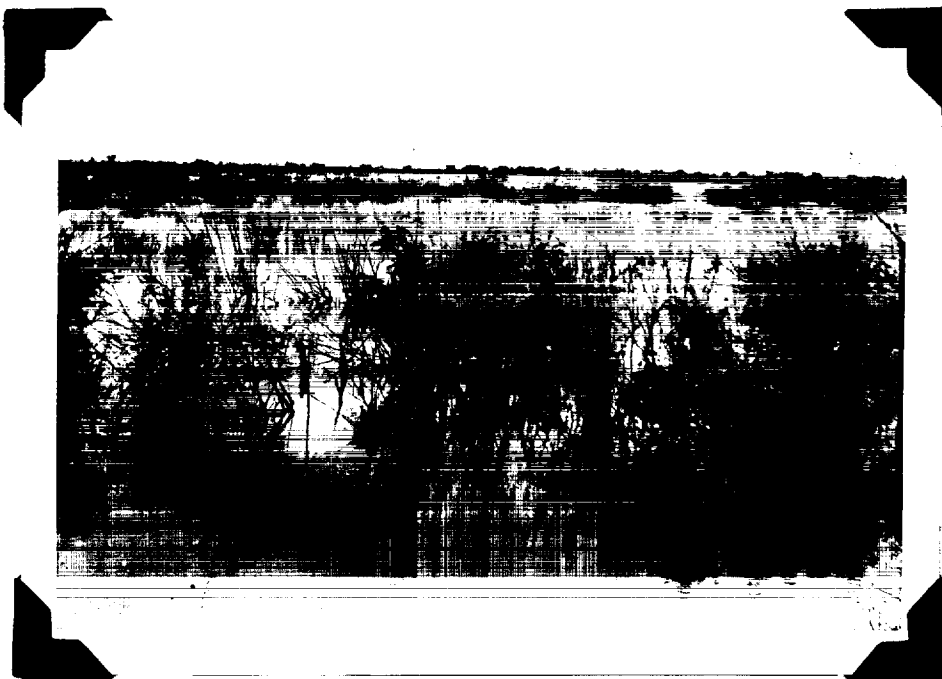
December

Highest temp.-----86°	Average high-----79°	No precipitation
Lowest temp.-----30°	Average low-----43°	Clear weather

January

Highest temp.-----83°	Average high-----71°	Precipitation-----.13
Lowest temp.-----28°	Average low-----44°	8 cloudy days

State Fish and Game biologist photographing gull-bill tern's nest on one of the islands that was nearly washed away during the September rainstorms.



The New River, now flowing over a large area on its way to the Salton Sea, is making a fine waterfowl area.

Baldpates in the vicinity of the Refuge.

II

WILDLIFEA. WATERFOWL

The waterfowl population fluctuated as birds left for Mexico and others came in from points north. Hunters enjoyed their best shooting in the last two weeks of the hunting season, as the birds were held up north earlier in the season by mild weather. The peak of abundance was reached during December and January.

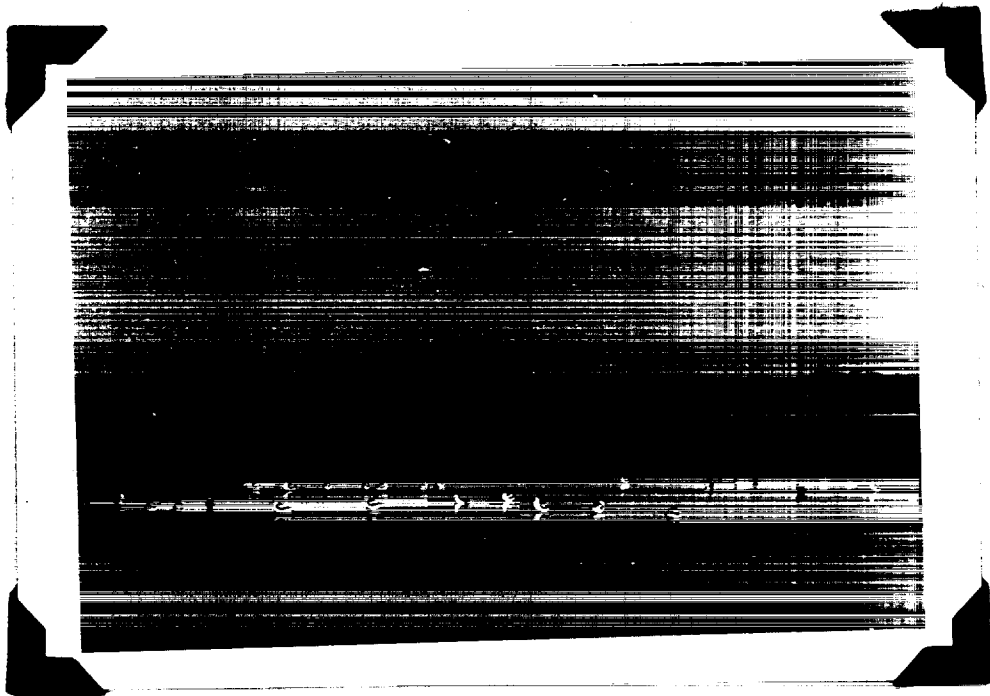
Waterfowl species observed during the period covered in this report included:

Mallard, gadwall, European widgeon, baldpate, American pintail, green-winged teal, cinnamon teal, shoveler, redhead, canvasback, greater scaup, lesser scaup, buffle-head, ruddy duck, Canada goose, cackling goose, snow goose, white-fronted goose, and whistling swan.

Although there is considerable natural food for waterfowl on or near the Refuge, ducks visited the cultivated fields in large numbers and complaints by farmers were numerous. Most of the damage suffered was in the young alfalfa and newly-sown grain fields in the vicinity of the State Game Refuge. Ducks left this State Refuge by the thousands at sundown to feed in the fields nearby. Farmers estimate that losses run into several thousands of dollars. They, and the local hunters, advocate a later season, starting about November 15 and ending about December 31.



Long-billed dowitchers in flight
over Section #2, R. 12 E., T. 12 S.



Flock of avocets at shallow water flats
near Mullet Island.

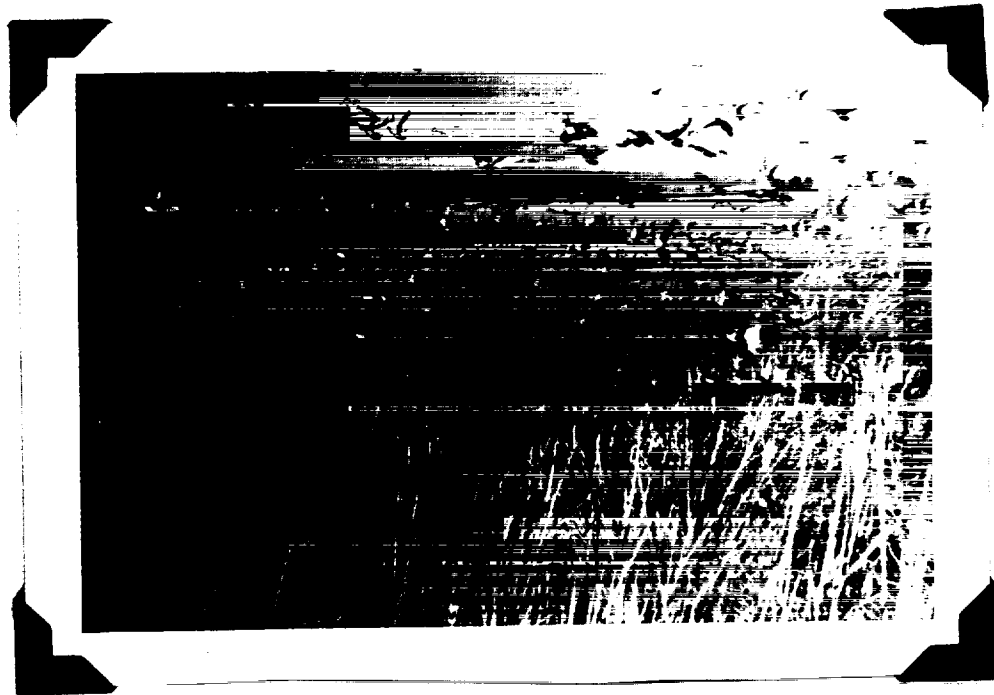
Conditions favoring an outbreak of botulism developed in early November, and by the 10th a number of sick birds were observed. Although duck sickness was noticed on the Refuge to some degree, an area in the vicinity of Mullet Island adjoining the Refuge, was hit worst. Here the water is shallow, sluggish, and alkaline, with considerable rotting vegetation and little chance for oxygenation, aeration, and mixing. November, for the most part, was mild and the water temperature high. The peak of sickness was reached during the last of this month. More birds were found at this time than earlier, perhaps because of the influx of ducks migrating from the North.

The pintail, being the most abundant species of duck on the area, was the most affected. The shoveler was next, followed by green-winged teal, cinnamon teal, and then the ruddy. Other species of ducks picked up in small numbers were baldpate, greater and lesser scaup, and buffle-head. Non-game species of birds picked up include western grebe, eared grebe, avocet, ring-billed gull, herring gull, western sandpiper and least sandpiper.

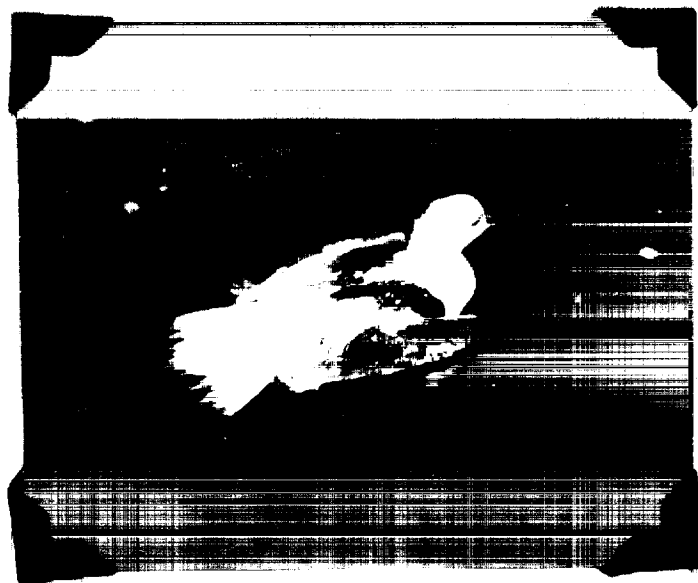
Sick ducks were picked up by one's wading in the muck and water after them, where possible. A rowboat was drawn along to carry the ducks. In deeper water where it was necessary to row, a springer water spaniel was used to good advantage with the more lively of the sick birds.

pens

the ducks were carried to retaining pens held on private property with
since no favorable place could be found for them.



Approximately 200,000 baldpates spend the Winter in Imperial Valley.



Sick avocet. Besides waterfowl, 7 species of non-game birds were affected by toxin from the botulism organism.

the cooperation of the owner, at no cost to the Bureau. 350 ducks were given treatment and about 76% of them recovered. About 400 carcasses were picked up and disposed. It is estimated that 3000 birds were lost from botulism this year. This is a small number when compared with with some of the estimated figures of past outbreaks in the Salton Sea area.

A few study specimens were made up from skins of birds that had died of botulism. It is hoped, that eventually the Refuge may have a collection representative of the birdlife of this region.

B. UPLAND GAME BIRDS

The very unusual September rains made the weed seeds, and other seeds so important in the diet of the dove and quail, germinate. It is thought that this condition caused the doves to leave for dryer country, and created a scarcity in September and part of October. Doves were abundant in the dryer desert country to the east, but did not appear in numbers in the farming sections, as usual, until the last of October and during November. Quail were scattered in the Valley because of the abundant water available.

Little Brown cranes have been staying on the Refuge and moving out for daylight-feeding in nearby open fields.

1000 pen reared pheasants were brought down from the State Game Farm at Chino, California, and released in the Imperial Valley.

Drake American pintail cured of duck-sickness and ready to be released.



The California State Fish and Game Department released 1000 ring-necked pheasants in Imperial Valley this Winter.

C. BIRD LIST

Birds observed on the Salton Sea Migratory Waterfowl Refuge and the vicinity during the months covered in this report are listed as follows;

Eared grebe	American pintail
Western grebe	Green-winged teal
Pied-billed grebe	Cinnamon teal
Farallon cormorant	Shoveler
Great blue heron	Redhead
American egret	Canvasback
Brewster's egret	Greater scaup
Black-crowned night heron	Lesser scaup
American bittern	Buffle-head
Little brown crane	Ruddy duck
White-faced glossy ibis	Turkey vulture
American merganser	Western red-tailed hawk
Whistling swan	Ferruginous roughleg
Common Canada goose	Golden eagle
Cackling goose	Marsh hawk
White-fronted goose	Cooper's hawk
Snow goose	Duck hawk
Common mallard	Prairie falcon
Gadwall	Sparrow hawk
European widgeon	Gambel quail
Baldpate	Chinese ring-necked pheasant

Yuma rail	Western belted kingfisher
Virginia rail	Red-shafted flicker
Sora	Gila woodpecker
American coot	Vermilion flycatcher
Killdeer	Say's phoebe
Spotted sandpiper	Black phoebe
Long-billed curlew	Horned lark
Greater yellow-legs	Violet-green swallow
Western willet	Tree swallow
Least sandpiper	Barn swallow
Wilson snipe	Cliff swallow
Long-billed dowitcher	Verdin
Western sandpiper	Raven
Marbled godwit	Tule wren
Avocet	Mockingbird
Black-necked stilt	Sage thrasher
California gull	Chrissal thrasher
Ring-billed gull	Leconte thrasher
Herring gull	Mountain bluebird
Forster's tern	Gnatcatcher
Mourning dove	Western ruby-crowned kinglet
Great horned owl	Pipit
Western burrowing owl	Phainopepla
Short-eared owl	Shrike
Road-runner	Audubon's warbler
Texas nighthawk	Western yellowthroat

Western meadowlark	Willow finch
Yellow-headed blackbird	Green-backed goldfinch
Red-wing	Savannah sparrow
Tri-colored red-wing	Lark sparrow
Brewer's blackbird	Sage sparrow
Lark bunting	Gambel's sparrow
English sparrow	Brewer's sparrow
Common house finch	Song sparrow

D. MAMMALS

Musk rats are fairly numerous on the Refuge, where they live in the ditch banks and along the rivers. Their fur is considered low grade, and the few local trappers average only \$0.35 each for the pelts. They are known as "sand rats".

Coons are abundant on the Refuge and in the vicinity. Their well defined trails are very numerous. Coon tracks around partly-eaten duck carcasses indicate a desire for meat in their diet.



"Lost Hour's Ranch" located on Section #2,
R. 12 S., T. 12 S., is being flooded with water
flowing from the New River. The entire Section
is now good duck area.



Scirpus campestris. Where given a chance,
"nut grass" grows profusely.

III

REFUGE MAINTENANCE AND DEVELOPMENT

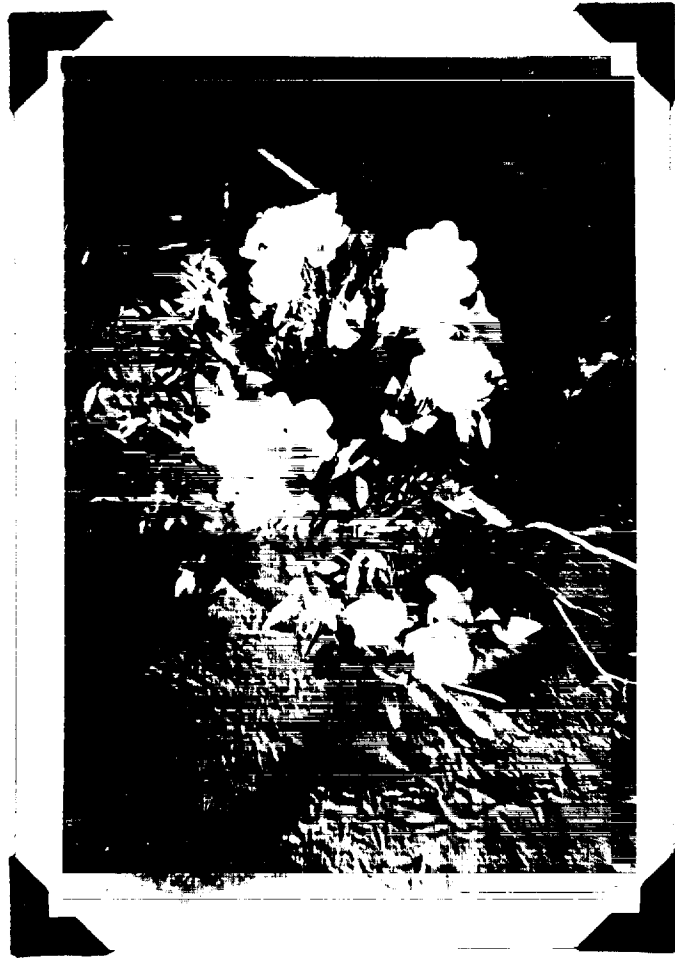
Previous to the hunting season, additional boundary posters were placed in areas where hunters were expected to be most numerous.

The Salton Sea Refuge, now almost completely under water, has no land within the present area upon which refuge development might be made. Since the Imperial Irrigation District owns most of the land adjoining the present Refuge, it is hoped some plan can be worked out with them whereby the Bureau of Biological Survey will get jurisdiction over favorable areas lying outside the present high water mark. Until we do get lands above the water level, little can be done toward development on the Salton Sea Refuge.

ESTIMATE OF WATERFOWL AT PEAK IN JANUARY 1940

<u>Ducks</u>		<u>Geese and Swans</u>	
Common mallard	50	Snow	20,000
Gadwall	100	White-fronted	300
Baldpate	5,000	Canada	500
Green-winged teal	8,000	Cackling	25
		Whistling swan	2
Cinnamon teal	1,500		
Shoveler	3,000		
American pintail	15,000		
Redhead	1,000		
Canvasback	1,000		
Greater scaup	100		
*Lesser scaup	1,000		
Buffle-head	50		
Ruddy duck	1,000		

*A rough estimate of 15,000 scaups was made on December 29th when rafts of these birds were observed on the Salton Sea Refuge.



Primrose. Note bird tracks. Lark buntings, pipits, and thrashers feed on the insects and larvae to be found on these plants.



Primrose at Sandy Beach.

IV

PUBLIC RELATIONSA. RECREATIONAL USES

The Salton Sea Refuge and immediate vicinity hold a great interest for bird lovers and conservationists because of the many species of birds that frequent the area or are resident here, and because of several unusual birds, among which are the white pelican, fulvous tree duck, white-faced glossy ibis, little brown crane, and Yuma rail.

Among the visitors to the Refuge since October 9th were the following:

Mr. Rudolph Dieffenbach, Chief of Division of Land Acquisition, spent October 9th and 10th looking over land recommended for addition to present Refuge.

(check) Mr. Luther J. Goldman, October 25-28th; annual check up of waterfowl in this region.

Mr. and Mrs. Lawson Brainard, of Park Service, stationed at Lava Beds National Monument, California, November 2; short visit.

Mr. Albert A. Traub, ^{Frank. Control} Bureau of Biological Survey, November 4 and January 6; official business.

Mr. Ben A. Hundley, ^{P.O. Admin. Officer} November 19; official visit. ✓

Mr. James Murdock, Glendale, California, December
10, 23, and 24; bird photographer.

Mr. and Mrs Arther E. Hutchinson, La Jolla, California
and Philadelphia, Pennsylvania, January 15; bird lovers.

Mr.
Lewis W. Walker and Mr. J. Elton Green, January 25 and 26;
bird collectors of the staff of the San Diego Museum.



"Ripper" brings 'em in dead or alive.

