

ANNUAL REPORT

SALTON SEA MIGRATORY WATERFOWL REFUGE

BRAWLEY, CALIFORNIA

Fiscal year 1941

Submitted by

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Jr. Refuge Manager

Note: The author was not present on the Salton Sea Refuge during the entire fiscal year, having spent the months of July, August, September, 1940, and February 17 to May 1, and June 1941, elsewhere.

SUMMARY OF HIGHLIGHTS AT SALTON SEA NATIONAL WILDLIFE REFUGE  
DURING FISCAL YEAR 1941

I. Wildlife

A. Bird List

Birds observed on or in the vicinity of the Salton Sea Refuge not included in the 1940 report are as followsr

Brown pelican	Western sandpiper
Brewster egret	Forster tern
White-winged sooter	Caspian tern
American merganser	Costa hummingbird
American eagle	Lewis woodpecker
American osprey	Bewick wren
Blaak-bellied plover	Western bluebird
Blaak turnstone	Golden-crowned kinglet
Lesser yellowlegs	Green-tailed towee
Red-breasted merganser	Sierra junco

B. Mammal List

One more mammal has been found on the small amount of dry land left within the refuge boundaries. This animal, a pocket mouse (Perognathus penicillatus angustirostris),

was found on one of the little islands off the southwest shore of the Salton Sea.

### C. Migration and Fluctuation

Large numbers of ducks did not begin to arrive until October 13th, and the main flight of ducks that winter on the Salton Sea area did not arrive until just after the Armistice Day cold snap in the states to the north. It is estimated that at least 100,000 ducks and geese were using the refuge area during the peak of abundance in the latter part of January.

In general the duck numbers were noticeably increased over last fiscal year. The lesser snow goose, as usual, was the most abundant of the geese on the refuge. About 8,000 of these birds were present. 300 Canada geese were counted on the area during last winter, as compared to 500 estimated during the winter of 1939-1940. About 400 white fronted geese were also present.

Shorebirds showed a slight increase in numbers on and in the vicinity of the Salton Sea Refuge. Approximately 400 migrant yellowlegs were observed feeding in a newly irrigated field September 29; numbers of these birds

were not noticeably increased. However, marbled godwits and black-bellied plover showed an increase over the previous year. Approximately 300 black-bellied plover were seen feeding in a wet pasture on December 21. Black-necked stilts and avocets are present on the refuge during the entire year, but are not abundant in the spring.

Nests of the black-necked stilts were discovered on the refuge for the first time on May 18.

It is not uncommon to see 200 or more avocets at one time on the shallow-water silt flats along the shoreline. Long-billed dowitchers become especially gregarious too, and sometimes as many as 400 of these birds can be found feeding together in a rather tight flock.

Fifty-six whistling swans visited Imperial Valley on December 7. This is the largest number of swans that has ever been seen in Imperial Valley, according to local people.

On December 22nd the Christmas Bird Census for "Bird Lore" was again taken. Eighty-six different species and 213,742 individuals were observed.

D, Use made Of Nesting Islands

**The** gull-billed terns, Caspian terns, and white pelicans again were active with their nesting on the islands in the southwest corner of the Salton Sea . A few k w Mourning doves nested on the islands also.

E. Special Problems

Considerable help was given to local farmers in the control of duck damage to their alfalfa, grain, and rice fields. Several kinds of scaring devices were used. Among these were aerial bombs, firecrackers, tracer bullets, and a revolving spotlight.

Control of waterfowl was necessary on 500 acres of domestic rice near Imperial California last winter. Tracer bullets and aerial bombs were used to good advantage in this case. 7,000 acres has now been planted in rice and it is expected considerable control will be necessary when the ducks and geese move down from the north next fall and winter.

#### IV. Public Relations

##### A. Law Enforcement

The refuge manager cooperated with the California State Game Officers and Mr. Alvin W. Elder, Game Management Agent, in law enforcement work. No cases were made within the refuge boundaries.

##### B. Visitors

The Salton Sea National Wildlife Refuge and vicinity continued to be a popular haven for bird enthusiasts. Winter vacationists in Southern California, as well as resident bird students and photographers, made numerous trips to the Salton Sea area.

During May and June photographers were given fine opportunities for photographing the nesting white pelicans and gull-billed terns.

## II. Water Conditions

The Imperial Irrigation District has completed a new channel approximately four miles long on the lower part of the Alamo River, so that the Alamo River now empties into the Salton Sea over Section #8, T.11 S., R. 13 E. (Last year the river emptied over a large part of Section #21, T.11 S., R. 13 E. on its way to the Sea). It is necessary to shift frequently the lower course of flow of both the New and the Alamo Rivers to cope successfully with the heavy silt charges at their mouths. The New River is unchanged over last year.

According to information received from the Imperial Irrigation District, the Salton Sea has raised seven feet in the last twenty years.

Following are monthly gauge readings of the Salton Sea from July 1, 1940 to June 2, 1941:

July 1, 1940	242.3
August 1, 1940	242.8
September 3, 1940	243.0
October 1, 1940	243.2
November 1, 1940	243.3
December 2, 1940	243.1
January 2, 1941	242.5

February 1, 1941	242.0
February 28, 1941	241.6
March 15, 1941	241.2
April 1, 1941	241.0
May 1, 1941	241.2
May 17, 1941	241.1
June 2, 1941	241.3

All elevations are below sea level, and the gauge was set from a U.S.G.S. bench mark at Fig Tree John's Spring, the elevation of which is -196.25 feet.

(Readings acquired from I. Irrigation Dist.)

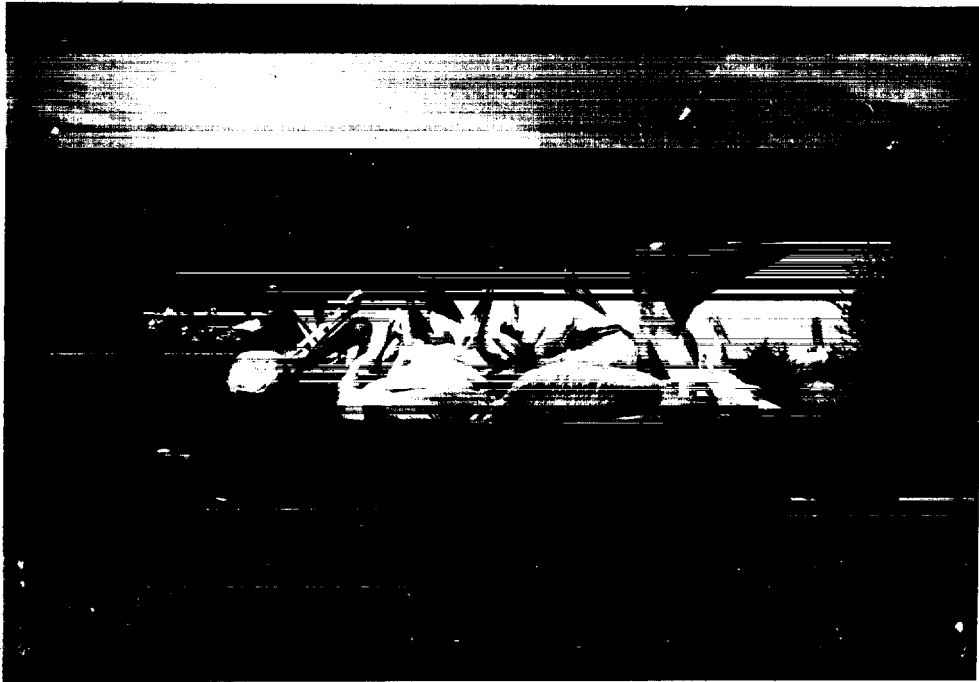
### III. Development and Administration

Development of the refuge is pending the acquisition of additional lands, since the present refuge is nearly completely inundated. Maintenance work included regular patrol of the refuge area, replacements of rusted boundary markers and rotted posts, and the keeping of refuge property in good condition.

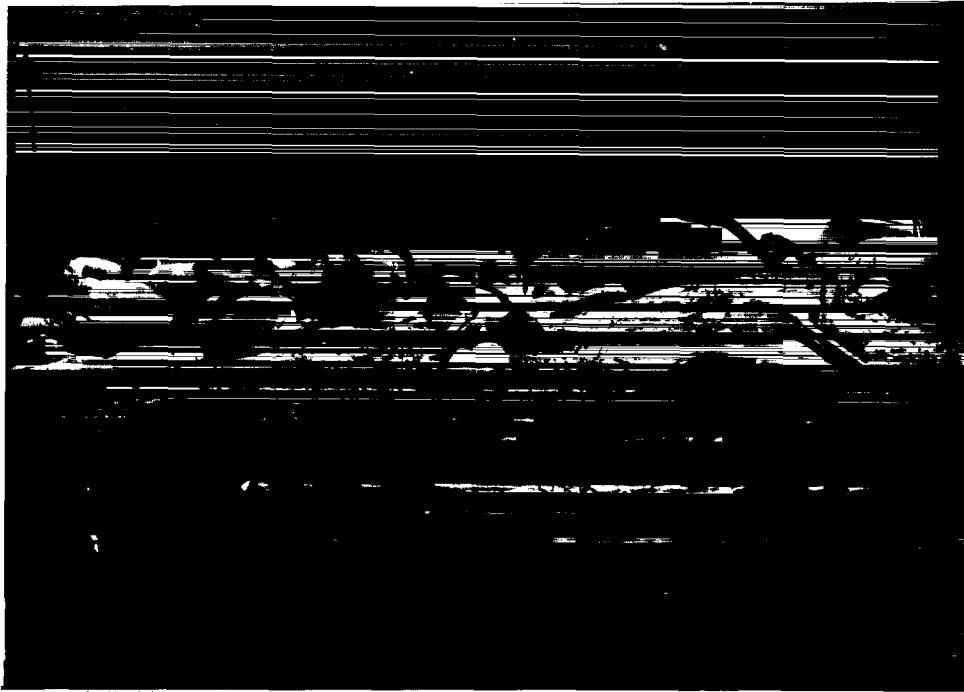




Close up of white pelicans taken from blind  
with telephoto lens. Picture taken May 14, 1941.



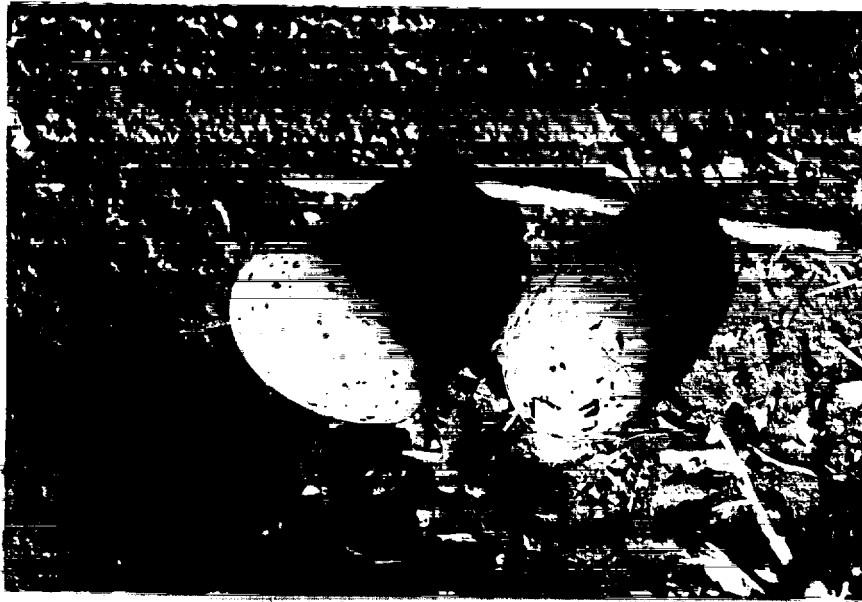
White pelicans covering eggs and newly hatched  
young. Sometimes eggs rolled from nests get into  
deep sand and are deserted. Picture taken May 26, 1941.



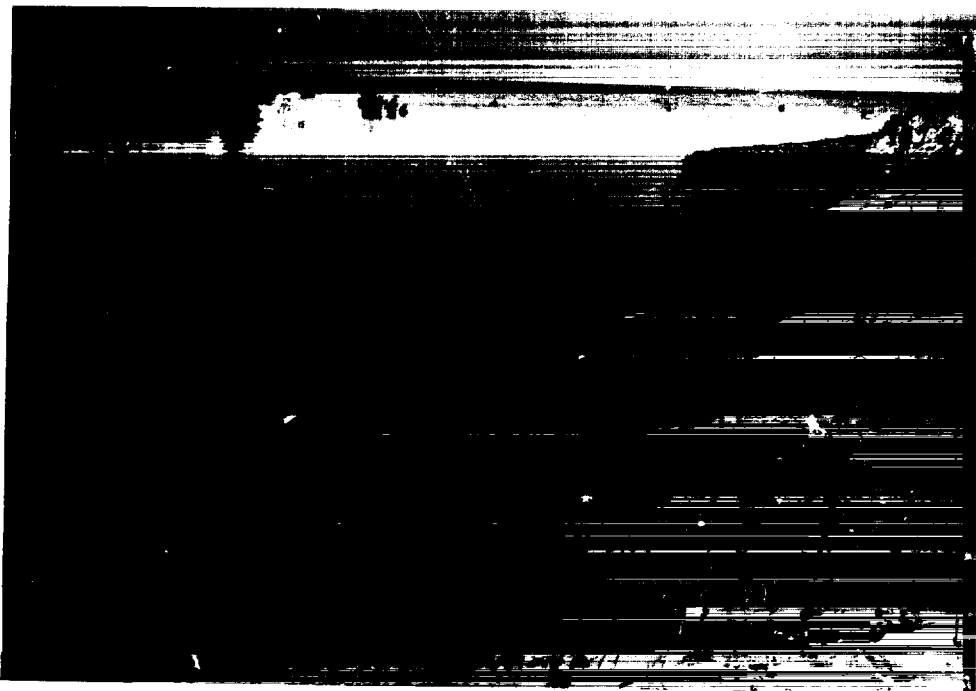
White pelicans incubating eggs on one of the nesting islands. Picture taken May 7, 1941.



Ring-billed gulls, bonaparte gulls, and black terns in field near the Salton Sea Refuge. Picture taken May 1, 1941.



Caspian tern eggs. Note nesting material of fish bones and bits of sticks. A small colony nests on the islands off Sandy Beach each year. Picture taken May 8, 1941.



Mouth of new channel of the Alamo River where it reaches the Salton Sea. Picture taken May 20, 1941.