

TABLE OF CONTENTS

I. GENERAL - - - - - 1

- A. Weather Conditions
- B. Water Conditions

II. WILDLIFE - - - - - 2-4

- A. Waterfowl
  - 1. Population and Behavior
  - 2. Nesting
  - 3. Botulism
- B. Other Birds
  - 1. Shorebirds
  - 2. Terns and Pelicans
  - 3. New Record
  - 4. Banding Activity
- C. Upland-game Birds
  - 1. White-winged doves
- D. Fish
  - 1. Mallet

VII. OTHER ITEMS - - - - - 4

- A. General

MEMORATIVE REPORT

SALTON SEA NATIONAL WILDLIFE REFUGE

BRAWLEY, CALIFORNIA

May, 1940

Submitted by

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Jr. Refuge Manager

Note: The author was not present at the Salton Sea Refuge during June and July of this quarter, having been transferred to Parker, Arizona, on June 1, for the summer months. Records and data are therefore necessarily incomplete for the remainder of the quarter.

QUARTERLY REPORT

SECTION 1  
WEATHER

A. Weather Conditions, May, 1940, was only ordinary in that it was hot and dry as usual but the occurrence of a severe earthquake, on the evening of May 18, was both unusual and destructive. Nine lives were lost and thousands of dollars of damage done to property. The business district of Brawley was left in ruins. 80% of the business houses were condemned and are now in the process of being rebuilt.

Following is given the weather for the month of May:

Highest temp.-----110°	Average high-----100°	Precipitation-None
Lowest temp.----- 54°	Average low-----64°	No days cloudy

Readings were compiled from reports made at El Centro, California. The Refuge area is about -197 feet lower than El Centro and higher readings are to be expected. Much higher humidity is found in the Sea area.

B. Water Conditions. The tumbler caused a number of large breaks in the canal system of the Imperial Irrigation District so that water for irrigation purposes was shut off at the head-gates on the Colorado River for several days. This made no lasting difference to the level of the Salton Sea, for although no water flowed into the Sea for a time, farmers clamored for the maximum amount when the breaches were repaired and in a short time the sea level was back to normal. There was little difference in the May gauge reading which was -241.7 on the 1st of the month to -241.8 for the last reading on May 24.

## II. WILDLIFE

### A. Waterfowl.

1. Population and Behavior. Despite the fact that the weather was hot during May, and that the majority of the waterfowl had long since gone north, a number of ducks persisted in staying around. They were mostly green-winged teal, cinnamon teal, shoveler, redhead, canvasback, and ruddy ducks. Although it is expected some of these were non-brooders, some were evidently mated. The ruddy is the most numerous of the ducks that stay through May. Since the Refuge manager left the Refuge at the end of May, their habits and movements during the later Spring and Summer months could not be ascertained.

2. Nesting. No ducks, other than the fulvous tree ducks and semidomesticated mallards, were observed nesting in the Imperial Valley. It is reported that teal (probably cinnamon teal) have nested locally.

3. Botulism. Although conditions appeared favorable for duck-sickness during this month, only a few cases were noted. Since the bulk of the waterfowl population had gone north, a natural check was thereby furnished (because the subject of the effect was thus removed from the cause.).

### B. Other Birds

1. Shorebirds. The Salton Sea area is attractive to numerous kinds of shorebirds which include the following seen during May: White-faced glossy ibis, Wilson phalarope, avocet, black-necked stilt, long-billed dowitcher, least sandpiper, western sandpiper, Sanderling, marbled godwit, yellowlegs, western willet, spotted sandpiper, long-billed curlew, Hudsonian curlew, killdeer, semipalmated plover, snowy plover.

2. Terns and Pelicans. The little natural islands in the southwest corner of the Refuge were the scene of considerable nesting activity for the gull-billed terns, Caspian terns, and the white pelicans, during May. Since there are no roads into this area, and no trespassing is allowed, the terns and pelicans brought forth their offspring in comparative safety, with the exception of damage by earthquakes of May 18 and those that followed. The islands, though not directly over the new San Jacinta Fault line, received some shaking, and a few parents whose eggs were laid in slight depressions and on little slopes found them several feet below the shallow nests. No damage was done to Refuge property other than the breaking off of overhanging points of earth on the nesting islands.

It was estimated that 1500 pelicans were occupying the nesting islands in 5 different sites. Gull-billed terns and Caspian terns are nesting on the same islands with the white pelicans in some cases. Caspian tern nests were 36 in number as compared to 17 for last nesting season. A rough estimate of 500 gull-billed terns for the total population was made. The pelican eggs had not cracked by May 30, nor those of the Caspian terns, but the gull-billed terns' nests held juveniles as early as May 15.

3. New Record. The least tern, observed by the refuge manager for the first time on the Salton Sea Refuge May 31, brings the total number of terns using the area to four. The other three are the Forster, gull-billed, and Caspian terns.

4. Banding Activity. Mr. Harold M. Hill of Redlands, California received a permit to band birds on the Refuge. He used this privilege in banding terns and pelicans at the nesting islands.

C. Upland-game Birds

1. White-winged Dove. A few white-winged doves occupy the Imperial Valley during the Summer. The first arrivals this year were noted on May 2.

D. Fish

1. Mullet. The high temperature of the Salton Sea in the ~~Summer~~ months and its high saline content are at least two important factors controlling the variety of fishlife in the Sea. The one species that thrives in apparently good numbers is the mullet. An effort to introduce striped bass several years ago has evidently met with failure as none of this species has been caught or seen since.

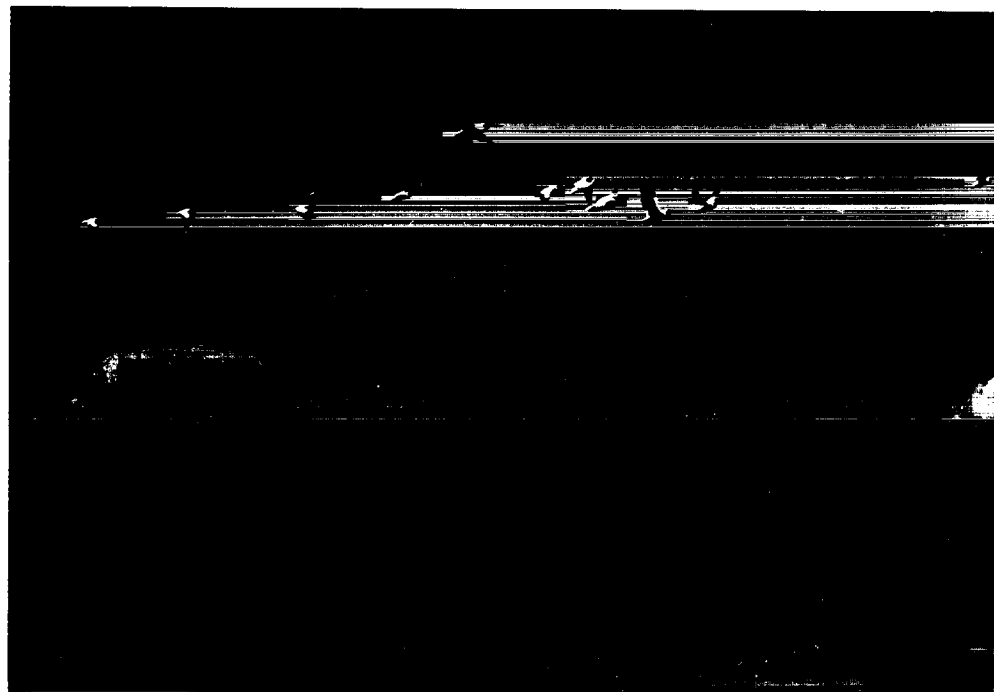
VII. Other Items

A. General

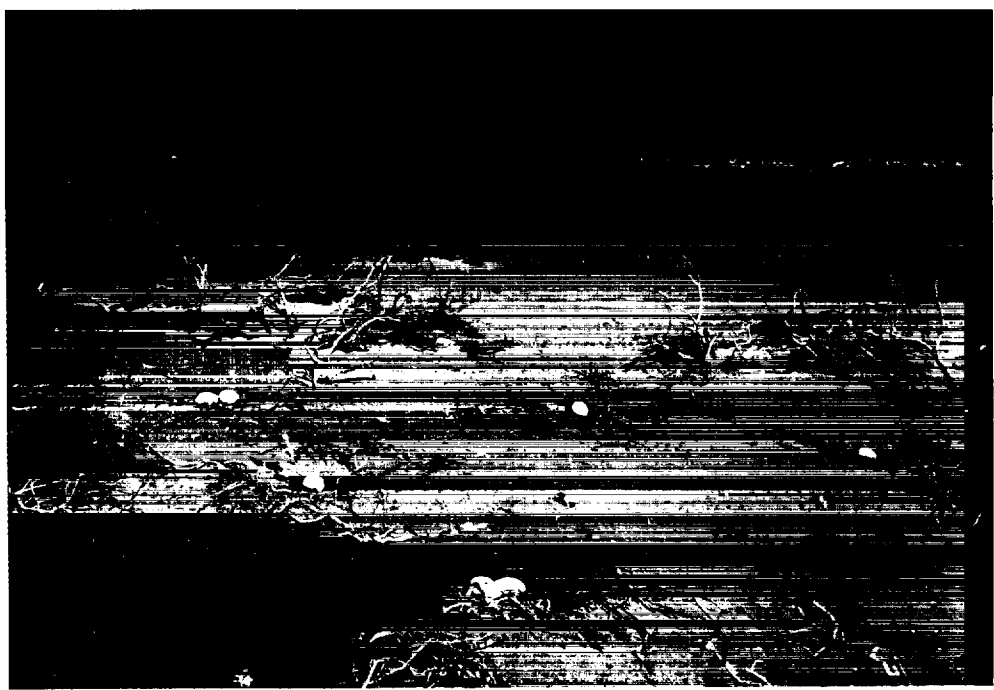
A 2.5 horsepower Johnson Seahorse motor was acquired for use on the Salton Sea Refuge on May 14. This motor will be used on the Refuge rowboat, and will greatly facilitate patrol and maintenance work.



A portrait of Mr. Western Grebe.  
Picture taken May 18, 1940 Roll #1, Exp. #1

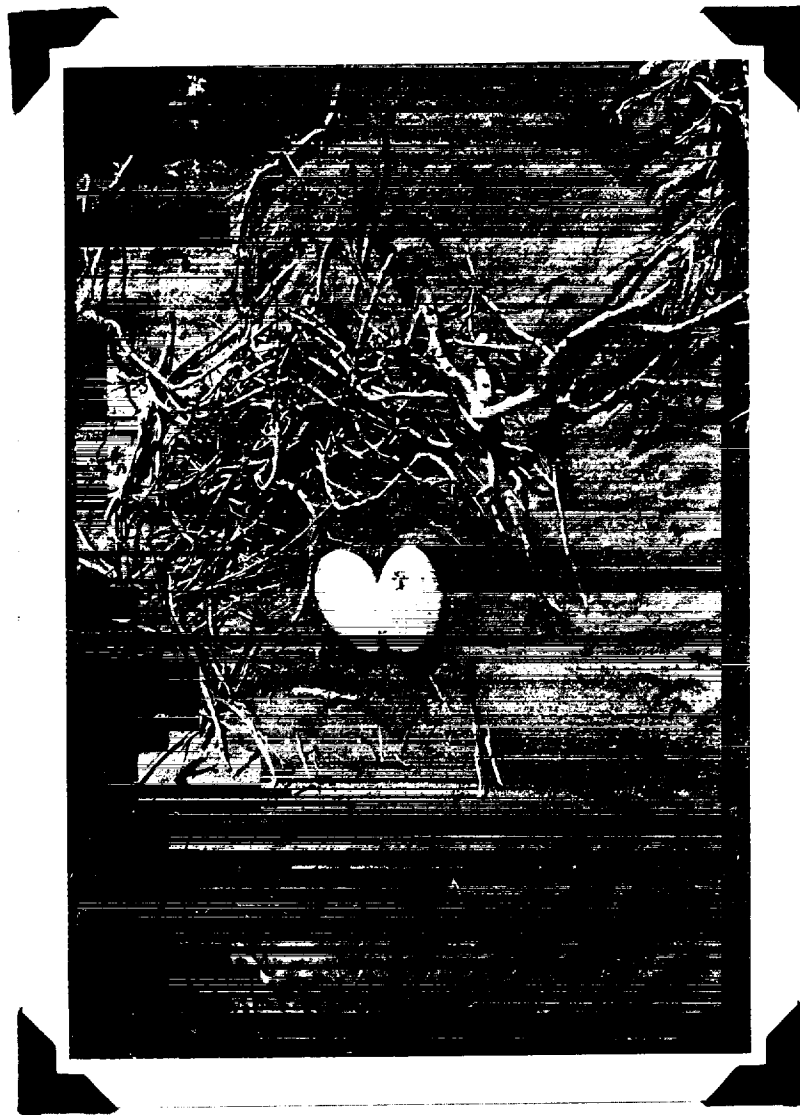


White pelicans flap awhile and coast awhile  
over Salton Sea Refuge. Picture taken May 18, 1940.  
Roll #1, Exp. #3



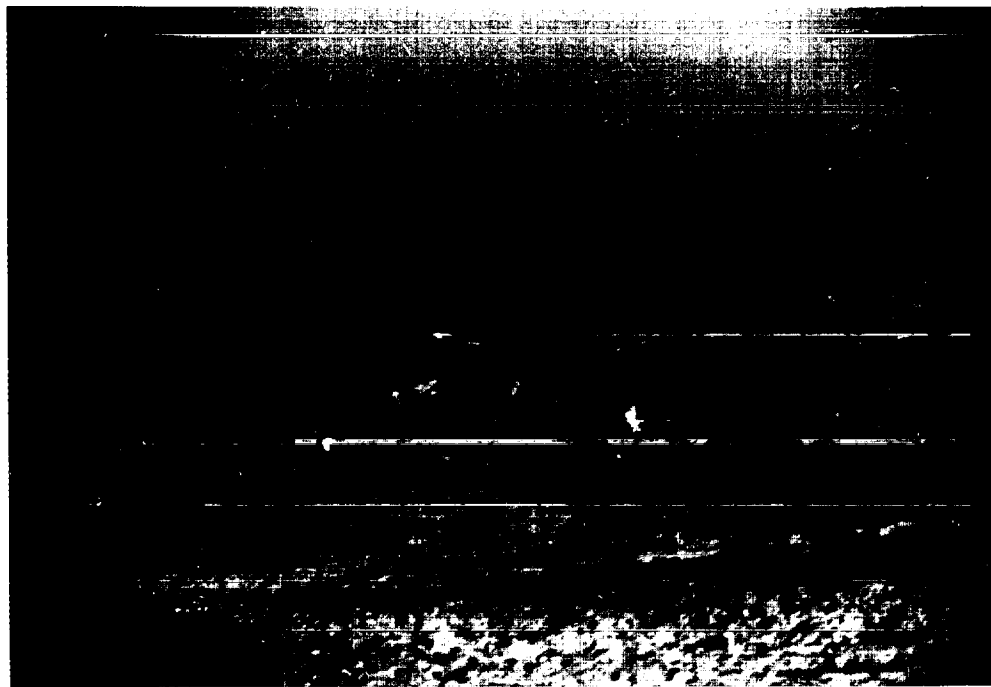
A few nests on one of the five nesting sites  
occupied by white pelicans. Picture taken May 18,  
1940 Roll #1, Exp. #5



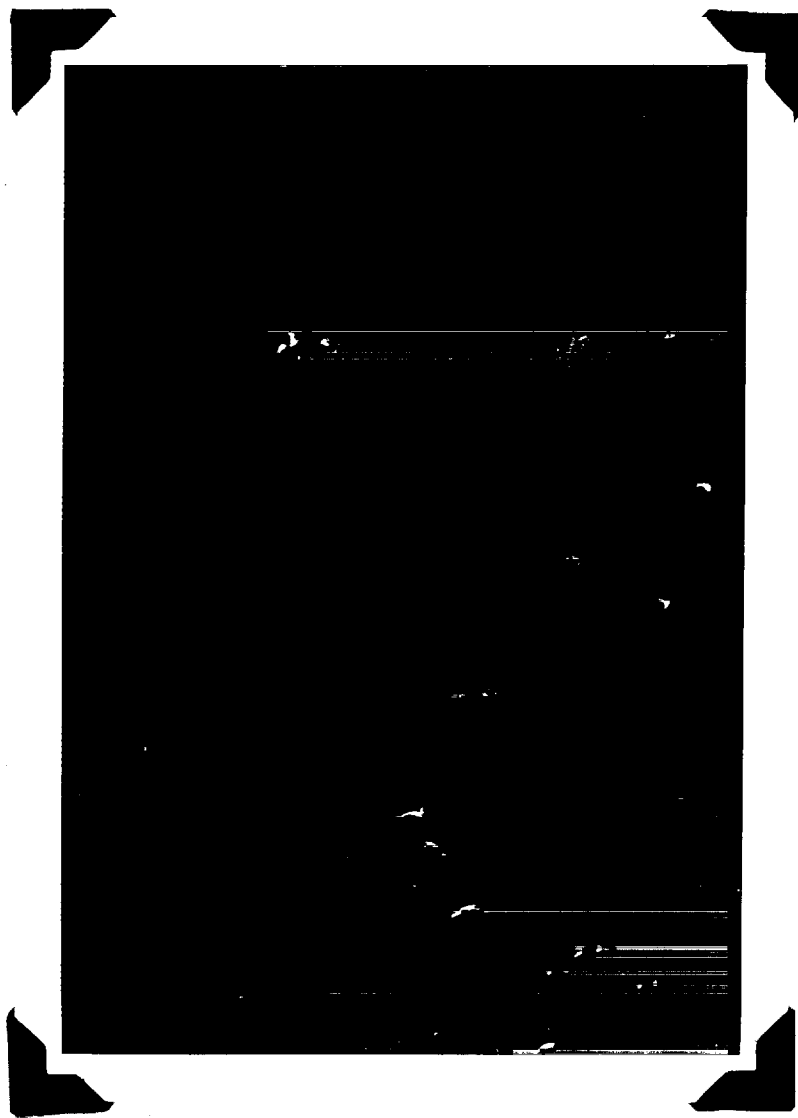


Typical white pelican nest on nesting island in southwest corner of Salton Sea Refuge. Original nesting material does not support the eggs, in most cases. Picture taken May 31, 1940. Roll #2, Exp. #4.

Western grebe, awkward on land from his neck back. His bill thrust is faster than man's hand movement. Note swimming position of legs. Picture taken on May 18, 1940. Roll 31, Exp. 22



Gull-billed terns use nesting islands. (3 cover eggs from heat of sun) Picture taken May 31, 1940 Roll 33, Exp. 17



White pelicans, Caspian terns, and  
gull-billed terns circling over nesting islands.  
Picture taken May 18, 1940. Roll #1, Exp. #10