

20
SALTON SEA NATIONAL WILDLIFE REFUGE

47
AND

35
WATERFOWL DEVELOPMENT AREA

XXXXXXXXXXXXXXXXXXXX

NARRATIVE REPORT

MAY, JUNE, JULY, AUGUST, 1953

XXXXXXXXXXXXXXXXXXXX

UNITED STATES DEPARTMENT OF INTERIOR
FISH AND WILDLIFE SERVICE
BRAWLEY, CALIFORNIA

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Cover ROADRUNNER

REFUGEE PERSONNEL

Regular Personnel

EDWARD J. O'NEILL	Refuge Manager
EDDIE BRIDLER	Refuge Manager, Asst.
CLYDE W. STEWART	Foreman, Farm Operations
MICHAEL J. KART	Mechanic
JOHN C. RYN	Clerk-typist
JAMES W. HAMILTON	Dragline Operator
LEO E. GON	Tractor Operator
W. GARY FORD	Tractor Operator
MELVIN FORD	Tractor Operator
CHESLEY WILLIAMS	Tractor Operator
PAUL WILLIAMS	Tractor Operator
JOHN BARNES	Irrigator
JOHN BARNES	Irrigator
STEVENSON BARNES	Irrigator
MANUEL SANCHEZ	Irrigator
WILLIAM LINDEN	Irrigator (Resigned)
JULIO MENA	Irrigator

Temporary Personnel

JOHN A. HOFFMAN	Irrigator
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NARRATIVE REPORT

I GENERAL CONDITIONS

A. Weather Conditions

This spring was the windiest and coolest of any since records have been kept in the valley. On 14 days in May the wind averaged 15 miles an hour or better for the entire 24-hour day, and frequent gusts rose well above the 25 mile-an-hour mark. Windy springs are the rule here, but it was the consistency of the force of the winds which shattered all records.

Although these winds kept the temperature down and delayed the coming of the burning summer, they caused considerable damage by scratching melons, tossing windrows of hay, retarding the growth of young cotton plants to the extent that entire fields had to be replanted or thinned, and raising hob in general with agriculture.

The communities of Brawley and Westmorland were frequently covered with towering walls of dust, much to the dismay and despair of housewives.

Automobile travel to and from the valley was frequently harassed by sandstorms. On May 15 travel from Brawley to Indio was brought to a virtual halt as wind-whipped desert sands blasted the paint from automobiles and frosted windshields.

At 5:10 P.M. on June 12 Brawley and surrounding areas were sharply jolted by an earthquake which caused little physical damage but much shock to morale. Lights popped on all over Brawley, and people poured out of the local theaters on the double. The Brawley paper reported one casualty--a woman who made the mistake of falling down in front of the trampling herd in the theater as it headed for the exits. She suffered a sprained ankle before she could get going again. The switchboards at the local branch of the telephone office lit up like a pinball machine as anxious people inquired about relatives.

Stifling heat throughout July and August was the lot of the citizens of the valley, and as last year a number of citizens here and in the Mexicali Valley succumbed to heat prostration and sunstroke.

Following is the weather data for the period as taken from records of the El Centro Naval Air Station at El Centro, California.

<u>MONTH</u>	<u>AVERAGE MAXIMUM</u>	<u>AVERAGE MINIMUM</u>	<u>PRECIPITATION</u>	<u>DAYS OF WIND OVER 25 MPH</u>
May	86°	60°	0	7
June	101°	70°	0	1
July	104°	79°	Traces	0
August	106°	79°	0	1
Total <u>Traces</u>				

B. Precipitation and Water Conditions

No measurable precipitation fell during the period. In one instance during July refuge roads scarcely had the dust settled while Brawley, some 20 miles away, recorded a light shower.

Electric storms occurred almost nightly in surrounding hills in July and August.

Salton Sea continues its steady climb, rising 1.25 feet during the period July 1, 1952 to July 1, 1953. Water level dropped very little this summer, normally the time when evaporation exceeds the irrigation inflow.

Much of the rise, we think, reportedly caused by methods of irrigation of large cotton acreages grown in the valley since 1950; from an approximate 60 acres in 1950, the acreage of cotton has increased to 104,000 this year. The crop results in large amounts of run-off water during the summer months. Other factors contributing to the rise are increased need for irrigation water, additional enlargement and increased efficiency of drainage systems here and in Coachella Valley.

I.I.D. engineers expect a continued rise for a number of years. The rise however, is very difficult to estimate. They list the necessity for establishing drainage into the sea for 150,000 acres of land in Baja California, Mexico and the need to remove excess salts brought in from the Colorado River as reasons for the anticipated rise.

The District again denied that more water than necessary is diverted from the Colorado in order to establish river water rights and to generate additional electric power.

Below is a table showing the level of the Sea for the Period: May 31, 1952 thru July 1, 1953.

ELEVATION OF SALTON SEA

<u>1952</u>	<u>1953</u>	<u>1952</u> <u>Elevation</u>	<u>1953</u> <u>Elevation</u>
May, 31	Jan.	-236.95	- -
June 30	Feb. 28	-237.20	-236.20
Aug. 1	March 31	-237.25	-235.95
Sept. 2	April 30	-237.40	-235.90
Oct. 1	May	-237.45	- -
Oct. 31	June 1	-237.30	-236.00
Dec. 1	July 1	-237.15	-235.95
Dec. 31		-236.60	

G. Fires

No fires during the period.

II WILDLIFE

A. Migratory Birds

1. Population and Behavior

Most of the waterfowl migrated from the area by the beginning of the period. The population remained low during most of the hot summer months until the middle of August when the numbers of Ruddy Ducks, Cinnamon Teal and Pintails started to increase. Most of the birds were observed in the water areas within and adjacent to Unit I of the refuge although some Pintails were to be found in nearby leach fields. On August 26 an aerial survey of the Valley was made with Pilot-biologist Glahn in the Service plane No. 720. The result of waterfowl census checks are as follows:

WATERFOWL ON REFUGE
UNITS AND SALTWATER SEA

Ducks	1,800
Geese	535
	<u>5195</u>

WATERFOWL OUTSIDE OF
REFUGE (LEACH AREAS)

Ducks	3895
	<u>3895</u>

Total observed in Valley 9030

From the above figures it is evident that over half, 57%, of the ducks in the Valley were in and immediately adjacent to the refuge units at the time. We estimated that a total of 3080 acres of land were being leached throughout the Valley. These leach areas serve as fair substitutes for natural habitat.

Observations of other birds during the flight disclosed thousands of Black-necked Stilts inhabiting leach areas scattered throughout the Valley. Considerable numbers of other birds such as avocets, godwits, dowitchers, and Wood Ibis also glean their food from these areas.

A mere handful of ducks were seen on State areas most of which were dry or barren.

2. Geese and Swans

Geese also had left well before May although 3 Canada Geese, presumably cripples, were seen on July 21. On August 7, one White-fronted Goose was seen in company with a Canada Goose in the salt water area of Tract 6, Unit 1. These were presumed to be cripples. A Lesser Snow Goose led a merry chase through the "bonds" before being captured near Pumice Hill, on June 2. The bird later was able to fly from the pen at Headquarters and has not been seen since.

3. Ducks

Shovellers were the last species of any appreciable number to leave this spring. At the beginning of the period approximately 200 were here, but shortly thereafter numbers dwindled to but a few which departed before June. There seemed to be a loose form of commensalism displayed between individual Shovellers and the Wilson's Phalarope. One duck was usually accompanied by 4 to 5, sometimes more and sometimes less, of the smaller birds which spun about feeding on aquatic organisms turned up by the bill of the Shoveller as it swam ahead busily stirring the mud and water for greater items of food.

A small flock of 15-20 Redheads, mostly males, were seen throughout most of the summer, in that portion of sea water which has encroached upon the former fresh water Tract of the refuge west of Red Hill in Unit II.

A few Ruddy Ducks remained throughout the summer, and a few broods were seen; however, as these birds tended to remain in those water areas heavily overgrown with salt cedar, it is an all but impossible task to estimate population. About the middle of July the population increased steadily until a peak of 2,000 was reached during the first week in August. This number then declined until by September 1 only 150 were here.

The time of late summer influx of Pintails was similar in numbers with last years records. Three were observed on July 31; one week later the number had swelled to 200. After that the population jumped considerably until a peak figure of 7,000 was reached August 27. A week later this dropped to 4,000, although some of the birds spread out from the refuge to nearby leach fields. The build-up in mid-August and later decline coincides with the behavior of last year.

Gimmamon Teal arrived at about the same time as Pintails although the build-up was rather insignificant. A peak of 300 was reached in early August. Numbers dropped to 100 towards the end of the period.

A small number of (75) Green-winged Teal put in their appearance in late August as did 60 Baldpates and 15 Shovellers.

Fulvous Tree Ducks arrived May 5 when 4 were seen. They did not seem to be as abundant as last year although 113 were counted in on the leach field along Highway 99 midway between Westmorland and Vendol's Corner. On June 17 we located two nests, one containing 12 eggs and the other 14, while making a reconnaissance of the salt cedar-cattail marsh north of Unit I. A later visit revealed both nests destroyed with 17 eggs floating nearby. Another nest close by was part destroyed, and 7 broken eggs containing feathered embryos floated on the water in the immediate vicinity. As these nests were on the exposed southeast edge of the open water, the theory is held that high winds created wave action which washed over the nests. Broods were seen in mid and late August.

Banding operations began August 20 in Unit I, and by August 31, 1350 Pintails had been banded. A lone Fulvous Tree Duck and several North Phalaropes which entered the trap were also banded. Banding data disclosed a ratio of 6 Adult Males: 5 Immature Males: 1 Adult Female: 1.5 Immature Female.

3. Disease

Little sickness was noted outside of a sick sandpiper seen in Unit I August 12 and a sick, immature Snowy Egret, (which later died), picked up in the lower Pumice Unit of the State Public Shooting Grounds.

4. Water and Marsh Birds

On May 12 a trip was made to the Pelican nesting islands, along the southwest shore of the sea, to check on nesting of these birds. There were no birds to be seen in the vicinity, and an examination of the island revealed eggs smashed or addled. As this island has a maximum height above water of only two feet, we surmised that strong wind-whipped waves washed completely over the nests. A later check from the shore nearby on June 3, to determine if there was a re-nesting attempt, yielded a negative answer. We did note many Gull-billed Terns with nests.

On June 5 we conducted Roger T. Peterson, noted American ornithologist, and James Fisher, famous British ornithologist, to the island by boat. It was discovered that almost all of the eggs of the Gull-billed Terns were destroyed by having small holes picked in them. Only one Tern chick was found. A few Caspian Tern eggs were found, but most all were intact as were Stilt nests containing 3 to 5 eggs. A Laughing Gull nest with 2 eggs was found. Five decapitated Gull-billed Terns were also found. A careful scrutiny of the island yielded fresh coon tracks. It was concluded that "Brer Coon" killed the adults, and that Caspian Terns were responsible for destroying the eggs, (especially as the coon would not have been selective.) The remains of a number of Pelican eggs were also found. With Messrs. Peterson and Fisher we carefully surveyed every square yard of the tiny island. Data obtained is as follows.

Gull-Billed Tern

	<u>Nests</u>	<u>Adults</u>
One unbroken egg	31	Decapitated 5
One broken egg	82	
Two unbroken eggs	18	
Two eggs, one broken	10	
Two broken eggs	62	
Three unbroken eggs	1	
Three broken eggs	2	
Total.....	206	

Caspian Tern

	<u>Nests</u>
One unbroken egg	5
Two unbroken eggs	3
Two broken eggs *	1
Total.....	9

* Found out of nest.

One unidentified live young.

A visit was made to the heron-cormorant rookery at the delta of the New River on May 26 to band herons. Many of the Great Blue Herons eggs were hatched, and the young were mature. Most egrets, both American and Snowy, as well as the Black-crowned Night Herons, were still in the egg stage. Banding operations were difficult, it being necessary to drive the boat into dense thickets of dead Tamarix to reach the nests. Cane were useless as punt poles in the muddy bottom. A water depth of 5-6 ft. precluded any wading, and use of the motor was hampered considerably by underwater snags and growth of dead trees. In spite of this 2 Blue Herons, 6 Egrets, and 5 Black-crowned Night Herons were banded before rising winds and choppy waters forced us to head back. During the aerial census of August 26 it appeared that nesting was still going on, but strong winds and rough air did not permit a closer look. Approximately 300 nests made up the colony.

The first Wood Ibis was observed in the pond area of Unit I on June 6 and soon many "Old Cramas" were seen throughout much of the valley. A flock of 2,000 were observed in an irrigated field near Highway 111 south of Midland on August 14. The aerial count of August 26 turned up an estimated 5,000 birds. Preferred habitat on the Refuge seems to be the drain canals and ditches infested by carp. Some birds were seen with carp 10 to 12 inches long.

Avocets, present only in low numbers throughout much of the summer, jumped spectacularly the week of July 3 when at least 5,000 were recorded on the refuge.

Long-billed Dowitchers appeared July 31 when 150 were observed in Unit I. These little denizens of the marsh are now very common throughout the water areas of the valley.

Curlers, both Long-billed and Hudsonian, were seen in and near the refuge throughout the summer.

Five Semi-palmated Plovers and 3 Black-bellied Plovers appeared on the shores of the sea in the Middle Unit on August 3.

Black Terns were common throughout the summer, and an occasional Forrester's Tern was noted.

About 30 White-faced Glossy Ibis remained here for the summer.

As last summer, many Black-necked Stilts and Killdeer nested on the refuge and nearby areas. The former rival the Willet for vociferousness.

Thirty-one Willetts were seen near the mouth of Trifolium 13 Unit I July 31, but disappeared before the week was over.

7. Food and Cover

During June, widgeon grass, (Ruppia maritima) grew profusely over some 20 acres of sea water immediately west of Red Hill in Unit II and started to produce seed; however, with the coming of hot weather growth soon ceased and plants died or became dormant.

During August, we noticed scattered bunches of Elymus sp. growing in some of the drain canals, but growth was negligible.

One hundred and forty acres (140), tract 6 of Unit I, was seeded to wild millet, and at the time of this writing pintails, teal, and tree ducks are making use of the crop. Some cattails are also coming up in the tract and should furnish goose food this winter.

A good crop of cowpeas, Stromboscarpa, are producing and undoubtedly will furnish food for upland birds.

8. Upland Game Birds

1. Mourning Dove

By the beginning of the period nesting was in full swing. Mesquite and Athel trees proved to be the preferred arboreal nesting cover with salt cedar used but very little. Considerable ground nesting occurred and some nests were found in bare fields devoid of vegetation.

An attempt was made to determine nesting success of doves using an Athel grove in the north portion of Unit I, but owing to the press of other duties, it had to be given up. However, out of a total of 26 nests containing 2 eggs each, it appears that the average nesting success per nest is 1.2 birds. Ten of the nests produced two young able to fly; four contained one able to fly; while eggs and young in fourteen nests were destroyed either by the strong spring winds or other causes--(roadrunners (?)). Eleven other nests either destroyed before egg laying or else were excluded from the total of 26 because two weeks had elapsed from the time we found young and were able to revisit the nests. In the future it is hoped that time will allow a much more complete study since Imperial Valley is one of the better dove-producing areas in southern California. Little work has been done for this bird here, and like Topsy, they "jest grows".

The dove banding program also suffered from lack of time although 36 were banded, this includes 31 nestlings. This brings the number of banded doves this year to 328.

On June 4 a dead, immature bird was found north of Westmorland. Examination disclosed it had been shot.

A hunting season of 30 days encompassing all of September has been established for the Mourning and White-winged Doves for this year. The latter species is not too abundant here. Bag limit is 10 of each or in the aggregate. A considerable number of nestlings may suffer or perish this season.

2. Carroll's Quail

Few broods of quail were observed this summer, and it is not too uncommon to see pairs without young. A covey of three-week old birds was seen as late as August 28.

6. Other Birds

On July 2 several thousand Cliff Swallows were flying about the fields in Unit I. By July 25 their numbers increased to perhaps several million which were seen in Tract A of Unit I. A few Barn and Rough-winged Swallows were among them. The numbers declined slightly and on August 7 we saw but a few thousand. The next week we were able to see only a few.

A Western Kingbird egg was found in an Abert's Towhee nest with two towhee eggs. The later birds seemed a bit bewildered by this action and fussed about the nest with some dismay. A check of the nest a few days later revealed the nest intact but all three eggs gone. At Unit II Kingbirds nested in a refuge sign along K-Road, but temperatures apparently heated the metal framework to unbearable degrees resulting in no success.

Nests were found of the following species: Crissal Thrasher, Cactus Wren, Western Kingbird, Long-billed Marsh Wren, Roadrunner, Abert's Towhee, Texas Nighthawk, Meadow Lark, Hocking Bird, and Song Sparrow.

Western Wood Peckers were very abundant throughout June but were uncommon after mid-July.

On the afternoon of July 22 an event occurred which gives some indication of the heat to which this Valley is subjected during the summer. A roadrunner which had flown into the side of a pickup and became momentarily stunned was retrieved and banded before it was released, a picture was taken. After release, it ran to the top of one of the field borders where it stopped, clucking softly and jauntily jerking its tail. Endeavoring to get another picture, the assistant manager tried to draw near to the bird, but it dropped down to the foot of the contour and ran parallel along the base. The assistant manager kept pace for a few yards then ducked low and scuttled ahead of the bird a few yards and stopped near the top of the contour to face in the direction from which the bird was approaching.

At this time, the bird came to the top of the contour, but upon spying the man, dropped quickly to the bottom of the contour once more and started running along its base again with the assistant manager keeping pace. As before, the maneuver of the man to get the picture was unsuccessful. After four similar attempts, the bird, instead of dropping down on the far side of the contour descended to where the assistant manager was squatted with his back to the sun. It came directly to him, and he was forced to move backwards a few feet so he could keep the bird within minimum camera range. But the bird quickly ran to where he was squatted and stopped directly under him in his shadow with bill wide open panting. An attempt was made to grasp the bird with the intention of taking it to some shade, but then the bird ran around his right leg, and came underneath him again from the rear. After we took the picture of this scene, the man stood up and the bird scurried across the road to the shelter of some salt cedars. This bird, a resident of the Colorado Desert, one of the hottest parts of the world, saw fit to take shelter from the tortuous sun in the shade of man, an enemy.

D. Fur Animals

Cottontails are abundant now throughout the mesquite trees and atriplex growth bordering the canals and ditches in the Valley. The State has declared an open season starting September 1 and continuing to December 31. Bag limit....1 per day.

A coyote was observed a quarter of a mile north of headquarters by mechanic Kari on June 22. A short time later Tractor Operator Carl Ford also saw a lone coyote in the same general vicinity.

E. Fish

Personnel from the State Department of Fish and Game planted 3,500 Japanese littleneck clams, 20,000 Japanese seed oysters, and many southern California mussels and clams in the Salton Sea during the month of May. Vari-colored littleneck clams in larval stage are to furnish food for many fish (formerly planted). Within one week clams were reported to be dying, but mussels and oysters were "doing well".

During the month, large numbers of salt water fish, mainly orange-mouth white sea bass, were taken from the Gulf of California waters and planted in the sea. These fish are to be used as a control measure for the thousands of Blardiella White Sea Bass which have now multiplied to such numbers that they are exceeding the food supply and becoming stunted. On April 10 one sweep of a 100-foot net near Salton Sea Beach (Atomic Energy Area), yielded 10,000 of these fishes ranging in size from four and one-half to six inches in size, many of which were about to spawn. The over abundance of these small fish has made serious inroads upon the limited supply of the native marine pile worms.

Anchovies and anchovettas planted at the same time as the Biardiella bass are reported to be "thriving".

In the event that the Biardiella bass reach their expected size at maturity (18 pounds) and the other plantings succeed, the State plans to open the sea to fishing.

III REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Developments

1. Cultivated Crops

Due to operational obligations and funds on other more important farming projects, early (May-June) contour areas flooding and seeding to wild millet as in previous years was not undertaken until July and August.

Tract 8, Unit I was seeded early in the Fiscal year and most of the area produced good crop coverage. Tract 9, Unit I was reworked, tilled and flooded for continued leaching.

Tract II of Unit I was left dry until late fall when other work demanding the tractors will be less pressing.

Tracts A, B, 1 and 2 of Unit I was contoured, leveled and flooded for leaching.

All tracts in Unit I which were "grazed out" by waterfowl last winter were completely reworked. Only Tracts 26-27 were left unchanged where some 100 acres of dry, matured barley will remain until consumed this fall.

In Unit II all tracts were reworked, tilled and flooded for continued leaching or farming. Tracts 15-20 consumed most time and effort where steep headlands were cut lightly and material used to fill bad holes or low spots in the large field just south of the Alamo River.

Bragline work was continued in both units with ditch construction, cleaning, etc.

The subheadquarters area in Unit II was tiled with approximately 1,000 feet of 4" concrete drain tile.

During the period irrigators excavated concrete outlet boxes and cleaned weeds from some 3 miles of ditch and installed drops in contours on 480 acres of land.

By fall it is contemplated that in Unit I 560 acres will be flooded of which 160 acres will be wild millet or watergrass. Some 820 acres should be prepared for seeding to barley to provide winter green feed. Only about 100 acres of mature barley is available for early use.

In Unit II 80 acres will be leaching, 160 acres of Alfalfa will be available and approximately 900 acres ready for seeding to barley when weather permits.

IV ECONOMIC USES

A. Haying and Grazing

Due to infrequent high winds the new alfalfa crops survived poorly and yielded very little.

Under Special Use Permit SAL-25 Mr. John Sexton of Calipatria harvested 33.35 tons of alfalfa hay from Tracts 7-11, Unit II during the period June 24 to 30.

V PUBLIC RELATIONS

A. Recreational Uses

There are no recreational facilities on the refuge.

* * * *

B. Refuge Visitors

On May 10 Mr. Frank Bonham, biology teacher at Chula Vista High School, Chula Vista, California and his class of 20 students toured the refuge and were given a talk on the scope of Service and refuge activities.

Dr. and Mrs. Fisher of Holtville, California spent the day touring the refuge and taking pictures on June 16.

Mr. John Sexton, haying permittee, conferred with the refuge manager on June 20 re haying operations on the refuge.

On July 11 Messrs. Stuart and Phogley of the Standard Oil Company of California visited the refuge in relation to the matter of oil contracts.

During the period, a small number of other visitors toured the refuge.

C. Official Visitors

<u>Name</u>	<u>Date</u>	<u>Identification</u>	<u>Purpose</u>
Messers. Bruce and Eugene Cardiff	5/16	Bird Collectors	Contact and Visit
Mr. Roger T. Peterson	6/5	Ornithologist	Tour refuge and photography
Mr. James Fisher	6/5	British Ornithologist	" " "
Mr. George Barclay	6/6	Regional Refuge Supervisor, Reg. II	Contact
Mr. A. W. Elder	6/8	USFWS Game Agent Los Angeles	Headquarters visit
" " "	8/28	" " "	" " "

D. Refuge Participation

On June 10 the programs and policies of the Service was presented to approximately 85 members of the Brawley Rotary Club. Special emphasis was placed upon the role played by the Salton Sea National Wildlife Refuge in both the overall and local waterfowl management programs. Colored slides depicting refuge activities were presented. The program was well received and comments would indicate that a few citizens are interested in the functions of the refuge.

A similar talk was given on June 18 to 35 members of the Lions club at Imperial, California where we were the guest of Mr. Vanessa Jefferies, Administrative Officer, Imperial Irrigation District.

E. Violations

During the weekend of April 10-11 someone ripped open the tool boxes on three tractors and looted them of a wide variety of tools and grease guns. Throughout the period help was solicited from the F.B.I., County Sheriff and City Police Departments in the Valley with no success in recovering said tools.

Sixteen No. 2 traps on 30 feet of cable was found in tract 15 Unit II by Operator Leo Cox. Remains of some half dozen rabbits were found in the traps. The traps had been set out by persons unknown during the previous period to capture snow geese in the tall barley along the bank.

VI. OTHER ITEMS

I.I.D. officials reveal that one new claim and one supplementary claim for damages have been filed against the District. The Desert Beach Resort filed supplementary claim for \$10,000.00, and this brings the total amount of claims filed by this firm to \$37,000.00. The new claim of \$10,000 was filed by Mr. George H. Crosby of Duluth, Minnesota through his attorney in Indio. Only one, that of Balvert and Co., for \$50,000 is pending in court although claims totaling approximately \$20,000 have been filed.

* * * * *

While discussing alfalfa depredations of last winter with one of the local farmers, he declared that he had no complaint about the Baldpates, that is, no real complaint. It was these ****!!! Widgeons that cause all the damage!!!

* * * * *

A small group of Brawleyites were looking over the Red Hill area in Unit II in early May when one young girl found a piece of transitional obsidian and inquired as to its identity. He in turn explained that this particular stone had not been subjected to enough pressure and intense heat to convert it to the final glasslike stage (obsidian), she gravely informed a curious companion, "that the man sez this one hasn't been in Imperial Valley long enough."

* * * * *

Officials of the Pacific Telephone and Telegraph Co. these days are complaining about the 30,000 Texas Red Squirrels in the San Fernando Valley that chew through the lead sheathing of telephone cables, thereby allowing moisture to enter and interrupt service. Officials maintain that the "neurotic" squirrels are costing them about one dollar each because of the damage.

* * * * *

The State Department of Fish and Game collected \$20,400.00 from 990 game violators during the month of March, 1953. This is an increase of 52% over the same month last year. The steady upward trend in violations is claimed to be due to the increasing number of hunters and fishers taking to the outdoors.

On April 29, the California Assembly passed a resolution directing the Fish and Game Commission to cease issuing permits for trapping the giant California Condor, as there are only an estimated 60 of these birds now in existence. Officials of the San Diego Zoo had planned to cage some of the birds in an attempt to aid propagation by artificial means. These officials were successful in inducing the Andean Condor, which lays one egg every two years, to lay each year. As soon as the egg was laid, it was removed and placed in an incubator. The birds oftentimes laid another egg shortly thereafter.

* * * * *

On April 29, the California house, passed a bill which makes shooting the wild burro a misdemeanor. The animal will be on the protected list for the next two years. So it appears that the brays of the "desert canary" will continue to "ruffle the serenity of the Colorado and Mohave Deserts". It appears also that the horse - ~~donkey~~ donkey laugh is on the hunter.

* * * * *

An unsuccessful effort was made by the Brawley Chamber of Commerce to have Florence Chadwick, the well-known distance swimmer, attempt to swim the Salton Sea. Miss Chadwick declined their gracious and unselfish offer due to other obligations in Europe.

* * * * *

A bill designed to prohibit the state from taking farm lands for fish and game refuges unless authorized by the legislature was passed on May 20 by the State Senate and sent to the State Assembly for minor amendments. This action was the result of proposed condemnation of lands for the expansion of the state Gray Lodge Refuge in northern California. An editorial in the Marysville Democrat entitled "Ducks at Rice" declared that, "ducks are getting as scared in California as cows are in India".

* * * * *

The state continued the warm water fishery construction program at Ramer Lake, located between Brawley and Calipatria. The project, to cost approximately \$50,000 of Wildlife Conservation Board funds, calls for the construction of a levee around most of the lake and the building of inlet structures.

Other plans call for dividing the lake in two by an east-west levee following the natural contour, the deepening of the higher part to prevent encroachment of tules, and the construction of islands for hunters.

The lake is supposed to be filled sometime this winter, and will cover about 275 acres. State biologists say that owing to the alkalinity of water and the extreme warmth of same during the summer, the survival of game fish such as bass, catfish, crappie, bluegill, and sunfish are against the odds. The department is considering introduction of some as yet exotic species.

Carp also present a problem, and department biologists claim it will be impossible to entirely remove this species from the lake.

The Brawley News of July 25 quotes Chester Woodhull and Phil Douglas, state biologists as saying, "We are going to do everything possible to establish the best sport fishing possible in Ramer Lake. It will not attain the status of "good" warm water fishery, but we intend to do our best to make it satisfactory".

Through full agreement on the part of local "sportsmen" it has been decided to close the lake to waterfowl shooting this year. Shooting in all probability will be permitted in 1954.

* * * * *

Mr. Ed Harrison, a Los Angeles businessman and a director of the San Diego County Museum, and a Los Angeles film organization plan to create a wildlife film to be entitled "Song of the Land". The purpose of the film is to depict the forces of nature at work, the struggle for existence of the creatures of the wild, and the beauties of nature. There is not to be a single trace or indication of the presence of man in the film. All of the actors will be birds or mammals. The greatest task is to cut 450,000 feet of film to 10,800 feet so that the running time will be two hours instead of the estimated 69 hours and 20 minutes which would be needed to run all the footage on hand. Much of the sound will be dubbed in from recordings of animals and birds taken by Dr. William Fish of the Naval Testing Station at China Lake. Dr. Fish is reputed to be one of the foremost experts on such recordings, having been so successful in this work that Cornell University gave him a grant to enable him to continue this avocation.

Mr. Harrison, who took the film over a period of years, became interested in nature studies when he took to outdoor activities as a means to improve his health. A fellow naturalist induced him to begin photographing birds and animals as a side hobby. His work in this field became so good that he is now considered to be one of the foremost photographers of wildlife in America.

During the period several billboards were erected by a west coast brewing corporation along the various highways in the Valley. One sign of particular note is located along Highway III on the N.E. land property south of Calipatria. Modestly extolling the virtues of A-1 Pilsener beer, the sign pictures four mallards flying over a marsh and proclaims Calipatria as the "Home of California's Famous Game Refuge".

* * * * *

Among other fish and game laws passed by the state legislature are: the permanent revocation of the hunting license of any person guilty of killing or wounding another while hunting; the revocation for five years of such license of any person convicted of wounding or killing a domestic animal; and the requirement that all hunting and fishing guides be licensed.

* * * * *

The Los Angeles Examiner of September 6 carried an item which announces that the State Fish and Game Commission will act upon a practical plan whereby the hunter can aid in reducing crop depredations by birds. Proposed plans call for, (1) "allow a flooding and feeding program which must be put in effect before October 1 and continue throughout the season, (2) the area in which the feeding is to take place cannot be closer than 200 yards from any blind or other points where hunters are trying to take ducks, (3) that feed which is placed nearer than 200 yards to such points prior to the opening of the season be thoroughly cleaned up at least 24 hours before the season opens and, (4) that the feeding area must be tentatively located at the time that the permit is granted and must be posted to avoid violations. Duck hunting groups will be required to apply for such permits during the period September 10-25".


* * * * *

On May 20th, Los Angeles embarked upon a campaign against the pesky mosquito by giving away Mosquito Fish, (*Gambusia affinis*), to any person over 16. One of the requirements that the applicant must furnish a description of the body of water in which he plans to plant the fish.

* * * * *

The City Health Officer claims that Los Angeles is becoming one of the most mosquito-free communities in the country.

Respectfully submitted,



EDWARD J. O'NEILL
Refuge Manager

Note: Credit is due Mr. Eridler for recording and writing the section
under Wildlife and editing most of the other material.

Approved: _____

3-1826

WEEKLY WATERFOWL CENSUS

REFUGE Golden Gate Refuge MONTHS OF May TO September 19 59

Species	Weeks of Reporting Period																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Swans:																		
Whistling Trumpeter																		
Geese:																		
Canada																		
Cackling																		
Brant																		
White-fronted																		
Snow																		
Blue																		
Other																		
Ducks:																		
Mallard	2	2																
Black	7	25																
Gadwall	20	1																
Baldpate	20	1																
Pintail	20	1																
Green-winged teal																		
Blue-winged teal																		
Cinnamon teal																		
Shoveller																		
Wood																		
Redhead																		
Ring-necked																		
Canvas-back																		
Scaup																		
Golden-eye																		
Buffle-head																		
Ruddy																		
Various Tree Duck																		
Coot:																		

Reported by

Interior - Duplicating Section, Washington, D. C.

Form NR-1B

TOTALS..... 870 965 315 66 126 82 97 94 281 640 1101 2649 8765 8366 4849

WATERFOWL

Refuge _____ Months of _____ to ~~August~~ 1947

(1) Species Common Name	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total Estimated for Period
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose	1 1	8/7 8/7			3	7/21			4 1
III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck Fulvous tree	3 2 60 3 2 25 15 3 3 4	8/21 8/22 7/31 8/21 7/31 9/3 7/31 5/6	 previous period 7000 previous period 300 previous period 2000 113 400	 8/27 8/27 8/27 8/27 8/27 8/27 8/27 7/21 8/27	2 2 3 3 1 1 4 44 10 2 1 1 1	5/12 8/8 8/16 6/12 6/12 5/12 7/12 5/24 8/7 5/24/7 6/8 6/8 6/8			9 23 136 17,319 136 1 726 321 238 2 29 1 1 3043 302 3001
IV. <u>Coot:</u>									

SUMMARIES

Total Production:

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period **27,000**

Peak waterfowl numbers **8,166**

Areas used by concentrations **Unit 1**

Principal nesting areas this season _____

Reported by **Edwin Sam Rafter**

INSTRUCTIONS

(1) Species:

In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.

(2) First Seen:

The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.

(3) Peak Concentration:

The greatest number of the species present in a limited interval of time.

(4) Last Seen:

The last refuge record for the species during the season concerned in the reporting period.

(5) Young Produced:

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) Total:

Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

REFUGE GRAIN REPORT

Refuge Salt Lake Months of May through August, 1953

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Barley	200	—		—	—	50	50	150		2	
WILD MILLET	30	—		—	30	—	30	—			

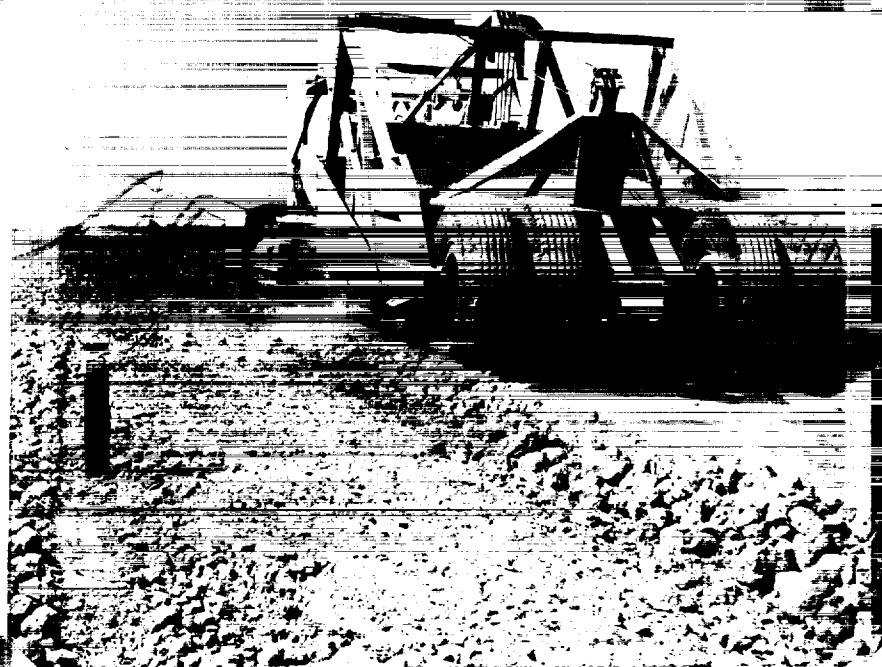
(8) Indicate shipping or collection points Refuge Headquarters

(9) Grain is stored at Refuge Headquarters

(10) Remarks

* See instructions on back.

Waterfowl utilizing Wild Millet crop in Tract 8 Unit I.
(August, 1953)



18 Intl. Tractor with Wooldridge Scraper on leveling job
at 15 Unit 11.

Installing concrete tile pipe on main line. Note presence of water at six foot depth. Irrigator Jose Barros, subheadquarters.



Tractor Operator Leo Cox and C. Williams inspecting traps attached to cable as found in barley field used by geese last winter.