

Assessing the birds of an inland sea

Salton Sea Studies

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IN A CHALLENGING NEW project in 1999, PRBO will work to document the abundance, distribution, and phenology (timing) of birds at the Salton Sea. Famous among birders for bird diversity (over 400 species have been seen there, including rarities such as Least Grebe, Laysan Albatross, and Neotropic Cormorant), this inland sea also has become a critical breeding and migratory stopover for millions of birds.

The Salton Sea is the third largest interior saline lake in North America (measuring some 15 by 35 miles) but is less than 100 years old. It was formed when humans mistakenly diverted water, in 1905, from the Colorado River into a low-lying basin in southernmost California. The last trickles of this flow ended in 1907.

In the past, a series of lakes existed where the present-day Salton Sea lies, probably created by periodic flooding of the Colorado River. However, with no outlets for the water, and no other significant inflow, the last of these historical seas dried up in the 1500s.

The Sea's level today is maintained in part by fresh water imported into the region to support intensive agricultural activities within the nearby Imperial, Coachella, and Mexicali valleys.

As agricultural fields are irrigated time and again, however, pesticides, herbicides, salts and other elements from the soil get washed into the sea. With high evaporation rates (1.3 million acre feet per year) in this hot, dry region, the Sea's salinity has increased from 3% when it formed to about 40% now. Other contaminants also are concentrated in the water.

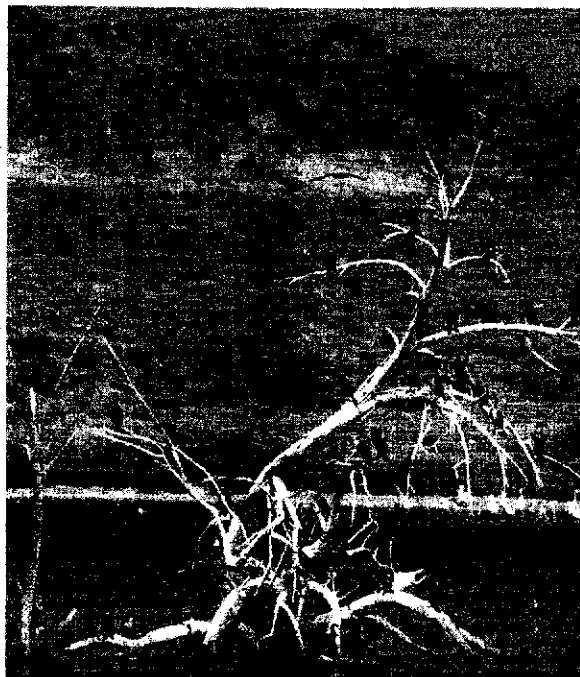
In this century, the Salton Sea has become immensely important to birds, in part because of its proximity to the delta of the once mighty Colorado River in the Gulf of California, less than 125 miles away. An estimated three million Eared Grebes were present at Salton Sea in March of 1988, and as much as 90% of the world pop-

ulation of this species may use the Sea as a stopover. Hundreds of thousands of shorebirds also rest and fatten up here during migration. The Sea supports important breeding populations, too: it is a key nesting area for Snowy Plovers; and it

supports some of the highest known concentrations of endangered Yuma Clapper Rails, the largest colony in western U.S. of Gull-billed Terns, and up to 40% of the breeding Black Skimmers in California.

There is growing concern that interactions (poorly understood) among salinity, water temperatures, and contaminants in the Salton Sea affect the ecosystem in ways sometimes lethal to birds and other wildlife. To name just two calamitous recent die-offs: in 1996, an estimated 20,000 pelicans, herons, egrets and gulls were killed by a botulism outbreak at the sea. In 1992, an estimated 150,000 Eared Grebes were killed by an undetermined source (possibly ingesting toxins associated with algal blooms, stimulated by eutrophic conditions in the Sea).

Increased worries about the health of the Salton Sea have led federal agencies, the State of California, and other parties to allocate funds toward a better understanding of how the ecosystem works. Data collected through these studies will be used to evaluate alternative plans for restoring the sea under the National Environmental Policy Act and California Environmental Quality Act. PRBO was awarded a contract from the Salton Sea Authority to study bird life as part of a collab-



Double-crested Cormorants find a safe roost in the shallows of Salton Sea, with dry desert hills beyond.

orative reconnaissance research project under the guidance of the Salton Sea Science Subcommittee. This project was initiated to ensure that appropriate biological and environmental information will be available to an Environmental Impact State-

ment/ Environmental Impact Report due to Congress within the next year. PRBO's work at Salton Sea promises to yield important information about the avifauna of this fascinating, threatened ecosystem. We hope that our information will be used to ensure that the Salton Sea remains a vital area for birds for centuries to come. *V*

P.S. Throughout the year we will be looking for experienced volunteers to help count birds at the Salton Sea. If you are interested please contact us for details.

Rhoda Boyd

AS THIS OBSERVER went to press, PRBO was saddened to learn of the death of Rhoda Boyd, an active and wonderful member of our Board of Directors. In an accident related to winter storm weather, Rhoda died on February 8, 1999, when a tree fell on her car as she was driving through Samuel P. Taylor State Park. This sudden loss is deeply felt by PRBO, and we will honor Rhoda Boyd in our next issue. Memorial funds to PRBO in her name will benefit our education program, to which Rhoda Boyd devoted great enthusiasm and energy.