State of California
The Resources Agency
Department of Fish and Game
Wildlife Branch

Caspian Tern Nesting on a Barge in the Long Beach Harbor

2007 Season

by
Wallace Ross

Nongame Wildlife Program, 2008-05

Final Report

To

State of California
Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123

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ABSTRACT

Caspian Tern (*Sterna caspia*) nesting activities on the Arctic Challenger began on approximately June 2, 2007. Seventeen visits to the Arctic Challenger were made between June 16 and October 3, 2007. The first visit to the Arctic Challenger was on June 16, when approximately 150 Caspian Tern adults were observed. The highest count of young Caspian Terns was made on July 16. A total of 75 to 80 chicks and fledglings were observed. The last nest to be initiated was on approximately August 3. The estimated number of Caspian Tern eggs that hatched was approximately 80 to 90. Approximately 41% of the fledglings on the barge were rescued from the water by the Long Beach Lifeguards and U.S. Coast Guard. The rescued birds were taken to the International Bird Rescue Research Center and the Long Beach Animal Hospital for rehabilitation and subsequent release. Where the heaviest nesting occurred, the substrate was composed of dirt, sand, crushed seashells, and avian excrement, was approximately three-quarters to one inch thick, and mostly concentrated in the area behind the forward bulkhead. It was estimated that approximately eighty-five Caspian Terns successfully fledged from the Arctic Challenger. It is recommended that prior to April 1 each year, barges within the Long Beach and Los Angeles harbors be inspected and cleaned to remove all suitable nesting substrate material, and if nesting terns are discovered on a barge, chick fencing should be installed around the perimeter of the deck prior to hatching.

[1] Ross, W. 2008. Caspian Tern Nesting on a Barge in the Long Beach Harbor, 2007 season. California Department of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report, 2008-05. Sacramento, CA. 5 pp.

INTRODUCTION

The Caspian Tern (*Sterna caspia*) is a large stocky tern with a stout bright orange to coral bill. Nests are found on flat sand or gravel beaches. With a wing span of approximately 48 inches, it feeds on large anchovies, sardines, and similarly sized fish. Caspian Terns lay between one and three eggs and have only one brood. Egg incubation is 20+ days. Fledging occurs between thirty and forty days after hatch.

On June 14, 2007, the California Department of Fish and Game was contacted by Dick Lauer of Sause Brothers Marine Tow Company (Sause Brothers), a marine transport firm, concerning reports of terns nesting on one of their barges, named the Arctic Challenger, anchored in the Long Beach Harbor. This barge is classified as an ice breaker barge and is 305 feet long and 105 feet wide, with a deck height approximately 15 feet above water. The barge has been located in the Port of Long Beach at 33 degrees 44.800 North, 118 degrees 10.161 West for approximately eleven years. In 2003, the Sause Brothers purchased the barge from Crowley Marine for retrofitting and future use, but it continued to lay at anchor.

METHODS

The California Department of Fish and Game requested that the barge be monitored on a regular schedule to provide protection and information on the progress of the Caspian Terns nesting on the barge. The Sause Brothers responded to the request and volunteered to provide weekly transportation to and from the barge for monitoring. It was determined that monitoring of the barge would be every Monday until the terns completed their nesting and fledging activities. Wallace Ross was the primary biologist that monitored the birds on the Arctic Challenger. Biological monitoring assistance was provided by Loren Hays, Dr. Charles Collins, and Nancy Frost.

Original Recommendations

- The Arctic Challenger should not be moved until all nesting birds have completed nesting efforts.
- Terns should be monitored by boat no closer than twenty yards, once a week.
- Advise authorities: Long Beach Port Police and Lifeguards, U.S. Coast Guard
- If possible, patrols should be made to prevent harassment or disturbance.
- No person should be allowed on the barge at any time until the birds have completed nesting.
- No private boats of any kind (including tour boats) within 100 yards of barge.
- No live bait fishing within view of barge.
- Fireworks/pyrotechnic barges should not be within one half mile of the Arctic Challenger and displays should be directed away from the barge.

RESULTS and DISCUSSION

Caspian Tern nesting activities on the Arctic Challenger began on approximately June 2, 2007. Seventeen visits to the Arctic Challenger were made between June 16 and October 3, 2007. Sause Brothers provided transportation aboard their boat "Chinook" to inspect the barge. Onboard for the first visit to the Arctic Challenger were California Department of Fish and Game Wardens, John Potter and Mike Morris, and Biologist Wallace Ross. Mark Russell, a representative from the International Bird Rescue Research Center in San Pedro was also onboard. On June 16, approximately 150 Caspian Tern adults were observed in the area. Eight to ten Caspian Tern chicks were observed ranging in age from two days to two weeks, which made on-deck monitoring unavailable due to the possibility of the chicks running over the edge and drowning in the water. It was estimated at that time there was an additional forty active and attended nests. Nesting was located along a forward bulkhead and in an area near the stern. It was suspected that some additional nests might have been hidden by equipment and the basic design of the barge. There were no other tern species on the barge. Other species observed roosting on the barge were: >20 Western Gulls (*Larus occidentalis*), >20 Brown Pelicans (*Pelecanus occidentalis*) and >28 Cormorants (*Phalacrocorax* sp.). Additional species noted on the Arctic Challenger during subsequent visits included Heermann's Gull (*L. heermanni*), Brandt's Cormorant (*P. penicillatus*), Burrowing Owl (*Athene cunicularia*), Common Raven (*Corvus corax*), American Crow (C. brachyrhynchos) and House Sparrow (*Passer domesticus*).

On the second visit, June 24, between thirty-eight and forty-two chicks were noted, indicating that most of the egg production was fairly synchronous, leaving approximately five to ten active nests. On July 11, it was noted that the Fourth of July fireworks from Long Beach did not have any dramatic effects on the nesting colony. Two Western Gull chicks were observed on the stern area of the barge. These two chicks successfully fledged from the barge.

The highest count of young Caspian Terns was made on July 16. A total of 75 to 80 chicks and fledglings were observed, thus confirming that the original estimate of nests was accurate. Over the course of the season, some additional nesting occurred. Approximately twelve to fifteen new nests were initiated. The last nest to be initiated was on approximately August 3. The estimated number of Caspian Tern eggs that hatched was approximately 80 to 90.

Approximately 41% of the fledglings on the barge were rescued from the water. It is not known if any drowned prior to rescue. Most of the birds were rescued by the Long Beach Lifeguards and U.S. Coast Guard. The rescued birds were taken to two locations: the International Bird Rescue Research Center in San Pedro; and the Long Beach Animal Hospital in Long Beach.

Three Caspian Tern fledglings were rehabilitated by the Long Beach Animal Hospital. They were successfully released at the beach near Redondo Avenue in Long Beach and were observed returning to the barge. The International Bird Rescue Research Center received

twenty-eight rescued Caspian Tern fledglings. Twenty-six fledglings were successfully rehabilitated and successfully released from the water near the barge. Two fledglings failed in captivity prior to release. Four of the original twenty-eight Caspian Tern fledglings were successfully released at the Salton Sea.

On October 3, 2007, an on-deck, final inspection of the barge was made. It was noted that where the heaviest nesting (approximately 90%) occurred, the substrate was composed of dirt, sand, crushed seashells, and avian excrement, approximately three-quarters to one inch thick, and mostly concentrated in the area behind the forward bulkhead. The substrate being deposited behind the forward bulkhead may have been the result of wind blown debris. A total of nine dead chicks were found ranging in age from one day to one and one half weeks old. There were no remaining eggs or fledglings found.

It was estimated that approximately eighty-five Caspian Terns successfully fledged from the Arctic Challenger. On August 9, a Caspian Tern fledgling was observed at Bolsa Chica Wetlands in cell 11. The young bird had a U.S. Fish and Wildlife Service band on the left leg and a blue colored rehabilitation band on the right leg. A call was made to the International Bird Rescue Research center and the bird was identified as one of the rescued and rehabilitated Arctic Challenger birds.

Recommendations

Preseason (prior to April 1):

- Contact barge owners/leaseholders/operators within the Long Beach and Los Angeles harbors.
- Inspect barges for suitable substrate, such as sand and/or small gravel.
- Clean barges to remove all suitable substrate material.
- If nesting terns are discovered on a barge, chick fencing should be installed around the perimeter of the deck prior to hatching.

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Appendix A

Photos

Photo of the Sause Brothers barge, the Arctic Challenger, by John Potter.

Photo of the substrate on the Arctic Challenger by Nancy Frost.