Common Terns, 18 nests, 44 eggs, and at least 26 total young fledged. More terns were produced in this single season than in the previous 23 years combined.

Other species of note

To further demonstrate the significance of this Great Lakes location, yet another state endangered species, the Forster's Tern (*Sterna forsteri*) was found nesting 2 July 2002 by Brandon Semel (age 11). The nest contained 3 eggs and was just outside the inner fence. Regrettably, because this species requires different nesting habitat on the water's edge, without the fence's protection, the nest later was lost to egg predation.

Although endangered terns and their breeding efforts are the main focus of the efforts to improve this habitat, this article would be incomplete without reporting on the attractiveness of this site to shorebirds.

In 2001 a Curlew Sandpiper (Calidris ferruginea) was present from 10-13 June. In addition, other uncommon and rare shorebirds utilized the now protected sandflats of the harbor island. These included: 17 April (second earliest arrival date), 3 Marbled Godwits (Limosa fedoa) (others were observed on 5 other occasions including one during fall migration, 29 July); 26 April, 34 American Avocets (Recurvirostra americana); 28 April and 30 April, one federally endangered Piping Plover (Charadius melodus) each day; 30 April, 3 Hudsonian Godwits (Limosa haemastica).

Also, as Johnson recently described, an Arctic Tern (*Sterna paradisaea*) was present at Great Lakes throughout the 2001 breeding season, and attempted pair formation with a Common Tern (Johnson 2002).

Habitat problems

Two significant habitat issues at Great Lakes have had considerable

impact on both successful tern nesting and use of the site by migrating shorebirds. First, lake levels have shown significant fluctuations. In 2000 and 2001, historically low water levels left little separation between the island and the peninsula. On occasion, it was possible to walk between the two areas and barely get



Common Tern eggs at the Great Lakes Naval Training Center. Summer 2002. Photo by Jackie Dann.

your feet wet. The resulting large expanse of exposed sand and shallow water was highly attractive to shorebirds. The birder who discovered the Curlew Sandpiper, Robert Erickson, commented that on 20 June 2001, the area was "teeming with shorebirds" (Erickson 2001). By contrast, in 2002, the water was up to my thighs while wading across the same area. I'm 177 centimeters, (5' 10"). As expected, numbers of shorebirds, especially peeps, had diminished significantly.

Our other obstacle to effective site management is invasive vegetation, both native and exotic. Willow (*Salix* sp.), *Phragmites* (sp.), purple loosestrife (*Lythrum salicaria*), and cottonwood (*Populus deltoides*) are particularly troublesome, and are rapidly expanding in height and density, and encroaching on the open sand that the shorebirds use. A recent three-hour workday involving 40 volunteers focused on cutting brush, adding sand, and otherwise working hard to improve the habitat, especially within the inner enclosure used by nesting Common Terns.

It is clear from our experience that for Common Terns to breed successfully, and for shorebirds to have adequate foraging and resting areas, this habitat requires intense management. Hopefully, for the 2003 breeding season and beyond, with the ongoing efforts of the many volunteers, the continued cooperation of the U.S. Navy, and the outstanding leadership of Brad Semel and the IDNR, Great Lakes will fully realize its excellent potential as an avian refuge.

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