



**DUCK BANDING IN GREAT SWAMP NATIONAL WILDLIFE REFUGE:  
THE 2009 & 2010 SEASONS**

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In addition to helping maintain a number of Wood Duck nest boxes in the Great Swamp National Wildlife Refuge (GSNWR) in Morris County, New Jersey, volunteers help trap and band waterfowl in the refuge (Hollein 2007). The 2009 season was a vast improvement over the poor results of the 2008 season when only five ducks were banded, but the 2010 season once again had a sharp drop in bandings, though not to the extremely low levels of 2008. In 2009 and 2010 four species, plus one hybrid were banded as shown below:

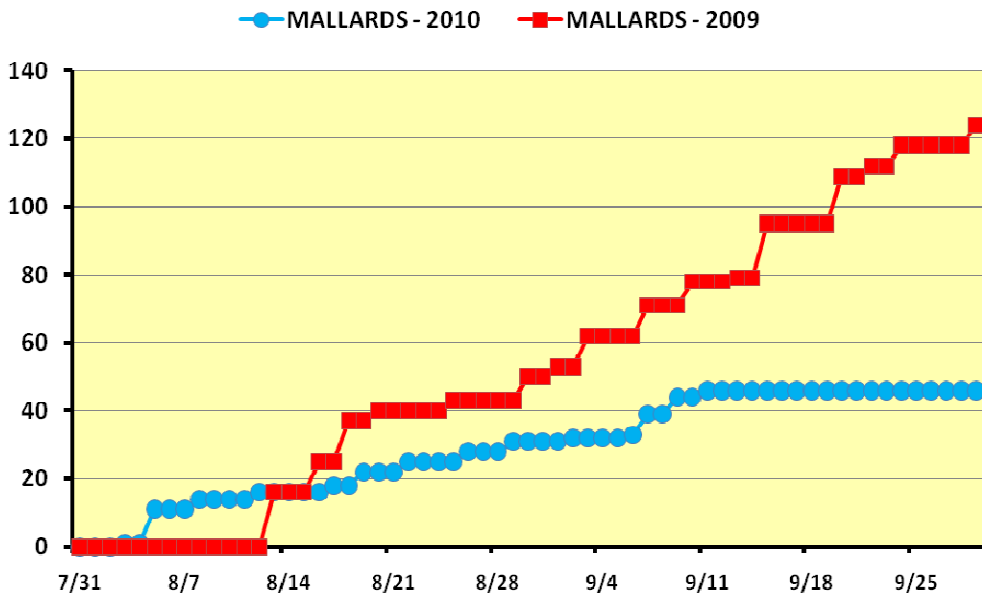
	<u>2009</u>	<u>2010</u>
Wood Duck	9	1
American Black Duck	6	1
Mallard	124	46
Mallard x Black hybrid	1	--
Green-winged Teal	<u>1</u>	<u>--</u>
Totals	141	48

The 2010 duck trapping and banding season was a disappointment. It started slowly and was terminated early as no ducks were trapped after September 12. Chart 1 compares the 2009 and 2010 Mallard banding results. The rate and duration of the Mallard banding season in 2009 was typical. The total of 124 banded was about normal for the GSNWR. However, the Wood Duck total was well

below average. Only nine Wood Ducks were banded compared to an average of ninety during the 2005 to 2007 period. At GSNWR most of the Wood Ducks are banded in the first week or so of the start of banding in early-August. Unfortunately, in 2009 this most productive time of the season was lost as various trapping strategies were being tested during this period. In 2010 for the third consecutive year the Wood Duck totals were very low in spite of a robust number of successful Wood Duck nests. Judy Schmidt also raised and released a record number of orphan young (Hollein and Schmidt 2010). Chart 2 presents the duck banding results for 2004 through 2010. Totals are shown for Mallards, Wood Ducks and "others". Besides the American Black Ducks, hybrid, and Green-winged Teal already mentioned, the category "others" includes Northern Pintails. All the ducks banded are known breeders in the GSNWR except for the Northern Pintails that are early fall migrants. In 2010, for the second time in three years the total of Mallards banded was well below average.

Banding is traditionally done in the morning. Traps are set the previous day at dusk when the ducks have finished feeding for the day. An evening session was held as a test in early-September 2010. A single Mallard was trapped and banded.

**CHART 1 - MALLARD BANDING TOTALS**



In 2008 the very poor results were believed to be caused by huge mixed blackbird flocks that consumed most of the bait corn placed around the confusion trap. In the latter part of the 2008 season corn was baited in shallow water and the confusion trap was replaced by water traps. This switch did not improve the trapping results. During July prior to the start of the 2009 season, corn was only baited in shallow water. This kept the blackbirds from swarming the trapping area. However,

Three kinds of traps are used in the trapping program: 1) a ground based confusion trap, 2) water traps placed in six to twelve inches of water, and 3) floating traps. In 2009, essentially all the ducks were trapped in the confusion trap that was used for the last six weeks of the season. Two Wood Ducks were trapped in the floating traps. No ducks were trapped in the water traps. A “confusion trap” (Figure 1) has multiple funnel openings and dead ended-boxes. Corn is used as bait to attract the ducks. Once the ducks enter the funnels there is a larger area with more corn and a series of openings leading to large rectangular, wire mesh boxes that are dead-ended. When a trapper approaches, the birds get confused, can't find their way back out and are trapped in the boxes.

when the water traps were put in operation at the start of August, no ducks were trapped for several weeks.

**CHART 2 - DUCK BANDING HISTORY**

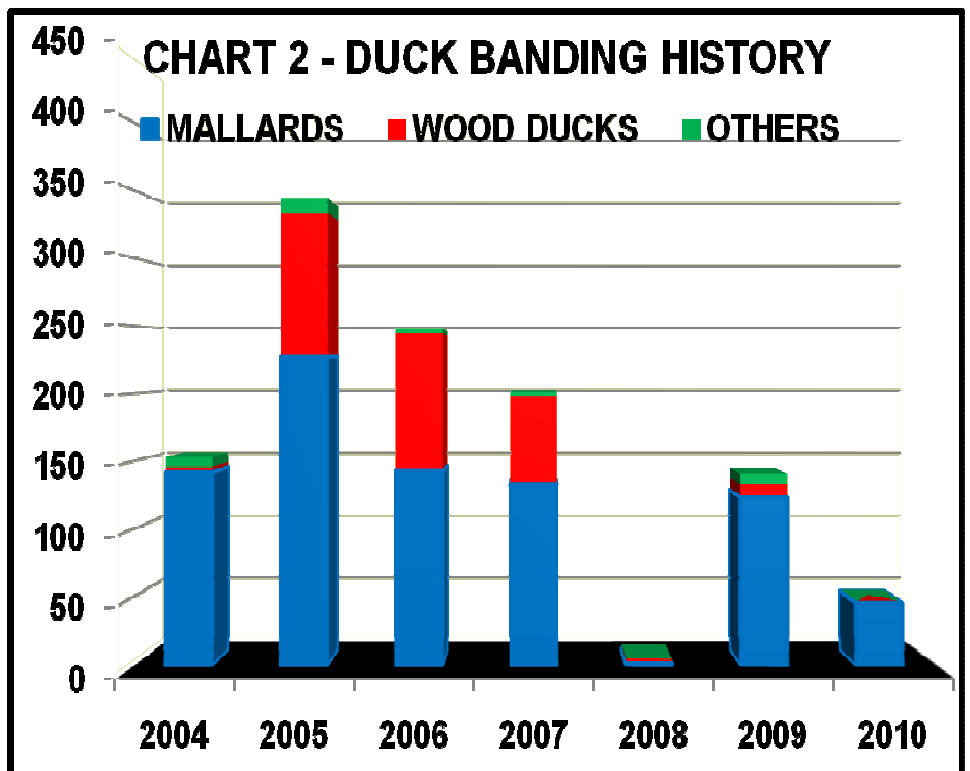




Figure 1: Baited confusion trap.

During the 2009 banding program Tony Cullen led the effort to swab ducks to test for various avian influenzas. This was the first time ducks had been tested at GSNWR. In 2008 Canada Geese were swabbed as part of the annual goose roundup manned by staff, interns and volunteers. In 2009 samples were taken from the throats and vents of twenty-eight Mallards, one Wood Duck and one Green-winged Teal. The samples were refrigerated and sent for analysis. None of the samples contained the H7N1 or H5N1 viruses. However, the analyses did find a number of less harmful avian viruses.

The predator traps had a busy year in 2010. *Have-A-Heart* traps baited with canned cat food were used. Although there were only two traps, twenty-three Raccoons were captured and relocated to the start of the orange trail at the end of White Bridge Road. It must have been an excellent Raccoon breeding year as nearly all the trapped animals were juveniles. A juvenile Possum was also trapped.

Summer intern Andrew Ferreira installed a motion sensor camera near the duck traps. Deer and a coyote were filmed at the site. Deer bent the duck traps a number of times while attempting to feed on the bait corn.

Chart 3 presents the Wood Duck and Mallard banding data covering the 1970 to 2010 period at Great Swamp. As shown many

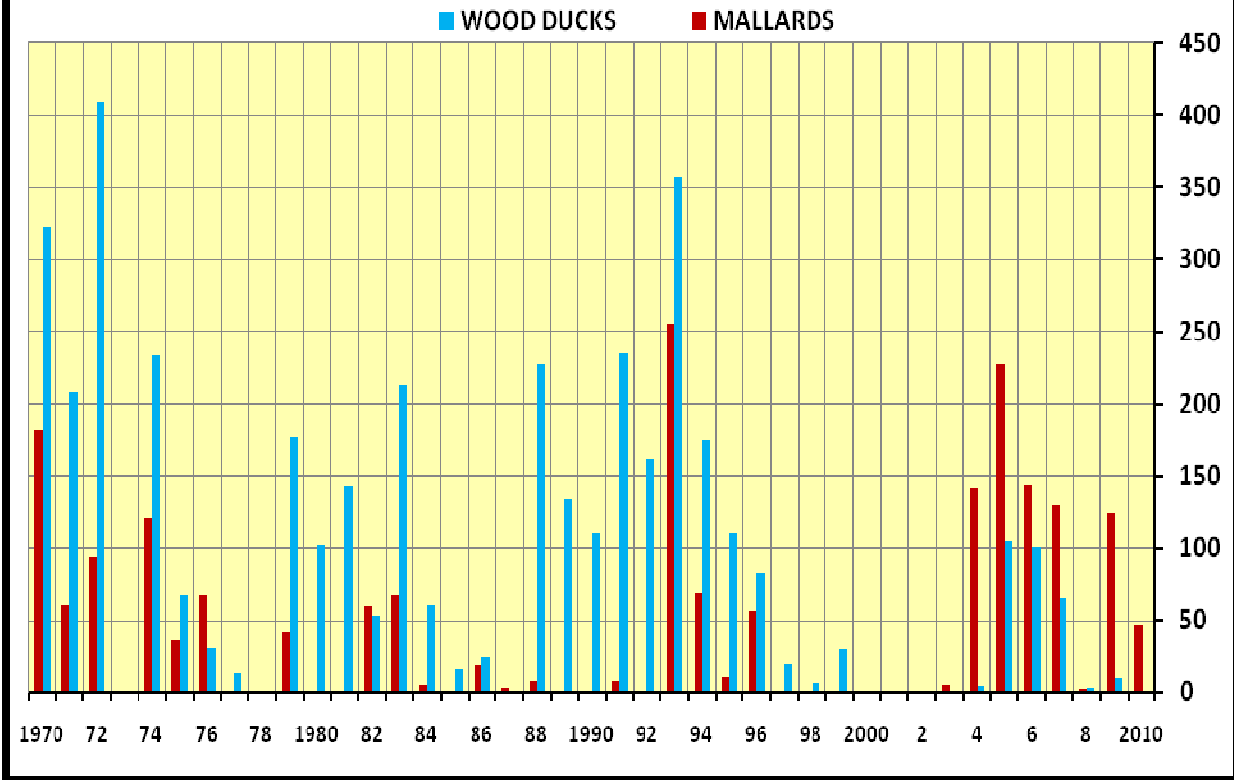
more Wood Ducks than Mallards were banded from 1970 to 2000. Only three times during these thirty years were more Mallards banded than Wood Ducks. The total number of Wood Ducks (3732) banded was more than three times the number of Mallards (1159) banded. However, for the 2001 through 2010 period the results are reversed as many more Mallards (819) were banded than Wood Ducks (289). During this most recent decade the

average number of Mallards (82) banded in a year exceeded the 1970-2000 annual average (39) while the average number of Wood Ducks banded declined dramatically. Five of the seven largest Mallard banding totals occurred in the 2001 to 2010 period. None of the top fifteen Wood Duck banding totals occurred in this same period.

There used to be six duck trapping sites in the Swamp. Two were in the Pool 3 area, two off the Refuge road west of the overlook parking lot and two at Pool 1. In the 2001 to 2010 period essentially only one trap at Pool 1 was used. The other trapping areas have become overgrown with vegetation and no open water remains. The reduction in trapping areas has contributed to the lower Wood Duck numbers. The increase in Mallard banding could be the result of a larger Mallard breeding population and/or the concentration of Mallards in one of the few remaining open water sites in the Refuge.

While data is not available, Craig Bitler recalls banding Wood Ducks through the entire August and September trapping and banding season at GNSWR. Ted Nichols also bands Wood Ducks throughout the season at other sites. In the recent decade Wood Ducks have been almost exclusively trapped at the Swamp during the first two weeks in August. The reason for this is not known.

CHART 3 - WOOD DUCK AND MALLARD BANDING TOTALS



Thanks go to Lou Pisane for the many hours he spent baiting and setting the traps during both seasons. Many staff members, interns and volunteers were involved in trapping sessions. Those volunteers most frequently participating in duck banding were Jennifer Dawson, Robert Furstner, Jack Higgins, and Melinda Nye. [This article is based on reports to the Great Swamp National Wildlife Refuge.]

**Literature Cited**

Hollein, L. 2007. A Home for Different Fliers. *Linnaean News-Letter* March 61(1).  
 Hollein, L. and J. Schmidt. 2010. Raising Orphaned Wood Ducks. *Linnaean News-Letter* September/October 64(4/5).

**CENTRAL PARK FILM PREMIERS**

Many Society members have been aware of the film on birding in Central Park member Jeff Kimball has been working on for the last few years. The film, *The Central Park Effect*, had its world premier in Austin, Texas at the South by Southwest film festival this month. It was very well received. There will be more news on the film in an up-coming issue of the *News-Letter*.

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