



Summary of the 2012 Off-Reservation Treaty Waterfowl Season

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INTRODUCTION

The fall of 2012 marked the 28th year of off-reservation treaty waterfowl hunting by Great Lakes Indian Fish and Wildlife Commission (GLIFWC) member tribes on lands ceded in the treaties of 1837 and 1842 (Figure 1). Participating tribes included Bad River, Lac Courte Oreilles, Lac du Flambeau, Mole Lake, Red Cliff and St. Croix in Wisconsin, Keweenaw Bay and Lac Vieux Desert in Michigan, and the Mille Lacs Band in Minnesota. In addition, 2012 marked the 22nd year of off-reservation treaty waterfowl hunting in the 1836 treaty area by the Bay Mills Indian Community in Michigan.

Hunting regulations proposed by GLIFWC, as authorized by tribal governments, were reviewed by the U.S. Fish and Wildlife Service (USFWS) after consultation with GLIFWC and the Departments of Natural Resources of Wisconsin (WDNR), Michigan (MiDNR) and Minnesota (MnDNR), and published in the Federal Register for public comment. Final regulations approved by the USFWS are summarized below.

Annual surveys to estimate the number of hunters, harvest, and effort by tribal waterfowl hunters were conducted via mail from 1985 to 1994 and by telephone from 1995 to 1998. Due to the low harvest estimates and minimal biological impact of the harvest, GLIFWC began waterfowl harvest surveys on a 3 year cycle, conducting a telephone survey after the 2001, 2004, and 2007 seasons. A phone survey was also conducted after the 2008 season to help determine if an increase in the mallard bag limit that year (from 10 to 30) influenced harvest levels, and again after the 2011 season. This report summarizes a survey conducted after the 2012 season to once again attempt to gain some understanding of possible impacts from several regulation changes which were implemented in 2012. These included: 1) raising the duck bag limit from 30 to 50 in the 1837 and 1854 ceded territory, 2) moving the opening date for ducks and several related species from September 15 to September 4, 3) eliminating species restrictions on black ducks, pintails and canvasbacks, and 4) holding the first sandhill crane season.

REGULATIONS

Season dates for zhiishiibag (ducks), aajigadeg (coot), manoominikeshiinh (rails), mergansers, gallinules, and snipe [ginwaa'okojiis (central/western dialect) or jiichiishkwenh (eastern dialect)] ran from September 4 - December 31 on all ceded lands. The nikag (goose) season opened September 1 for all species, and closed December 31, but also continued later for geese in any area that was open to state-licensed hunters after December 31. Badashka'anzhi (woodcock) hunting was open from September 4 - December 31. A mourning dove [omiimii (central/western dialect) or miimii (eastern dialect)] season ran from September 1 - November 9 in the 1837 and 1842 ceded territories. An inagural gopii ajijjaak (central/western dialect) or jijaag (eastern dialect)(sandhill crane) season as ran concurrently with the duck season in the 1837 and 1842 ceded territories.

The daily bag limit for zhiishiibag (ducks) was 50 in the 1837 and 1842 ceded territories, and 30 in the 1836. There were no additional limits on specific species. The daily bag limit for nikag (geese), all species combined, was 20 in the 3 treaty ceded areas. Other bag limits in all

ceded territories were: mergansers 10 (in the aggregate), coots and gallinules 20 (in the aggregate), rails 20 (in the aggregate), snipe 16, and woodcock 10. The bag limit for mourning doves was 15 (where allowed).

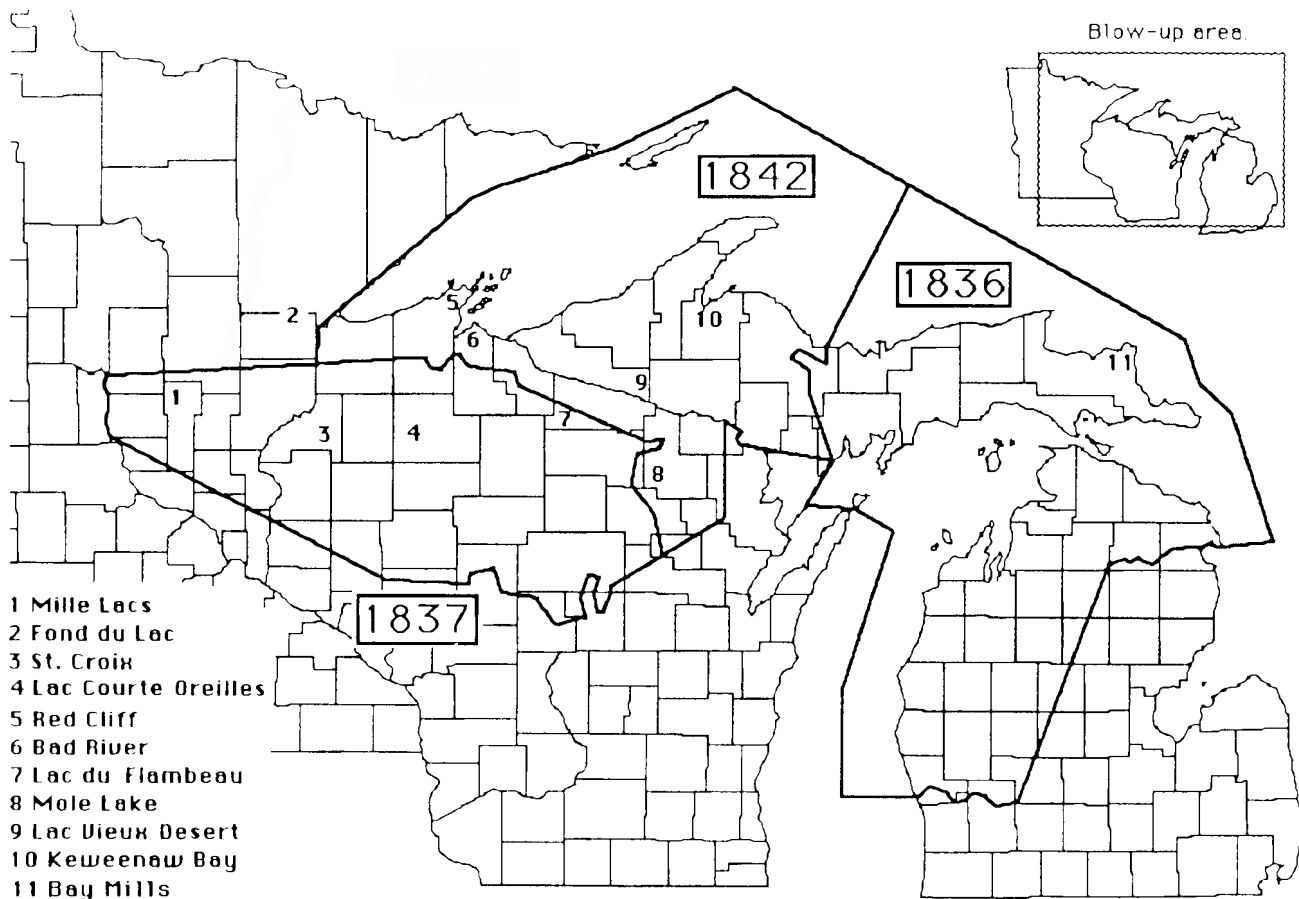


Figure 1. Map of the territories ceded in the treaties of 1836, 1837, and 1842 with reservation locations. (Ceded territory boundary depictions approximate.)

There were no possession limits. All federal and state closed areas and method restrictions were adopted, with the exceptions of state imposed open water hunting restrictions, Michigan state decoy restrictions, and shell limit restrictions on shotguns. Shooting hours were from ½ hour before sunrise to ½ hour after sunset.

METHODS

Tribal waterfowl hunters were required to possess a natural resource harvesting permit. All tribes with the exception of Keweenaw Bay (KB) used an off-reservation natural resources harvesting permit provided by GLIFWC. This permit was obtained by 1,701 individuals. When tribal members obtained this permit they were asked if they harvested waterfowl (either on or off-reservation) the previous year, and this information was used to group permit holders into “active”, “inactive”, and “non-respondent” groups (with non-respondents being those individuals who failed to provide this information). Randomly selected individuals were surveyed by

telephone. Telephone surveys have generally been used since 1995 because of suspected response bias in mail surveys. Thirty-three percent of the “active” (112/335), 15% of the “inactive” (123/796) and 25% of the “non-respondent” (142/570) individuals were surveyed. Separate participation and harvest estimates were then calculated for each group, and added to develop total harvest estimates.

Active hunters were also asked how many days they hunted waterfowl, by county. The total estimated number of days hunter was calculated in the same manner as harvest; this number was then distributed by county in proportion to reported hunting days, with all respondents pooled.

The Keweenaw Bay Indian Community issues a general, life-long hunting/fishing/trapping permit to their tribal members who participate in any of these activities. As a result, the waterfowl hunting activity rate among permit holders is very low: a mail survey sent to 350 of the 636 KB permit holders after the 2007 waterfowl season yielded only 4 active waterfowl hunters among 82 responses (David, 2008), and it is suspected that this number is biased high by a positive response rate among active waterfowl hunters. As a result, KB tribal members were not surveyed in 2012 and no estimate of their 2012 harvest is included in this report. In 2007, KB members accounted for 21.7% of the total harvest estimate of ducks, 56.6% of the estimated goose harvest, and none of the estimated coot harvest (David, 2008). However, because of the suspected positive response bias, it is thought these figures over-represent the actual harvest levels by KB members that year.

Identification of the species harvested in 2012, as in previous years, is based on the hunter’s skills and recollection, and may not be comparable to estimates from surveys based on parts collections. In this report, the composition of the duck bag is only broken down for a few common species (mallards, wood ducks, scaup, and blue-winged teal); all others are grouped.

It can be difficult to use the tribal waterfowl harvest data to draw solid inferences about the impact of particular harvest regulations. Estimates based on a small number of hunters can be greatly influenced by random variation and data outliers; in this survey for example, a single respondent accounted for 40% of the reported duck take and over 60% of the reported goose harvest. Waterfowl harvest also tends to be influenced by weather, the strength of the fall flight, local wetland conditions, and other factors. The interplay of these variables can make it difficult if not impossible to discern the individual effect of any one, particularly in a given year. In general, tribal harvest estimates may be best used to evaluate long-term trends.

RESULTS

Although the GLIFWC-issued tribal harvesting permits were validated for waterfowl hunting by 1,701 individuals in 2012, the proportion of permit holders who hunt waterfowl is low, likely because the permit is free and is often obtained by individuals obtaining permits for other hunting or gathering activities. In 2012, 86 (5.1%) of the permit holders were estimated to have hunted waterfowl (Table 1), similar to the estimated number of permit holders who hunted in 2011 (89) (Table 3).

The 19 active survey respondents in the “active” group reported harvesting 228 ducks, 57 geese and 12 coots, in 147 days, yielding total harvest estimates of 682 ducks, 170 geese and 36 coots in 440 days for this group. The 2 active respondents in the “non-active” group reported harvesting 167 ducks, 100 geese and no coot in 75 days, yielding total harvest estimates of 1081

ducks, 647 geese and no coots in 485 days for this group. The 4 active respondents in the “non-respondent” group reported harvesting 9 ducks, 1 goose and no coot in 41 days, yielding total harvest estimates of 36 ducks, 4 geese and no coots in 165 days for this group. Summing these totals yields a total estimated harvest of 1,799 ducks, 822 Canada geese and 36 coots in 1,090 hunting-days by 86 hunters (Table 2). This combined harvest estimate is compared to previous harvest estimates in Table 3.

Activity Group	Total Number	Number Surveyed	Percent Surveyed	Number Active	Percent Active	Estimated Number Active
Active*	335	112	33%	19	17.0%	57
Inactive*	796	123	15%	2	1.6%	13
Non-respondent*	570	142	25%	4	2.8%	16
Total	1,701	377	22%	25	5.1%	86

* Activity grouping is based on self-reported activity the previous year; see discussion in text.

Activity Group	Respondent Reported Harvest				Total Estimated Harvest			
	Ducks	Geese	Coot	Days	Ducks	Geese	Coot	Days
Active*	228	57	12	147	682	170	36	440
Inactive*	167	100	0	75	1081	647	0	485
Non-respondent*	9	1	0	41	36	4	0	165
Total	404	158	12	263	1,799	822	36	1,090

* Activity grouping is based on self-reported activity the previous year; see discussion in text.

For the inaugural sandhill crane season, phone-in registration was required for all cranes harvested. Two cranes were taken, one each from Forest and Chippewa counties in Wisconsin.

The 2012 estimates for total duck and goose harvest, and days hunted, were all higher than estimates made for 1996, 1997, 1998, 2001, 2004, 2007, 2008 or 2011 (the eight previous years surveyed) (Table 3). However, all of these figures were heavily influenced by a single active respondent who reported harvesting 160 ducks and 100 geese in 55 days of hunting. If this individual is omitted from the analysis, the estimated duck harvest drops by more than half, the goose harvest by over 75%, and the days hunted by a third. As noted earlier, tribal harvest estimates may be best used to evaluate long-term trends; additional years of harvest data will be needed before it can be better determined if the 2012 harvest estimates reflect an actual trend in increasing harvest or perhaps were biased high by a single hunter.

About 80% (870) of the estimated 1,090 hunting days took place in Wisconsin, with the remainder in Michigan. As in past years, most hunting took place in or near counties with reservations (Figure 2).

Table 3. Estimated treaty waterfowl harvest and effort in years surveyed from 1996 – 2012.

YEAR OF HARVEST	ESTIMATED # OF HUNTERS	ESTIMATED # OF DAYS	ESTIMATED HARVEST			DUCKS PER DAY
			DUCKS	GEESE	COOT	
2012*	86	1,090	1,799	822	36	1.7
2011*	89	394	759	28	0	1.9
2008*	76	504	1,124	213	137	2.2
2007	146	780	1,644	535	892	2.1
2004*	63	421	645	84	91	1.5
2001	75	353	1,014	81	146	2.9
1998	92	625	599	177	172	1.0
1997	151	951	1,022	183	164	1.1
1996	125	572	1,278	72	57	2.2
Ave.	100	632	1,098	244	188	1.7

*2004, 2008, 2011 and 2012 estimates do not include the Keweenaw Bay Tribe.

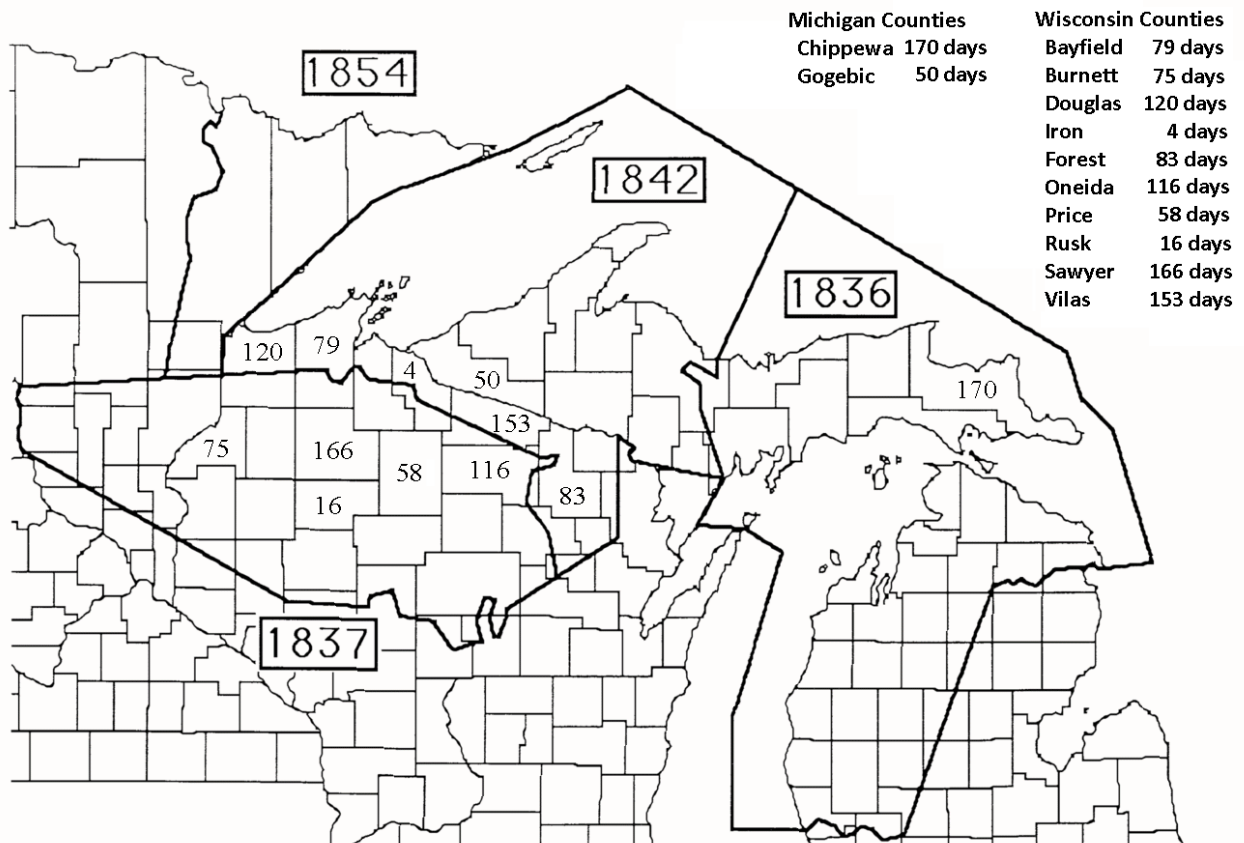


Figure 2. Estimated waterfowl hunting days by county in 2012.

No survey respondents reported harvesting snipe, rails, or doves. One active respondent reporting harvesting 4 woodcock. Among active hunters with an opinion (n=24), 50% felt the fall flight was poorer than in 2011, 8% felt it was better, and 42% felt it was about the same.

As in 2007, 2008, and 2011, hunters were asked to report the largest number of ducks and geese they harvested on a single day of hunting. For 2012, the greatest number of ducks reported harvested in a single day was 8, while the average harvest was 1.7 ducks per hunting day. The highest number of geese reported taken on a single outing was 8, and the average harvest was 0.8 geese per hunting day. These responses are similar to what was reported in previous years (Table 4). It is clear that hunter harvest is generally determined by factors other than the bag limit. Although total duck harvest remained low in 2012 even with a 30 - 50 bird bag limit, the large bag limit is important to tribal hunters because it may allow those individuals who do locate ducks on a particular hunting trip a greater opportunity to meet their subsistence needs.

Table 4. Highest single day duck and goose harvest as reported by active respondents in 2007, 2008, 2011 and 2012.										
Most Birds Harvested in a Single Day	Number of active hunters reporting for:									
	Ducks					Geese				
	2012	2011	2008	2007	Total	2012	2011	2008	2007	Total
0-3	18	16	18	17	69	23	22	27	25	97
4-6	6	2	6	9	23	1	0	2	2	5
7-10	1	2	3	1	7	1	0	1	1	3
10+	0	2	3	1	6	0	0	0	0	0

Survey respondents were asked to report the composition of their duck harvest. The reported composition in 2012 differed in some respects from the collective composition from the 13 previous surveys (Figure 3). The percentage of wood ducks and scaup in the bag were below the long-term average, while the percentage of mallards and “other” species in 2012 were similar to the long-term average. The percentage of blue-winged teal in the bag was more than twice as high as ever previously reported (Figure 4).

Over time, the percentage of scaup in the duck harvest has been declining, while the percentage of mallards, and perhaps blue-winged teal, has been increasing (Figure 4). Wood ducks and “all other species combined” have shown great variability, but no clear trend.

SUMMARY

A tribal waterfowl harvest survey was conducted following the 2012 season and estimates were compared to previous surveys. The estimated number of hunters in 2012 was within the range of previous surveys, but the estimates of hunter days and ducks and geese harvested were higher than any previous survey. However, each of these estimates was heavily influenced by a single survey respondent who reported harvesting 160 ducks and 100 Canada geese in 55 hunting days. Even with this individual included in harvest calculations (Table 3) tribal off-reservation harvest remained below 2,000 ducks and 1,000 geese. Because of the marked influence of this individual, the increase in the estimated harvest of ducks and geese in 2012 could not be attributed to the regulatory changes made in 2012. While the exercise of the treaty right to harvest waterfowl remains culturally significant to tribes and individual tribal members, the biological impact is widely dispersed and remains insignificant to waterfowl populations.

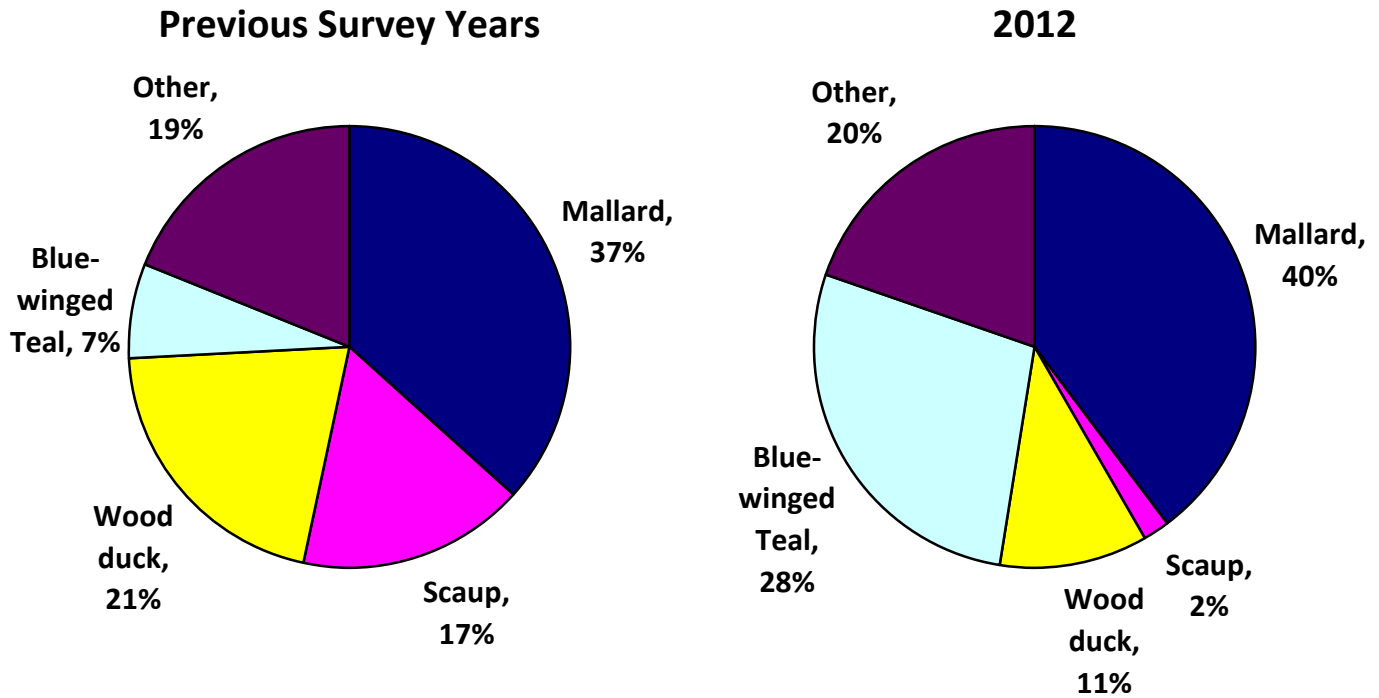


Figure 3. Species composition of the treaty duck harvest, 2012 versus previous survey years (1991-1998, 2001, 2004, 2007, 2008 and 2011 combined).

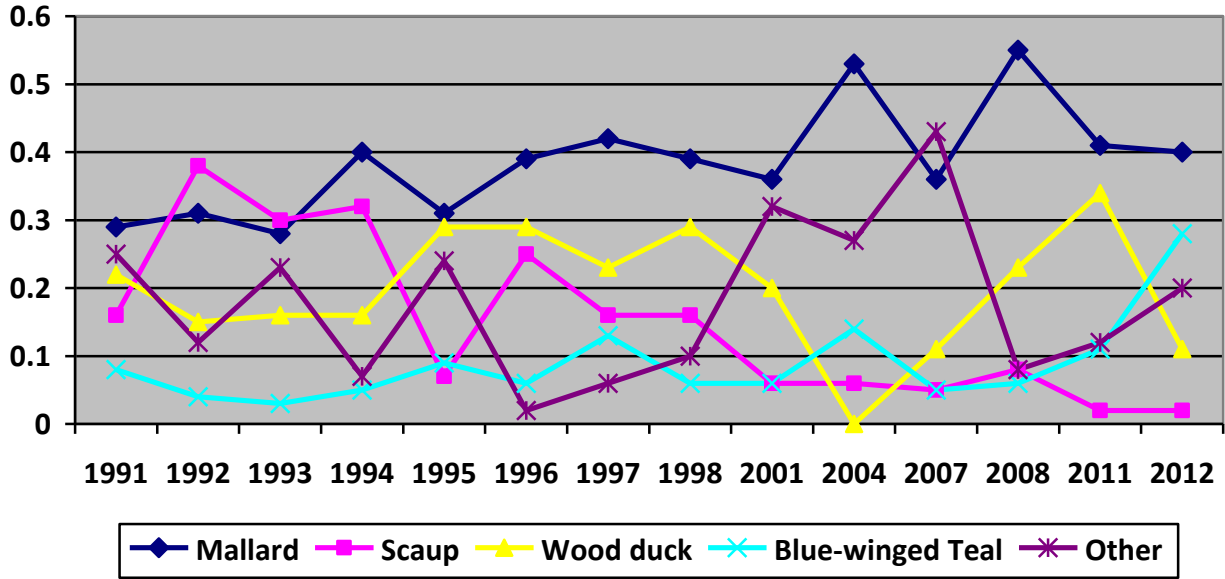


Figure 4. Duck species composition by survey year.

LITERATURE CITED

David, P. 2008. Summary of the 2007 Off-Reservation Treaty Waterfowl Season. Great Lakes Indian Fish and Wildlife Commission Administrative Report 08-09. 7 pp.