Figure 1. Shelter Island, New York, (large island) was the treatment area, and North Haven, New York, (smaller peninsula) was the control area for the 4-Poster Deer and Tick Control Study. Shelter Island included 2 intensive study sites; SIA (South) is located to the Southwest and outlined in white, and SIB (North) is located to the North and outlined in yellow. The control area, North Haven, is south of Shelter Island and outlined in grey.

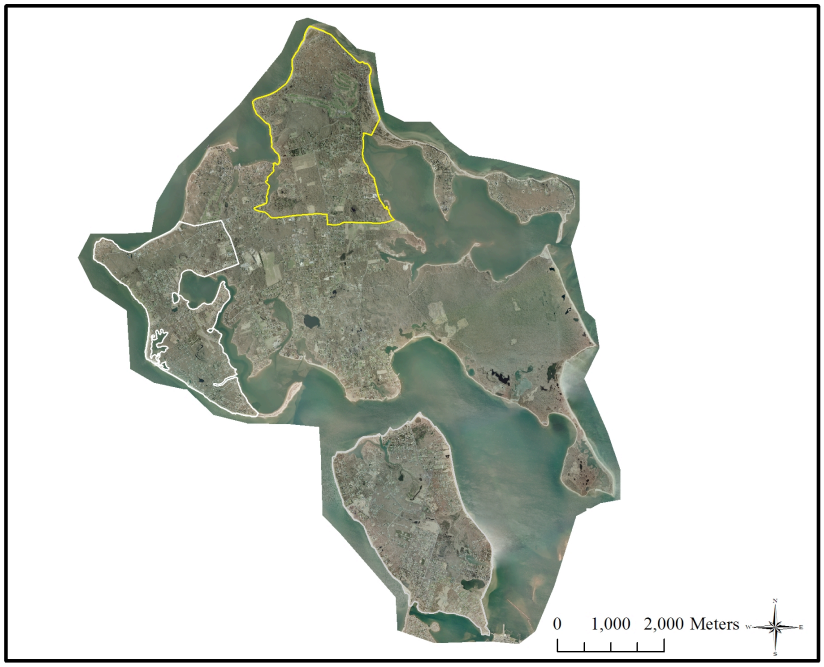

Figure 2a. 4-Poster device locations (green circles) deployed within the treatment area (Shelter Island, New York) during the 2008 study year.

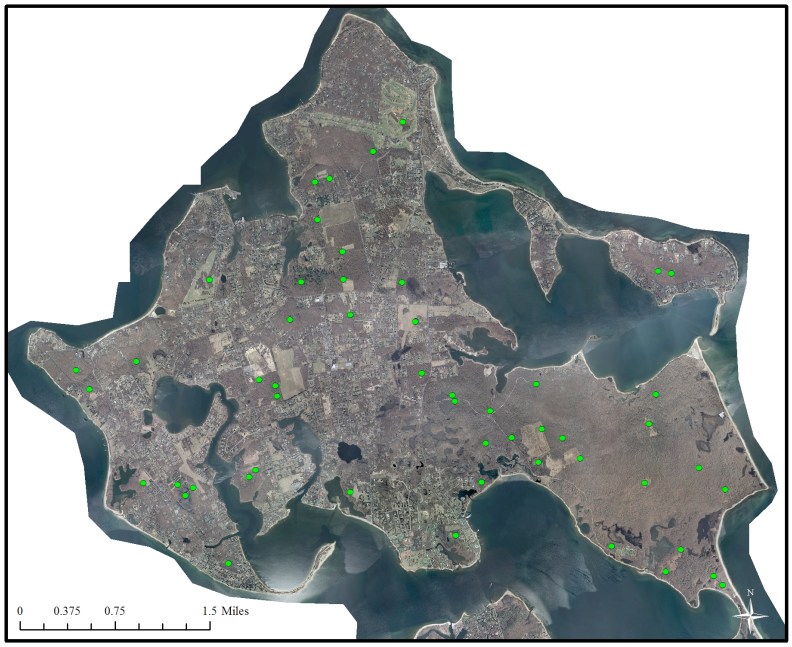

Figure 2b. 4-Poster device locations (green circles) deployed within the treatment area (Shelter Island, New York) during the 2009 study year.

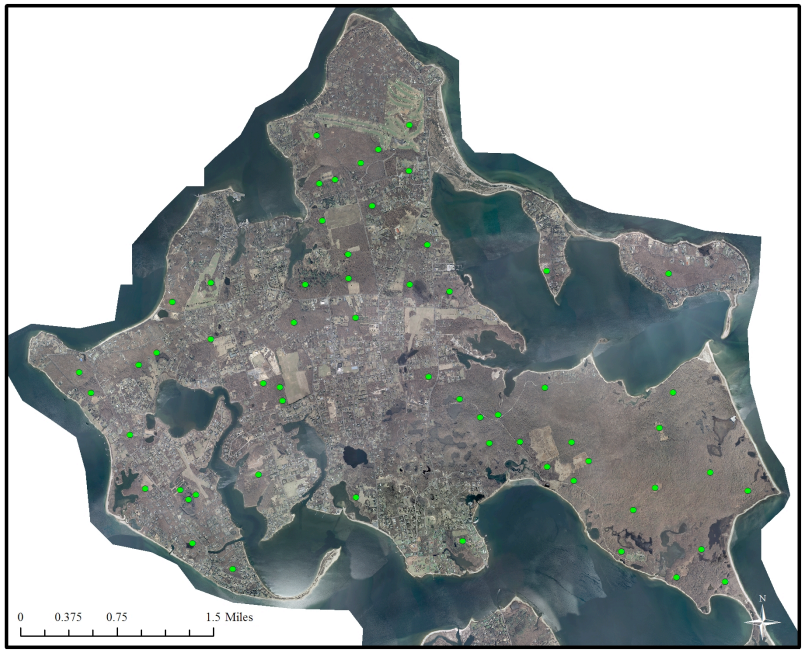

Figure 2c. 4-Poster device locations (green circles) deployed within the treatment area (Shelter Island, New York) during the 2010 study year.

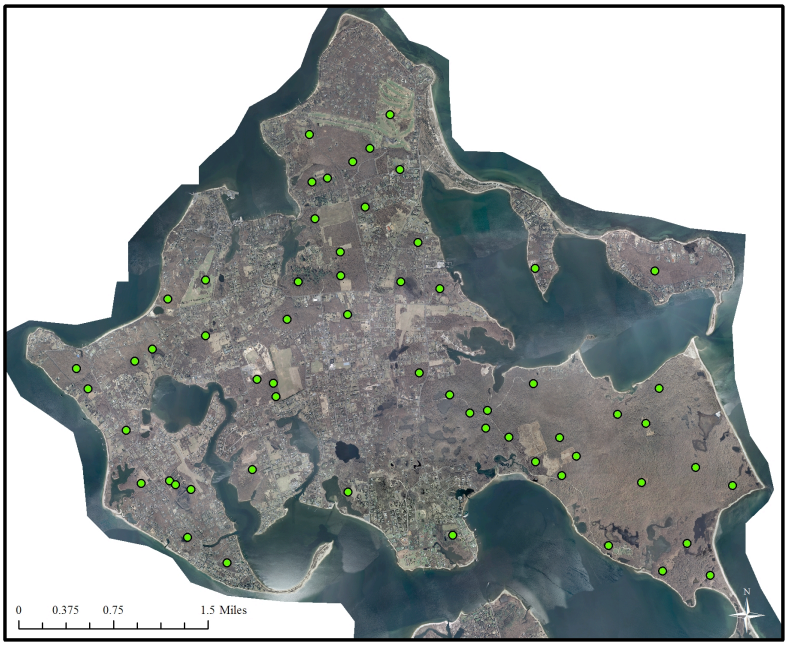

Figure 3a. Core area estimates were used to evaluate habitat use and potential changes resulting from 4-Poster device deployment. Changes in core area geographic locations were examined over time (2008-2010) to evaluate behavioral responses by deer to 4-Poster devices within treatment areas compared to normal range fluctuation where no bait was present within the control area. A high degree of core area overlap between study years was observed for collared doe, A08, within the treatment area; 59% overlap between 2008 and 2009, 98% overlap between 2009 and 2010, and 50% overlap between 2008 and 2010 were observed. Although no significant shift was observed in A02's core area locations throughout the study, a lower degree of fidelity was observed; 32% overlap between 2008 and 2009, 59% between 2009 and 2010, and 38% between 2008 and 2010 were calculated.

Figure 3b. Within the control area, a high degree of core area overlap between study years was observed for collared doe, 003; 52% overlap between 2008 and 2009, 83% overlap between 2009 and 2010, and 48% overlap between 2008 and 2010 were observed. Although no significant shift was observed in 023's core area locations throughout the study, a lower degree of fidelity was observed; 27% overlap between 2009 and 2010 was observed.

Figure 4. On average, 2 4-Poster devices were found within collared deer home ranges and 1 device within core areas during 2009. The colored polygons represent the home ranges and core areas of several different collared deer during 2009 and the yellow triangle symbols represent the 4-Poster locations during 2009. These ranges and core areas provide examples of no devices being incorporated into ranges while others serve as examples of several devices present within ranges. Notice devices located along range boundaries did not contribute to range enlargement to incorporate the supplemental food source (4-Poster device).

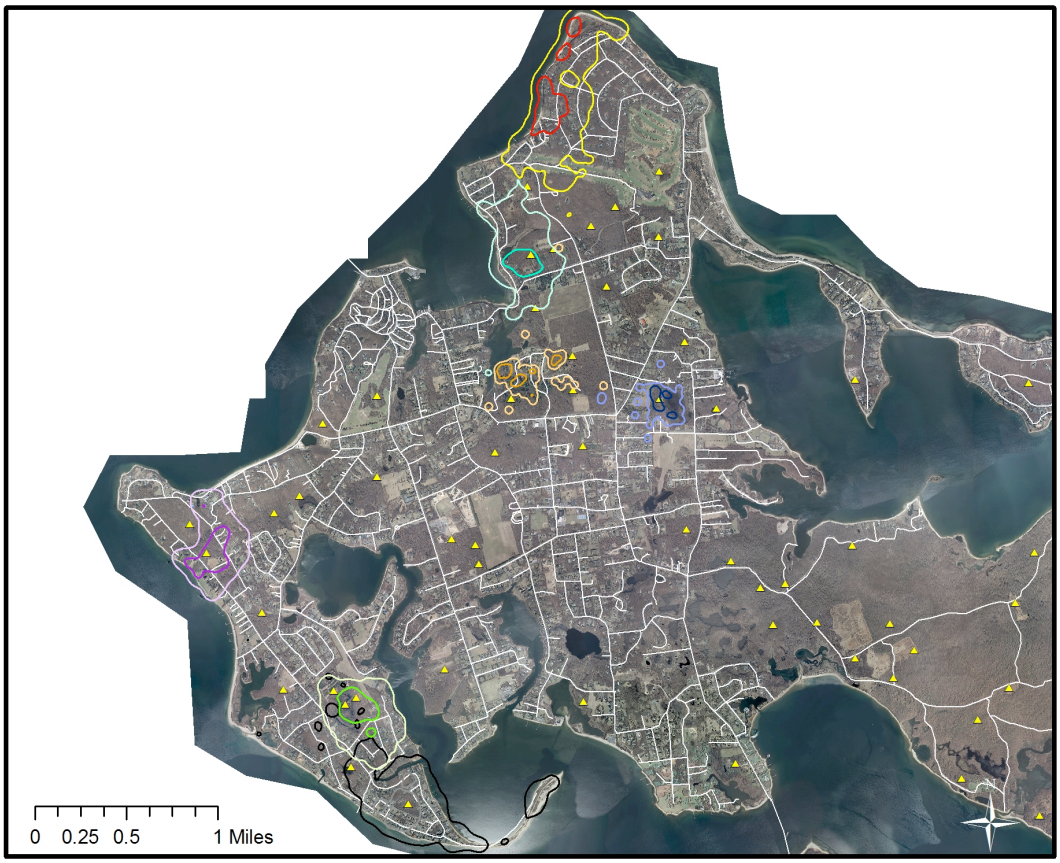

Figure 5. Average relative number of each animal observed visiting 4-Poster devices during monthly trail camera surveys conducted during 2008-2010.

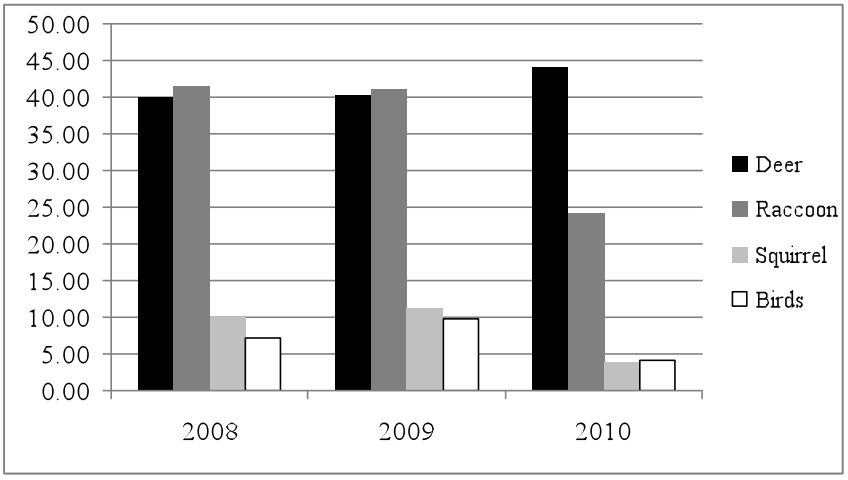

Figure 6. Average relative number of each animal observed visiting 4-Poster devices during monthly trail camera surveys during the spring season of each study year (2008, 2009, and 2010).

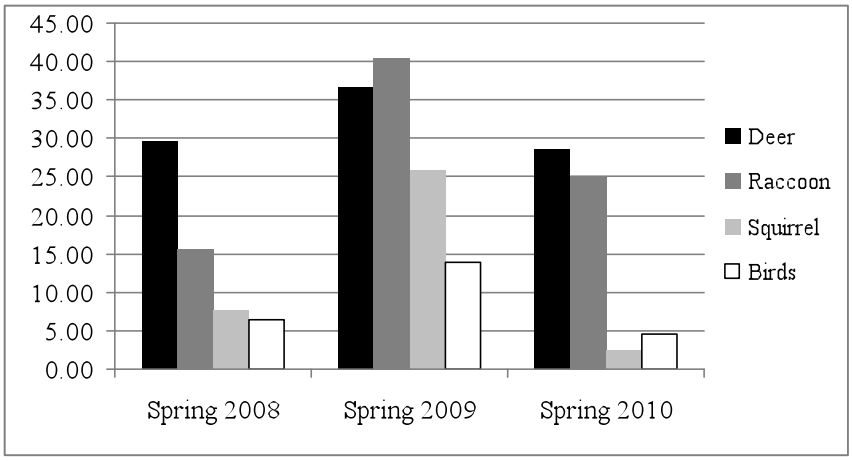

Figure 7. Average relative number of each animal observed visiting 4-Poster devices during monthly trail camera surveys during the summer season of each study year (2008, 2009, and 2010).

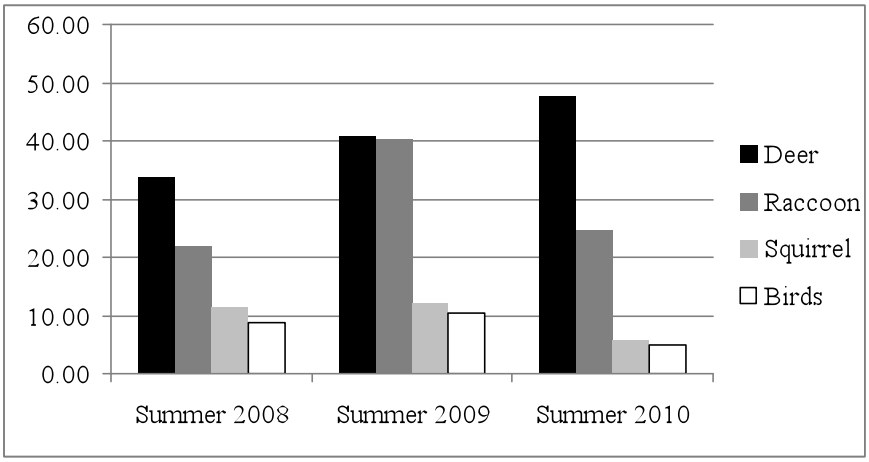

Figure 8. Average relative number of each animal observed visiting 4-Poster devices during monthly trail camera surveys during the fall season of each study year (2008, 2009, and 2010).

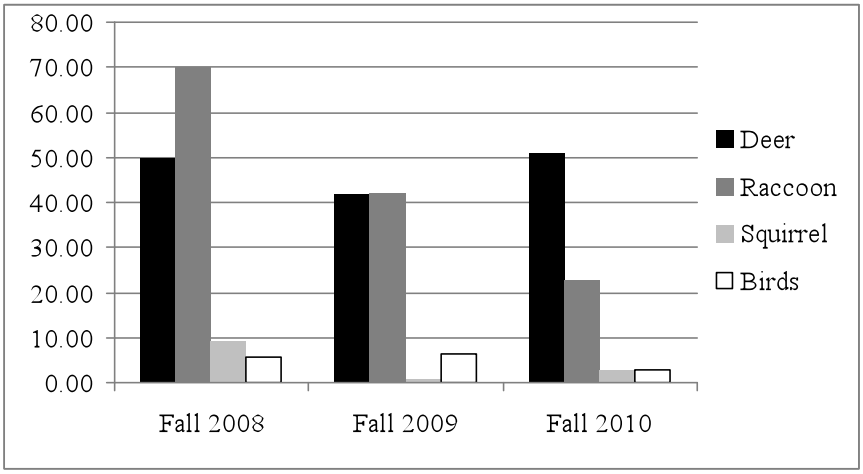

Figure 9. Average relative number of each animal observed visiting 4-Poster devices during monthly trail camera survey each season of each study year (2008, 2009, and 2010).

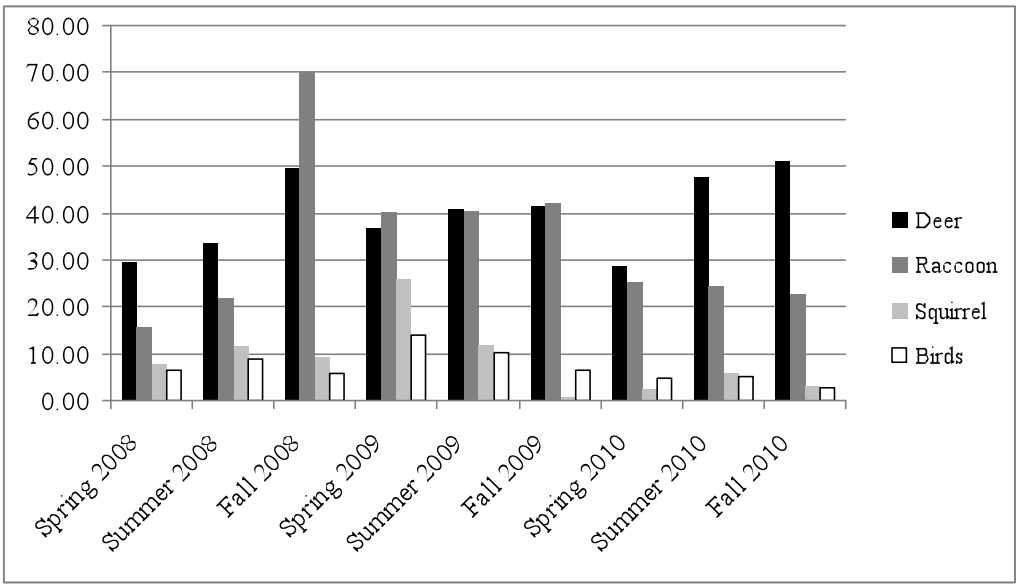

Figure 10a. The total amount of corn consumed (lbs) from 4-Poster devices each study year, 2008-2010.

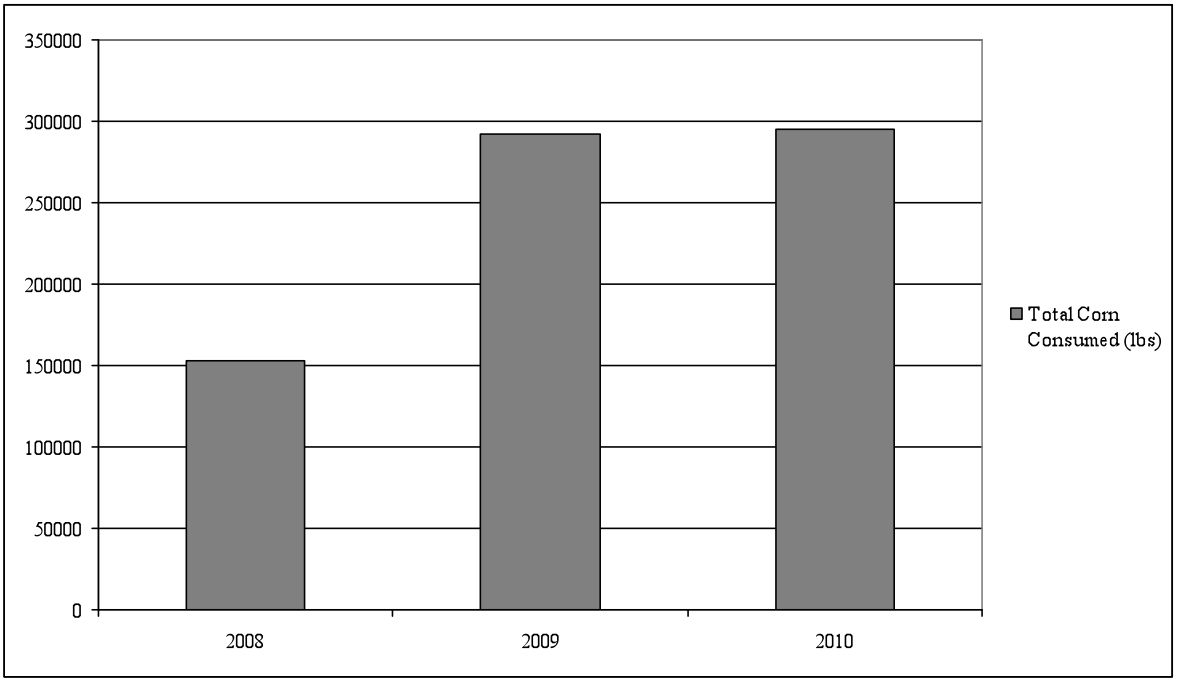

Figure 10b. The total amount of corn consumed (lbs) from 4-Poster devices seasonally each study year, 2008-2010.

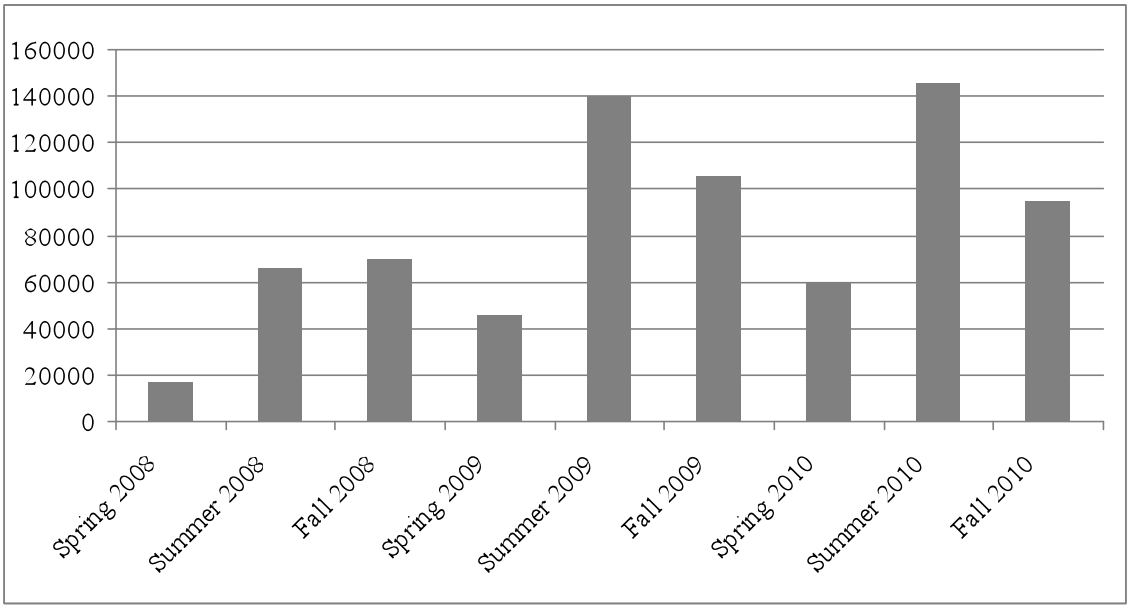

Figure 11. The number of 4-Poster devices deployed, average amount of corn consumed (lbs) per device, and the average estimated number of deer using a device each season of each study year, 2008-2010. The average estimated number of deer was derived based on corn consumption records and USDA guidelines (Pound et al. 2000a). The number of 4-Posters deployed for each three-month period is the sum of the number of devices deployed each month within that period.

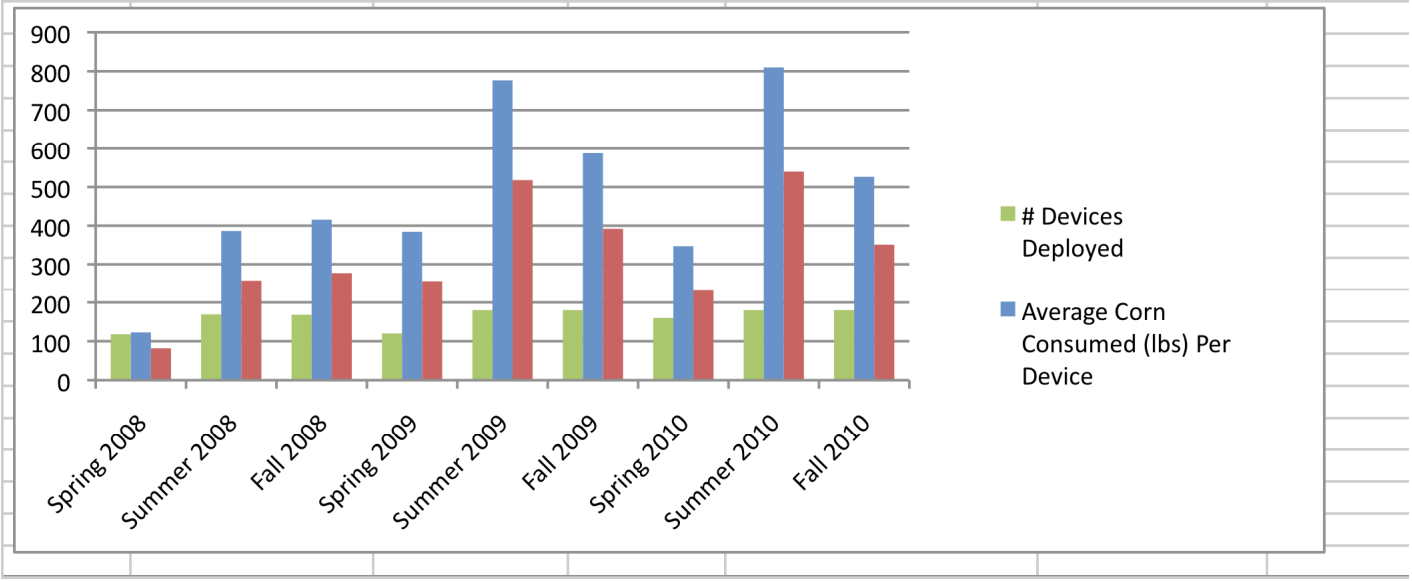

Figure 12. The decimal proportion of marked deer observed using 4-Poster devices in trail camera photos each season of each study year, 2008-2010.

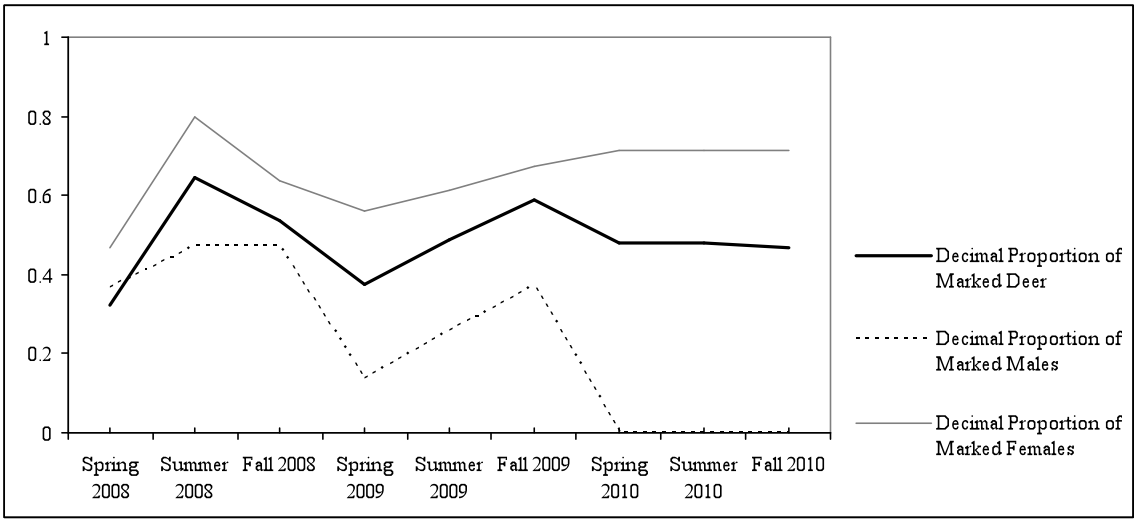

Figure 13a. Deer density (deer/mi^2) estimates derived for Shelter Island and North Haven during 2008-2010 using a capture-resight (Bowden's Model Estimation, NoRemark; White et al., 1982 and White 1996) method.

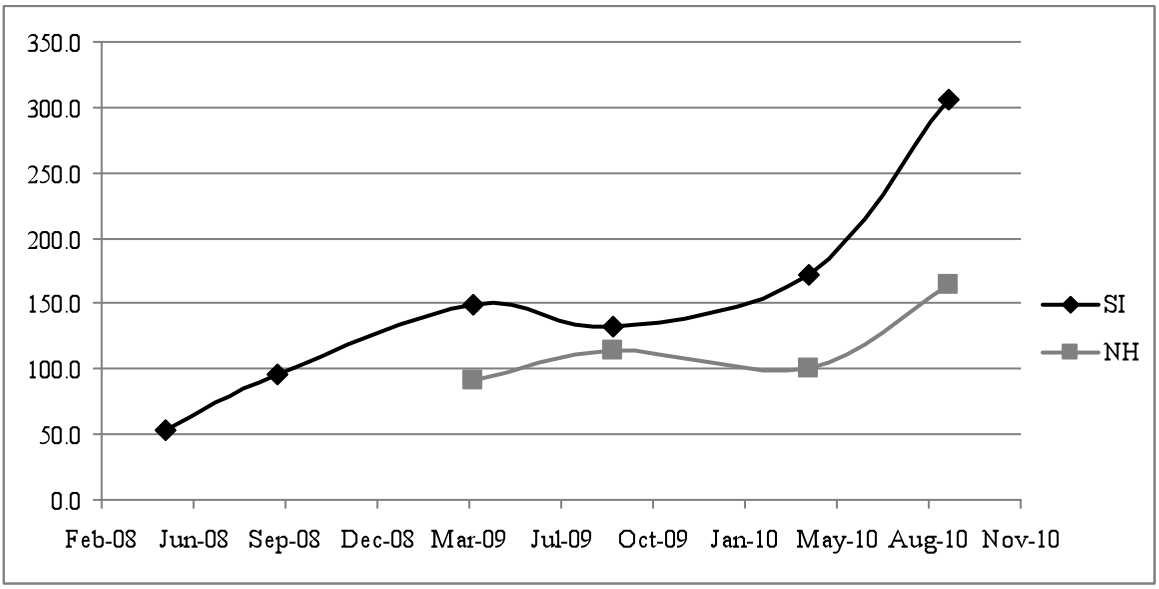

Figure 13b. Deer density (deer/mi^2) estimates derived for Shelter Island and North Haven during 2008-2010 using the branch-antlered buck (BAB) method (Jacobson et al. 1997).

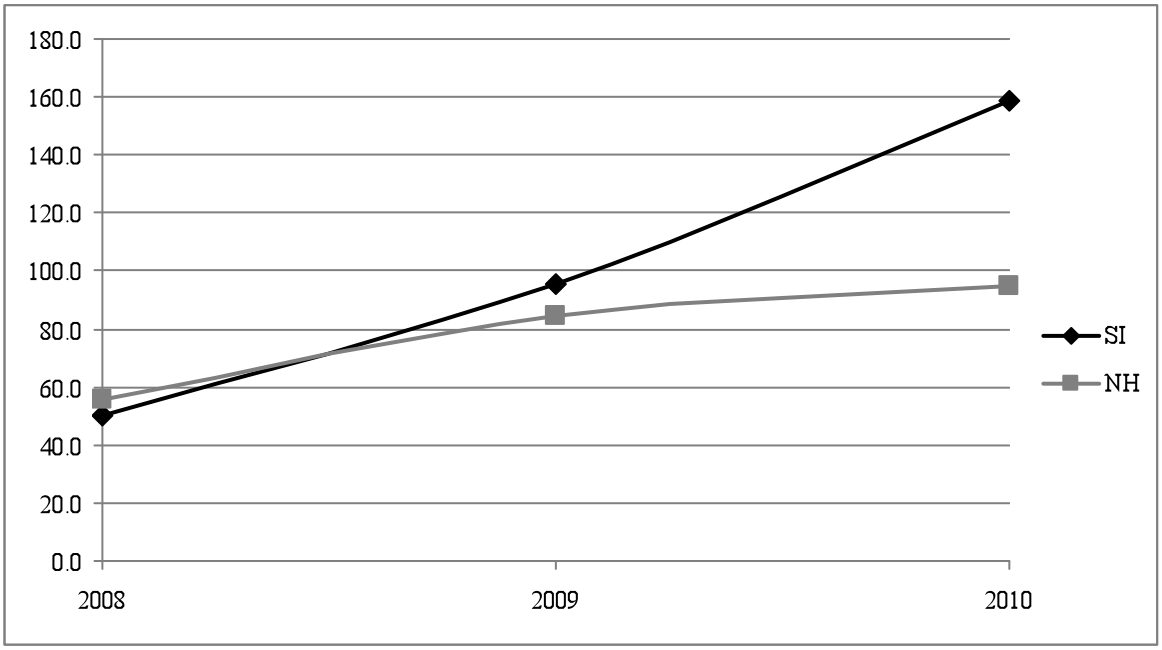

Figure 14. The total number of deer harvested (nuisance and regular season hunts) on Shelter Island, New York each year from the 2006/2007 to the 2009/2010 seasons.

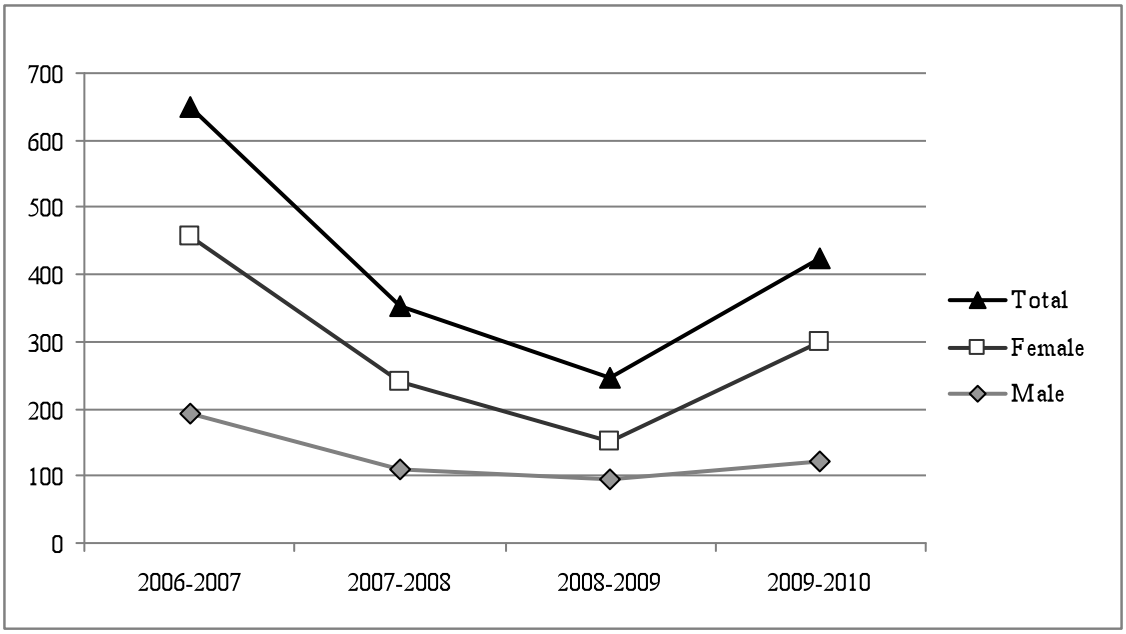

Figure 15. The total number of deer harvested (nuisance season hunt) on North Haven, New York each year from 2005-2009.

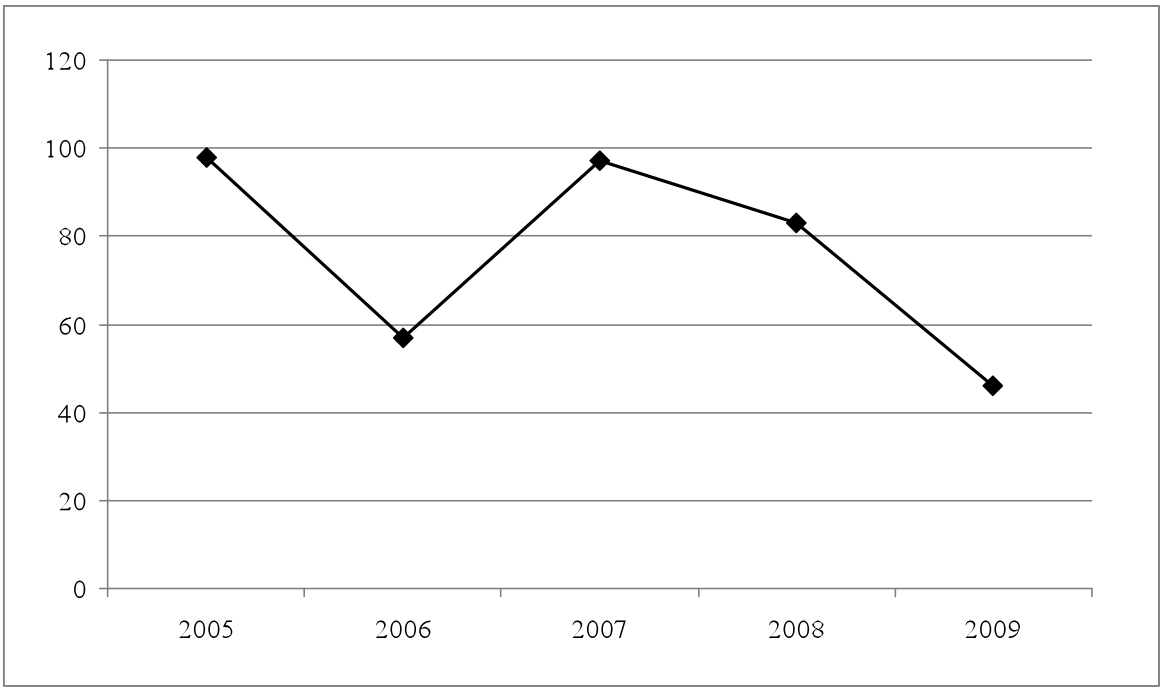

Figure 16a. Average dressed weights (lbs) recorded on Mashomack Nature Preserve, Shelter Island from adult deer harvested during the January special firearm seasons of 2005-2010.

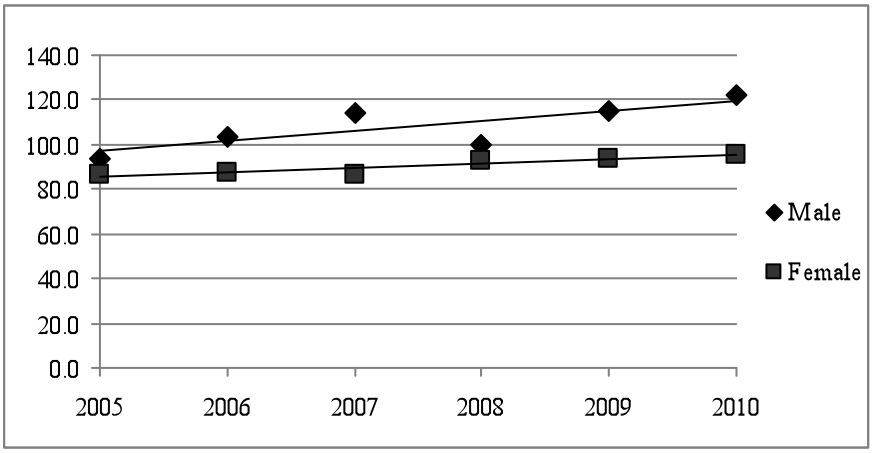

Figure 16b. Average dressed weights (lbs) recorded on Mashomack Nature Preserve, Shelter Island from yearlings harvested during the January special firearm seasons of 2005-2010.

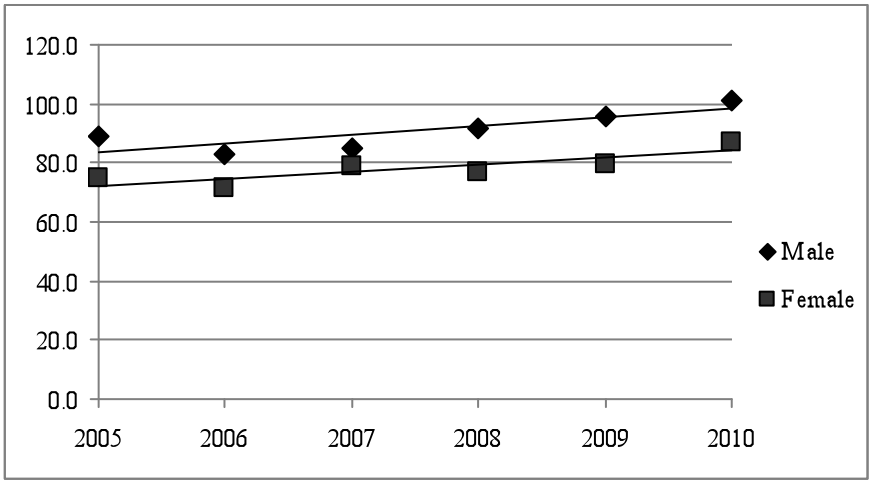

Figure 16c. Average dressed weights (lbs) recorded on Mashomack Nature Preserve, Shelter Island from fawns harvested during the January special firearm seasons of 2005-2010.