



October 2009 white-tailed deer preliminary population estimate on Bald Head Island

Methods

Spotlight surveys were conducted from May through September 2009. Estimates of the population were also conducted using Lincoln-Peterson index via mark-recapture data. Additionally, population estimates were obtained through population reconstruction using harvest data from yearly deer removals.

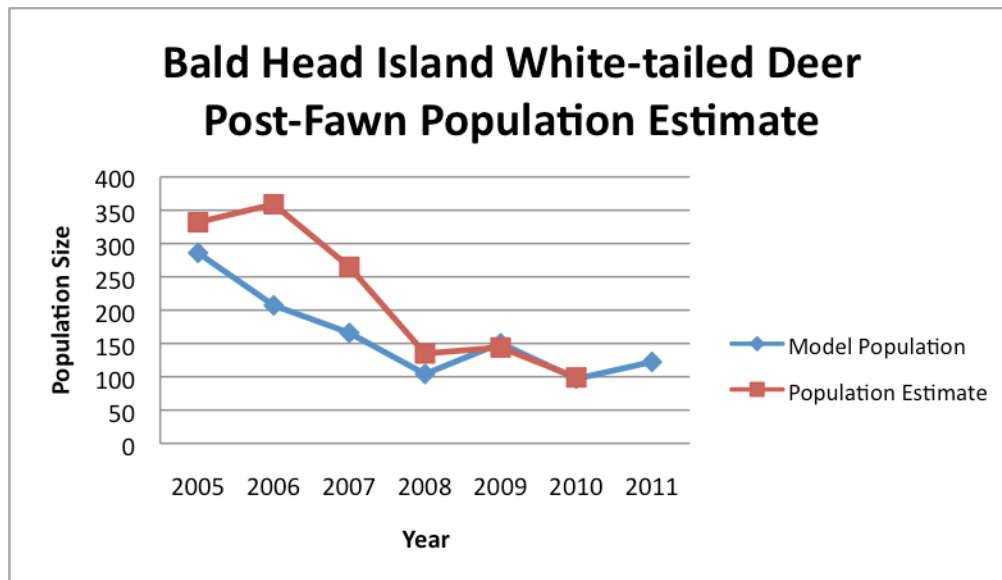
Assumptions:

- Model estimates were derived using an equal number of males and females removed during 2005 and 2006
- Reproductive rate of 87%
- 50:50 sex ratio recruited into the population.
- No immigration/emigration
- No additional mortality.

Results:

Results are preliminary, based upon thirty-four survey nights; 15 pre-fawn and 19 post-fawn.

- Using the Lincoln-Peterson index pre-fawn population estimate was 76 (SE = 14) total animals and the post-fawn estimate was 99 (SE = 23).
- The population reconstruction model provided a 2009 estimate of 97 deer.
- The 2009 pre-fawn and post-fawn population estimate equates to 40 and 52 deer/square mile respectively



Recommendation:

The Conservancy recommends, based on the 2002 task force plan that a population numbers be maintained between 125 and 175 deer with a resulting density of 50/70 deer/sq mile, that no cull be conducted during the winter of 2009/10. In addition we have asked the research scientists to submit a proposal to the village in December 2009 outlining the protocol to begin immunocontraception as a means to keep deer population within the recommended levels.

Additional work continues by Dr. John Taggart to estimate the impact of deer on the Maritime Forest. Although we were alarmed to find little to no live oak regrowth in the forest, deer have so far been ruled out as the causative agent. Research in the forest will continue to refine the carrying capacity of deer in a healthy resilient maritime forest environment and additionally to examine the cause and consequence of little to no live oak regeneration in the maritime forest.

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