

DISTRIBUTION AND ABUNDANCE OF TWO RARE TIGER BEETLES, *CICINDELA DORSALIS MEDIA* AND *C. LEPIDA*, AT ASSATEAGUE ISLAND NATIONAL SEASHORE, 2014

Summary

The 2014 survey to determine the distribution and abundance of *Cicindela dorsalis media* and *C. lepida* was conducted on July 22-24 at 930-1800 h. Conditions were ideal for adult surveys on all three days using the standard visual search method that involved counting all adults observed throughout the areas of potential habitat. The survey area for *C. d. media* included the whole length of shoreline from the north inlet to the Virginia line. This included the ocean shoreline of the North End, the State Park, the NPS Developed Zone and the extensive OHV zone including plover closure areas. Surveys for *C. lepida* were conducted along the whole length of the OHV zone and concentrated in and behind the primary dune line where this species has been most common.

1. The total count of adult *C. d. media* in 2014 was 210, including 7 in the north end shoreline and 203 in the south OHV zone. This count is significantly less than the second highest ever count of 391 in 2013 but similar to counts of 245 in 2010 and 235 in 2011. The distribution pattern in 2014 was similar to other recent years with very few adults counted in the north end and a large percentage scattered throughout much of the OHV shoreline. Other recent north end counts were 14 in 2011, 0 in 2012 and 3 in 2013. Although widely distributed in the OHV zone, most were concentrated at km 25-28 (90 individuals) and at 34-35 (63 individuals). The wide distribution of adults of *C. d. media* in recent years can be explained by their movement into these sections of the shoreline after the area is closed off for plovers.
2. The total count of adult *C. lepida* was 84 in 2014. This low count indicates a pattern of very steep decline since the highest ever count of 976 in 2010. This was followed by the three lowest ever counts: 128 in 2011, 41 in 2012 and 2 in 2013. The very high number of larvae in 2013 suggested there might be a high count of adults in 2014, but obviously this did not occur. In 2014 the adults were quite widely scattered, but concentrated at km 25-28 (29 individuals) and 19-21 (25 individuals). The most likely explanation for these low counts in recent years is a progressive stabilization of the primary dune area with increased vegetation causing a reduction in habitat quality of the cut throughs and overwashes which was the preferred habitat in previous years.
3. Management and survey recommendations suggested previously are still appropriate. Continued high numbers in the closed area of the south OHV zone indicate this area might be suitable habitat if vehicle disturbance is eliminated. Permanent protection of this area might improve the overall viability of *C. dorsalis* at AINS especially since the North end population is marginal at best and probably not viable.