

Report for the July 2013 Beetle Blitz at Acadia NP

The 11th annual bioblitz was held on July 12-15, 2013 at Acadia National Park, with a goal of collecting as many beetle species as possible over an approximately 24-hour period. After the introductory meeting on Friday, the target for Saturday was Mt. Desert Island, and the Schoodic Peninsula on Sunday morning. Forces were quickly marshaled on Saturday morning, for a pleasant and productive day of collecting on Mt. Desert Island. Each of the five previously identified priority areas had a team assigned, with the areas being: Bass Harbor, Canon Brook, Duck Brook, the Great Meadow, and Western Mountain. On Sunday it was free-form collecting on the Schoodic Peninsula, plus gathering of Lindgren funnel and flight-intercept traps with their specimens which had been set up earlier on MDI.

As collecting proceeded, starting Saturday evening specimen processing began, and continued until Monday morning, with the night-time hours not neglected by a few. Specimen sample log-in, rough sorting, mounting, labeling, sorting to species, and finally identifying the species always takes more time than all but the most experienced blitzers can appreciate. At the golden hour of 12 the blitz officially stopped on Sunday, to be followed by the official count of the number of species taken at the end of lunch. The blitz count was announced as being about 200 species seen. This announcement is always an underestimate of the final total, as at that time many of the samples have not yet been sorted nor examined, and the more challenging groups have not been carefully examined for the presence of similar species. As part of the pronouncement, an estimate of the final number of species was given by the lead scientist Don Chandler, written on a scrap of paper that was then misplaced and the number is not now certain, but his faint and possibly erroneous recollection was that the predicted number was 320 species. With that, identification activities commenced again, and by Monday morning over half of the material had been identified to species, and 7 boxes accompanied Don back to the University of New Hampshire to await identifications.

The identifications were completed just in time to meet the NPS deadline for final reports. The total was 371 species in 53 families, with the totals for the most diverse 10 families for 2013 (and three notable families for 2005) being:

	2013	2005
Curculionidae	49	45
Chrysomelidae	<u>35</u>	24
Staphylinidae	35	<u>45</u>
Carabidae	31	34
Elateridae	27	25
Cerambycidae	19	16
Cantharidae	16	22
Scarabaeidae	14	12
Tenebrionidae	<u>14</u>	8
Hydrophilidae	8	7
Dytiscidae	7	<u>18</u>
Nitidulidae	5	<u>10</u>
Silphidae	2	<u>6</u>

There were 103 species newly recorded for ANP, or 28% of the species taken. The first

Coleoptera bioblitz produced 349 species in 46 families. Both in species numbers and families represented, the 2013 blitz is a notable increase over the 2005 Coleoptera bioblitz. When the lists of more diverse families from both years are compared, some shifts are apparent. In 2005 the use of a number of fruit and carrion bait traps produced species in the Nitidulidae (sap beetles) and Silphidae (carrion beetles) that were not taken in 2013, and the use of specialized collecting and processing protocols by those interested in Dytiscidae (predaceous diving beetles) and Staphylinidae (rove beetles) in 2005 generated larger numbers of those groups. Noticeable increases in 2013 were seen amongst the Chrysomelidae (leaf beetles), and Tenebrionidae (darkling and comb-clawed beetles), which indicates that sweeping on the more botanically diverse MDI was more productive than on the Schoodic Peninsula.

In summary, a new record for beetle species and families, 103 species newly recorded for ANP, a beautiful day and productive new sites on MDI, all led to a very successful 2013 bioblitz.