

Results from the Acadia National Park 2014 Bioblitz

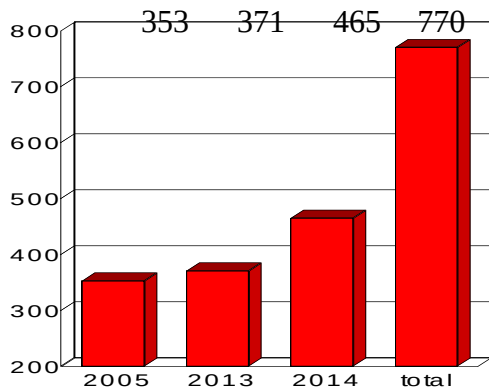
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On the beautiful weekend of July 18-21 around 70 “blitzers” participated in the third bioblitz that targeted beetles of Acadia National Park. After the round of introductory and organizational talks on Friday evening at the Schoodic Education and Research Center, the “24 hour” period of intensive collecting began Saturday morning. Saturday was devoted to Mt. Desert Island, where five ecologically different areas were targeted by groups of “beetlers”: Bass Harbor, Canon Brook, Duck Brook, Great Meadow, and Western Mountain areas. On Sunday was a period of free-form collecting on the Schoodic Peninsula in the morning, and the gathering of the various traps (pit-falls, flight intercept, Lindgren funnel, and baited malaise traps) ran through the afternoon. During this period and Monday morning, voucher specimens were mounted, labeled and sorted/identified to species where possible. Ten boxes of specimens returned with the lead scientist, UNH coleopterist Don Chandler, so that the more challenging material could be identified at a leisurely pace. Parts of this material was subsequently farmed out for visitors to UNH (Jonas Insinga), or those at other institutions to identify (Bob Nelson, Colby College; Ales Smetana, Serge LaPlante, Pat Bouchard, Ed Jendek, Canadian National Collection of Insects, Ottawa). As the specimens were identified, the data were entered into a database that captured the “who, what, when, and where?” of each voucher specimen that documented presence of species at the targeted areas.

After lunch on Sunday there is a traditional report on the success of the blitz, typically a guesstimate of the number of species taken, though a significant portion of the material collected is still being processed and hasn’t been thoroughly examined. The guesstimate was **320** species, with speculation that the final count would probably turn out to be higher, as it always is.

The final count is **465** species, the most ever of the three beetle blitzes, and in fact is nearly 100 more species than were taken during the 2014 beetle blitz (**371**), or 2005 beetle blitz (**353**). There is now a total of **770** species of beetles produced by the three beetle blitzes. For year 2014 **209** species were taken for the first time at the beetle blitzes, and 33 of these species are new state records based on the list by Majka et al. (The Coleoptera of Maine).

years	2005	2013	2014	total
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species

Between year similarity in species lists has been low, with only 94 species collected all three years, and only 50% overlap between years 2013 and 2014. Each year has been different in terms of the species collected, and in each year another large number of species has been added to the park list. The five collectors who captured the most species are listed below, with two individuals collecting well over 100 species. Systematic use of various traps (particularly flight intercept and malaise/Santé traps), examination of fungi, observant searching, and productive sweeping were noticeable factors in leading to the increase in species.

Collector	# species
M. DiGirolomo	166
J. Insinga	137
D. Chandler	78
R. Nelson	76
B. Woo	62

The eight families with the most species consistently account for 60% of the total species for each blitz, and the total number of families produced by the Acadia blitzes has risen to 65 families. Of these 93 species of weevils (Curculionidae), 79 species of Staphylinidae, and 75 species of Carabidae round out the top three families.

	2005	2013	2014	total spp.
Cantharidae	20	16	16	33
Carabidae	33	31	43	75
Cerambycidae	13	19	27	43

Chrysomelidae	24	35	40	67
Curculionidae	39	49	65	93
Elateridae	22	27	33	50
Scarabaeidae	12	13	16	27
Staphylinidae	43	35	35	79
	206	225	275	467

Based on the number of species collected, this was the most successful blitz of the three, but an important part of “success” must take into account the good weather, camaraderie, and satisfaction in contributing to an increasing knowledge about the biodiversity of a beautiful national park.