

## RESULTS OF THE LOBLOLLY MARSH WETLAND PRESERVE BIOBLITZ, JAY COUNTY, INDIANA

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The term “BioBlitz” was coined by Susan Rudy, a U.S. National Park Service naturalist, while helping to organize the first BioBlitz held at Kenilworth Aquatic Gardens, Washington D.C. from May 31 to June 1, 1996 (BioBlitz Center 2009, Post 2003). A BioBlitz (also written bioblitz), short for biodiversity blitz, is a rapid assessment of the flora and fauna living in a particular area at a given point in time (Field Museum 2007). It is essentially a “snapshot in time” of the living organisms of a particular site. A full BioBlitz must take place over a full 24-hour period since different organisms will be found at different times of the day. Additionally, it should be noted that since the species pool changes throughout the year, a one day BioBlitz will not produce a complete inventory of the biodiversity of the site. Lastly, the success of the event is based primarily on two factors, i.e., the organization of the event and the team of dedicated scientists, naturalists, and volunteers conducting the surveys.

On 19–20 June 2009, a 24-hour BioBlitz was held at the Loblolly Marsh Wetland Preserve (part of the Limberlost Swamp) in Jay County, Indiana. The event was held to honor the one-hundredth year anniversary of the publication of *A Girl of the Limberlost* by Gene Stratton-Porter, an Indiana native whose concern regarding the ecological consequences of deforestation and wetland drainage foreshadowed the environmental movement of today (Library of Congress 2009). The event was organized by Jamie Faller, Program Developer, Limberlost

State Historic Site and Anne Fairchild, Eastern Region Program Manager, Indiana State Museum and Historic Sites in collaboration with a number of partners (see Acknowledgments).

The results of the BioBlitz (Tables 1–8) are presented on the Indiana Academy of Science Website at [indianaacademyofscience.org](http://indianaacademyofscience.org). The results of two previous BioBlitz events (Otter Creek, Vigo County from 2005 and Wesselman Woods, Evansville, Indiana from 2008) are also available. Once on the website click on Events/Meetings, then click on BioBlitz Information; the lists are indicated by year, 2009, 2008, or 2005). The Loblolly BioBlitz recorded a total of 545 species, including two bees, 55 birds, 24 butterflies and moths, 29 dragonflies and damselflies, one fish, 25 fungi, 15 reptiles and amphibians, two insects (miscellaneous), five mammals, 376 plants, and 11 sciomyzid flies.

**Amphibians & reptiles.**—A total of nine amphibians (two salamanders and seven frogs) and six reptile species (two turtles, one lizard, and three snakes) was recorded. Of special interest was the abundance of *Acris crepitans* (Northern Cricket Frog) and *Rana pipiens* (Northern Leopard Frog) at the Loblolly site. These two species have been the center of attention in northern Indiana in recent years due to apparent dramatic declines in populations. *Rana pipiens* was the most frequently encountered amphibian; dozens of juveniles would scatter across the water as the herpetology team waded into wetland areas. After dark, the newly transformed juveniles literally cov-

ered the main road through the preserve. *Acris crepitans* was also abundant and could be heard chorusing from all of the major wetlands, suggesting that the preserve serves as a refuge for amphibians and is potentially an important source population for these two species, and possibly others, that are declining elsewhere. Photo-vouchers were taken for all specimens and are maintained by Daryl Karns at Hanover College.

**Odonates (dragonflies & damselflies).**—A total of 29 odonate species was collected or observed, including 17 new Jay County records (Abbott 2007; Curry 2001). In addition, the flight season of one species, *Sympetrum vicinum* Hagen [Autumn Meadowhawk], was extended by nearly two weeks, and *Tramea onusta* Hagen [Red Saddlebags], listed as “uncommon,” and *Sympetrum corruptum* (Hagen) [Variegated Meadowhawk], listed as “rare” for Indiana by Curry (2001), were collected. Voucher specimens have been placed in the Franklin College Indiana Odonata collection.

**Sciomyzid flies.**—Eleven species of Sciomyzidae (snail-killing flies) were found, all new for Jay County: *Dictya expansa* Steyskal 1♂; *D. pictipes* (Loew) 1♂; *D. sabroskyi* Steyskal 1♂; *Ditaeniella parallela* (Walker) 40♂ 41♀; *D. trivittata* (Cresson) 1♂ 1♀; *Limnia boscii* (Robineau-Desvoidy) 1♂; *Pherbellia nana nana* (Fallén) 1♀; *P. seticoxa* Steyskal 10♂ 8♀; *Sepedon armipes* Loew 6♂ 5♀; *S. fuscipennis* Loew 1♂ 2♀; *Tetanocera loewi* Steyskal 3♂ 1♀. The number of species was average, whereas the numbers of *D. parallela* set a new national high. This species oviposits on dying or decaying snails. A 1 m<sup>2</sup> circle of dead *Planorbella trivolvis* (Say) snails in the center of a dried pool hosted about 200 *D. parallela*. Also noteworthy were numbers of *P. seticoxa*, normally found singly or in pairs, and the lone *D. trivittata*, only the fourth individual from Indiana of a species first discovered in the state one month prior to the BioBlitz.

**Birds.**—The 55 species reported at the BioBlitz represent a list of common birds of field and woodland. It is augmented by a number of marsh and wetland birds, most notable were *Porzana carolina* (Sora) and *Nycticorax nycticorax* (Black-crowned Night Heron). Special birds of open areas were *Dolichonyx oryzivorus* (Bobolink) and *Spiza americana* (Dickcissel). Raptors were lacking except for *Falco sparverius* (American Kestrel).

**Butterflies and moths.**—The list of 24 species focused mostly on larger butterflies; skippers and moths were generally not recorded. Notable species included *Satyrrium liparops* (Striped Hairstreak) and *Euphydryas gilletti* (Baltimore Checkerspot).

**Plants.**—Of the 376 plant species recorded, 306 (81.4%) were native and 70 (18.6%) were exotics. The native plants included 61 woody species (33 trees, 20 shrubs, and 8 vines), 175 forbs, 5 herbaceous vines, 27 grasses, 37 sedges, and 1 fern. The exotic plants included 6 woody species (3 trees, 3 shrubs), 50 forbs, and 14 grasses. The floristic quality index (Rothrock 2004) for the native species was 61.1 and for all species was 55.1; the native mean C was 3.5 and the mean C for all species was 2.9. These numbers suggest that the site has some remnant natural quality, but the exotics are having a negative impact. Lastly, three species are state listed. *Carex leptonevia* (Few-Nerved Wood Sedge) [endangered]; *Hydrastis canadensis* (Golden Seal) and *Tripsacum dactyloides* (Eastern Gama Grass) [watch list] (Division of Nature Preserves 2007). *Tripsacum dactyloides*, which occurred in a restored prairie, was probably introduced. A limited number of vouchers were collected for identification of unknown species and were deposited at the Ball State University Herbarium (BSUH).

**Fungi.**—Although it rained the Thursday before the BioBlitz, it had been very dry the six to eight weeks prior. As a result, 23 of the 25 fungi recorded were typical “wood-rot” fungi. Twenty-three of the fungi were basidiomycetes, including *Puccinia podophylli* [May Apple Rust] and *Rhodotus palmatus* [Netted Rhodotus], and 2 fungi were ascomycetes, including *Sarcoscypha coccinea* [Scarlet Cup] and *Galiella rufa* [Hairy Rubber Cup]. No voucher specimens were taken.

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