

DRAGONFLIES ON FORT DRUM

The first dragonfly survey ever conducted on Fort Drum took place the summer of 2007. This survey was conducted by two volunteers as a part of the New York Dragonfly and Damselfly Survey (NYDDS), a 3-year state-wide effort. Surveys will continue July - September 2008.



A Halloween Pennant—a dragonfly. (Photo Vici & Stephen Diehl)

Dragonflies and damselflies are one of the most noticeable types of insects due to their size, flight pattern, and colorful bodies. They are often found near water—lakes, ponds, wetlands, rivers, and streams. Dragonflies lay their eggs in or on aquatic vegetation or directly in the water. Once a dragonfly egg hatches, it becomes a nymph. Depending on the species, nymphs live for a few months to a few years underwater eating voraciously on daphnia, mosquito larvae, other dragonfly nymphs, and even tadpoles and small fish. A dragonfly nymph can eat up to 60 mosquito larvae per hour.



An Ebony Jewelwing—a damselfly (Photo Vici & Stephen Diehl)

Once the nymph has completed its development, it moves from the water onto a plant stem, rock face, or other structure. The skin splits open and an adult dragonfly gradually emerges. As an adult, dragonflies continue to be voracious predators eating many flying insects including mosquitoes. Neither dragonflies or damselflies bite or sting humans.

During five visits to Fort Drum in July and August 2007, at least 30 species were identified including 15 dragonflies and 15 damselflies including one damselfly hybrid. A list of these species can be found on Fort Drum's Fish & Wildlife Management web site.

There are over 190 species of dragonflies and damselflies in New York. It is predicted that there should be at least 90 species in Jefferson county, but as recently as 2006, only 47 species had been recorded. The 2007 survey on Fort Drum added two new county records each for Jefferson and Lewis counties.

The information gained as a result of the NYDDS will be important in the development of New York's State Wildlife Plan with respect to the conservation of these insects. NYDDS is a project of the New York State Department of Environmental Conservation (NYSDEC), and the New York Natural Heritage Program (NYNHP). The project is being supported with funds from the U.S. Fish and Wildlife Service State Wildlife Grants program, administered by NYSDEC.

To learn more about the state-wide effort, see the NYSDEC web site at: <http://www.dec.ny.gov/animals/31061.html>.

INDIANA BAT SURVEYS CONTINUE FOR SECOND YEAR

Fort Drum began the first installation-wide bat survey effort in the summer of 2007 with the focus on the federally endangered Indiana bat. (See the Spring 2008 *Blaze Orange* newsletter for results.) In 2007, bats were surveyed at 57 sites in the Training Area; in June-July 2008, 40 sites were surveyed.

Bats are captured in mist nets as they fly about foraging for insects at night. Information is collected on all bats that are captured. For Indiana bats, a radio transmitter is attached so they can be tracked to their roost sites during the day. See the table below for a summary of bats captured in both years.

BATS CAPTURED IN TRAINING AREA		
	2007	2008
Big Brown Bat	519	224
Little Brown Bat	353	102
Northern Long-eared Bat	182	38
Eastern Red Bat	49	14
Hoary Bat	6	4
Silver-haired Bat	4	3
Eastern Pipistrelle	3	0
Indiana Bat	1	2
TOTAL BATS	1380	380

During survey efforts in 2007, 17 Indiana bats were captured in the Cantonment Area. This year, a separate project is underway in the Cantonment Area to track Indiana bats more regularly to their roost sites as well as while foraging to better determine the areas and habitats important to their continued existence. As of August 1, eight Indiana bats had been captured. More information about the Cantonment Area study will be in future issues of the *Blaze Orange* newsletter.



Bat #952, a female Indiana bat captured on Fort Drum in June 2007. The bat has a band on its arm and a radio transmitter attached to its back. (Photo Adam Mann)