What makes us human?

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The Flight of the Dragonfly

Life abounds near the shimmering surface of Botany Pond. Lily pads yawn across the water. Fish and turtles glide below. Reeds sway in the breeze above.

Dragonflies—tiny wonders of aerodynamics—zoom in and out of the ecosystem. And on the lawn nearby, you’ll find Michael LaBarbera, PhD, filming their flight.

LaBarbera, a professor of organismal biology and anatomy, may be among the first to record in great detail the flight, interaction and mating habits of dragonflies in the wild.

With a digital camera that captures 500 frames per second, he records videos in a slow-motion format that stretches 2.5 seconds of dragonfly flight into 42 seconds on screen.

The high-resolution images—about 1,000-by-1,000 pixels—show the flight and mating of dragonflies in crisp detail: The way each of a dragonfly’s four wings moves independently. The little slits a female green darner cuts into a lily pad so she can lay her eggs. How quickly mating dragonflies can escape a hungry duck’s beak as it lunges for a snack—of them.

The images captured in the natural setting of Botany Pond (just a few steps from the Zoology building) are unlike anything scientists observe in labs, LaBarbera said. “The best part is I can sit by the pond for two hours a day and say, ‘I’m busy! I’m working!’”

Videos made on summer days, the height of dragonfly season, will be analyzed later in the year. LaBarbera will use the images to compare how quickly the dragonflies take off and accelerate in a number of different situations: alone in safety, alone under attack, and a male and female flying in tandem under those same conditions.

“To me,” LaBarbera said, “part of the charm of this is that this wonderful ecosystem is in the middle of Chicago.”

—Suzanne Wilder