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Eye on the Environment

Dragonfly Addiction

By Andrea Stephens, Northwest Connections

A friend recently warned me that birding is like a gateway drug, leading to experimentation with other natural obsessions. In my case birds have led to many things, but most recently to Odonates – otherwise known as dragonflies and damselflies (hereinafter referred to collectively as dragonflies). I don't know a whole lot about their identification yet, but isn't that part of the problem with addictive substances? You don't necessarily know what you're getting yourself into.

This newest compulsion springs from a phenomenon that began last summer. For 10 days in August, 2010, my family and I watched from our backyard in Missoula a migration of dragonflies numbering in the thousands. Who knew dragonflies migrated? What species were they? Where had they come from and where were they going?

Then, astonishingly, earlier this summer, that same species began emerging out of a small pond my husband laboriously dug in the middle of our otherwise grassy backyard. Had the migrating adults stopped briefly to reproduce in our pond last year? Could their eggs, or perhaps their nymphs, have overwintered in our 2 foot deep pond?

Fueling my dragonfly addiction is the fact that citizens and scientists alike don't know much about them and therefore observations, photos, and written records of people like me and my family could turn out to be important.

Dennis Paulson, author of the field guide [Dragonflies and Damselflies of the West](#), writes, "There is no real line between amateur and professional odonatologists. For better or worse, very few people make a living studying Odonata. Thus, the great majority of those

studying and writing about odonates can be classified as nonprofessionals, and they are the ones who have contributed so much to our knowledge of dragonflies. I cannot emphasize enough how much these people (including the reader of these words) can continue to contribute, both by making observations and by sharing them with others."



Black-Tipped Darner Dragonfly emerging from its aquatic shell. Photo by Andrea Stephens.

What's more inspiring than imagining that while sloshing around in the Swan's 4000-odd wetlands, or sitting on your back deck, you might make an important scientific discovery? For the record, our migrating dragonflies turned out to be Variegated Meadowhawks, and while they are known to be highly migratory along the Pacific coast, reports of them migrating within or through Montana are apparently unknown.

I corresponded with Paulson about our migration event and he suggested that they most likely had stopped en route to reproduce at our pond last summer since our local Meadowhawks wouldn't have had time this year to mate, lay eggs and metamorphose all before July. He didn't know whether this is typical behavior during migration or not, since much isn't known about them.

Before emerging as aerial predators, dragonfly nymphs live from months to years in wetlands and flowing

streams alike, their bodies uniquely adapted to life underwater. The density of the Swan's wetlands, as well as the miles of riparian corridors, means you are likely to encounter dragonflies almost anywhere in the area. I haven't poked around in many Swan wetlands that didn't harbor dragonfly nymphs.

Adults of the especially large dragonfly species are strong enough fliers that they can disperse widely throughout the valley and some appear far from water. Earlier in August, at Smith Pass in the Swan Range, I watched large dragonflies moving west over the snow-covered divide at about 7900 feet!

As with birds, you can find many different types of dragonflies in a single environment. One hot afternoon several weeks back, I was struck by the density of damselflies buzzing around our property at Northwest Connections.



Emerald Spreadwing Damselfly. Photo by Andrea Stephens.

In about an hour of swinging my net around and creeping on hands and knees through the sedges, I had caught and (with later help) identified a Taiga Bluet; a Northern or Boreal Bluet (confusing enough that some folks refer to them as NoBos); a gorgeous green Emerald Spreadwing; a Belted Whiteface covered in water mites; and a tiny Sedge Sprite: in all, 4 damselfly species and 1 dragonfly. All without moving more than 25 feet in any direction. And that didn't count the several dragonfly species I was unable to catch as they flew out of reach over the water.

Nate Kohler of Deer Lodge is one of those "amateur Odonatologists" whose spare time is devoted to researching and photographing dragonflies around the

state. It turns out that Nate has spent some time hunting Odonates near our Northwest Connections facility. In late July, he turned up a Brush-tipped Emerald dragonfly off Cold Creek Road. Apparently his specimen is "only the third record of this uncommon species in Montana" and a new record for Missoula County.

Nate is an extraordinary example of what one "amateur" can contribute to our collective knowledge of invertebrates. He has bagged all kinds of "firsts" around the state, some as recently as last week! (Should anyone be keeping track, he also happens to be a serious birder....)

The invertebrates populating our headwaters streams as well as our great diversity of wetlands have received little scientific attention. I noticed recently a report from the Natural Heritage Program of a series of surveys conducted between 2006-2008 by crews from the USFS, FWP, Natural Heritage Program, and others. The surveys confirmed a "hotspot" of rare aquatic invertebrate species on the Idaho/Montana border, an area known as the Northern Rocky Mountain Refugium. The surveys included the Clearwater drainage, but stopped at the Swan divide and didn't include Odonates.

Imagine what a thorough survey of the Swan might yield?

New Hampshire, New York and Maine have all instituted volunteer-based, statewide Odonate surveys with great success, meaning they've added species to their statewide lists, identified rare or endemic species, and documented new range extensions of known species, all relying on trained amateurs.

Imagine what the current population of birders armed with binoculars, digital cameras and internet access could do in our own region? But please don't blame me for getting them hooked.