

FWS Interviewer Valerie Fellows:

Hi my name is Valerie Fellows and I work with the U.S. Fish and Wildlife Service's Office of Public Affairs. And today, I'm talking with Wedge Watkins, refuge biologist and the Midwest region's pollinator coordinator. And today we're going to be talking about pollinator surveys on Big Muddy National Fish and Wildlife Refuge in Missouri. Hi Wedge, and thanks for joining us.

FWS Wedge Watkins:

Hi Valerie, thanks for having me.

FELLOWS

So what kind of pollinator survey work are you doing?

WATKINS

Well we started a cooperative project five years ago with a group of partners and it began as a look at moths and butterflies on one of our refuge units here on the Big Muddy Refuge and our partners were a local Missouri Master Naturalist chapter, the state Department of Conservation, and the University of Missouri in Columbia.

FELLOWS

So what kind of pollinators are you surveying for and across what type of habitats?

WATKINS

Great question, we are looking in three habitat types, our refuge is located within the flood plain of the Missouri River and on some adjoining bluff lands. So we are looking at three habitat types. They include a bottomland wet prairie environment, a bottomland forest environment, and an upland old field. And within those habitats, our refuge is fairly new, so fifteen years ago, the bottom land portion, fifteen years ago was in row-crop agriculture. And after some severe flooding, the refuge purchased the land and is in the process of restoring native habitats. So we're using this pollinator monitoring to gage how we are doing with our restoration efforts as well as establishing a baseline for the pollinators that are present there.

FELLOWS

So what have you found so far with your survey work?

WATKINS

Well during the first three years we looked at moths and butterflies and in the past two years and then again this field season, we are looking at native bees. And, to date, we have found about 140 moths and butterflies and about 100 species of native bees.

FELLOWS

Wow. So what's the most unusual, or is there something very interesting that you found in your surveys?

WATKINS

We have found a number of things. Of course, pollinators in general are poorly studied. And particularly in the National Wildlife Refuge system, we're just really beginning to understand their importance. So every day that we go out, and every day that we spend in the lab doing identification, is a learning experience. But we have found some unusual bees, for example, that are only associated with big river wetlands. And we have recorded a couple of new species for the state and several new species for the county in which we're observing. We've also, during the moth and butterfly survey, found a sensitive species that wasn't known to occur on the refuge.

FELLOWS

Wow. So you've been doing this survey work—this is the sixth season—how long will it continue, and then what are the next steps?

WATKINS

Well this is our final field season. We wanted to make sure that we captured a good portion of the insects that are there as a baseline. And we wanted to look over a significantly long period of time to encompass our summer weather possibilities. So the first couple of years were drier than normal, the last four years have been wetter than normal, so we feel like we've done that. Because of this association between many of the pollinators and specific genera of plants or certain family groups of plants, in other words there are some pollinators that only visit daisies or asters or willows. Because of that close association, it makes it ideal for tracking changes over time, both to the plant community and to the insect community. But also, because we have captured a wetter than normal scenario and dryer than normal scenario then we should be able to correlate the changes that we observe over time to other issues like climate change or to man-made management changes within the watershed.

FELLOWS

And then when will you come back for your next survey?

WATKINS

Well beginning this fall, we'll be processing the data that we've accumulated. We still have probably 30 or 40 percent of the bees yet to be identified. We've done most of the ones we're able to do and we're going to need to enlist the help of some experts to finish the identification work. So we'll still be adding species over the winter. And then we want to summarize the data that we found. It turns out that there is a close association between pollinators and plants. And on this particular refuge unit, we've got some permanent veg (vegetation)-plots established so we should be able to track changes in plant community as well as pollinator community over time. We hope to revisit the site in five to 10 years.

FELLOWS

Okay great, thanks again, so much, Wedge for taking the time to talk with us about the survey work you're doing on Big Muddy National Fish and Wildlife Refuge in Missouri.

For more information about this project and pollinators in general please visit,
www.fws.gov/pollinators.