

## What is the Monarch Premigration Migration?

Monarch Matters: September 2013

by Candace Sarikonda, Monarch Watch Conservation Specialist

Fall is my favorite time of the year. Last summer, I was saddened to see few monarchs in my yard. Drought had devastated milkweed and nectar sources in the south, and intense heat had desiccated eggs in our area and driven the monarchs further north. But, like clock-work, the premigrants arrived, and I began finding eggs again in early to mid-August. Once again this year, I did not see monarchs all summer, and heard few reports of anyone in our area finding evidence of monarch activity. The southern drought had continued, and little milkweed was available for monarchs heading north into Texas this spring. On top of it, monarchs migrating north along the central flyway were greeted with unusually cold weather, which stalled the northward migration and prolonged larval development. Our record-low monarch population met a less than ideal scenario this spring that would most likely impair their ability to reproduce in strong numbers over the summer—would I see a monarch this year?

It is mid-August as I write this, and I am once again seeing monarchs in my yard laying eggs (ovipositing) (From Toni – under the leaf in the photo). Some monarchs appear to be freshly eclosed, indicating they are from our local area. But others appear worn, and I find them to be very skittish as they crawl through my bushes, searching for the choicest milkweed upon which to lay their eggs. These worn monarchs are most likely premigrants. Huh? There's that word again. What do I mean, "premigrant?"



First, let me tell you a story. A few years ago, I was working to help OSU students and staff to create a certified Monarch Waystation at South Bass Island lighthouse in Lake Erie. South Bass island is located directly south of Point Pelee, Canada, a major monarch stopover during the fall migration, located on the northern shore of Lake Erie. I was on the island all weekend at least every 2 weeks that summer. All summer long, my friends and I did not see monarchs on the island. Friends kept coming to me, asking, "Where are the monarchs?" BUT, when I arrived to the island on August 13, 2011, there were

monarchs EVERYWHERE. We were all delighted—friends and I watched as monarchs oviposited, fed heavily from nectar plants, and flew all around us. They were laying eggs on the milkweed at the butterflyhouse grounds, in two friend’s yards, at the nature center—it was a stunning sight. But what on earth was I seeing? No monarchs all summer, and suddenly WHAM!—they’re all over. And in mid-August, a full month before the fall migration usually passes through northern Ohio.

I went to D-plex, Monarch Watch’s listserv, and posted my observation. “What is going on?” I asked. Dr. Karen Oberhauser of the Monarch Larva Monitoring Project (MLMP) at U of MN responded. It was the premigration.

For the past 15 years or so, Dr. Chip Taylor of Monarch Watch has been referring to a “premigration migration,” a migration of reproductive monarchs that moves south beginning in late July. Dr. Taylor made several observations of monarchs moving southward in late July, and noted that other monarch watchers were seeing similar behavior. People were calling Monarch Watch wanting to know why the monarchs were migrating so early. These monarchs were migrating, and some were laying eggs! See Dr. Taylor’s discussion on this topic at <http://www.texasento.net/premig.htm>

Dr. Oberhauser further notes that from MLMP data, observers in the central and southern US begin to see monarch adults, eggs and larvae after not seeing them most of the summer. She explains, “It makes evolutionary sense that some monarchs would fly south as they laid their eggs, since an egg laid in August in Missouri or Virginia is probably more likely to develop and migrate to Mexico than one laid in Minnesota, where a hard freeze in early September is not that uncommon.”

Gail Morris, director of the Southwest Monarch Study (SWMS), also points out “...where I live in the greater Phoenix area we usually see them (premigrants) right around September 1<sup>st</sup> each year and they load up our milkweed with eggs as they sweep through. With our warm temperatures, they have just the right amount of time to complete their life cycle and join our main migration for the 33<sup>rd</sup> latitude from September 29 to October 11.” She says, “It’s rather fun to look for this wave, so if you’ve never done this before, check your latitude and watch for monarch and egg-laying activity.”

The premigrants will travel through your area about 30 days before the main fall migration. (Note from Toni – put “city state latitude” in a web search engine to discover your latitude. Columbus and Cincinnati are 39 and Cleveland is 40.) Use your latitude to check when the peak fall migration usually occurs in your area at <http://monarchwatch.org/tagmig/peak.html>. Then start looking 30 days before that time, and you may note the premigration! Let’s hope these premigrants find ample milkweed for egg laying, and loads of nectar sources to sustain them as they move south. We need their offspring to contribute to the overwintering population in Mexico this winter.