

Heard it through the Pipevine



Newsletter of the Austin Butterfly Forum • www.austinbutterflies.org

We have a smorgasbord of great articles this month. David Dauphin follows up his June talk with more information about their little heaven in South Texas. Peg Wallace helps us remember the amazing things about dung beetles and gives us some practical advice on identification and care. Mike Quinn tells us about the migration ecology of snout butterflies in south Texas. And Phil Schappert gives us good news on Monarchs.

Club Meeting

Monday September 26, 7:00 pm Zilker Botanical Garden Center

Phil Schappert, Ph.D., will present a program titled, "**Butterflies of the Lost Pines**." The Lost Pines of Bastrop Co. offer an intriguing juxtaposition of Post Oak Savanna, Blackland Prairie and East Texas Piney Woods communities. Updated historical records list 135 species of butterflies and skippers in Bastrop Co. and 111 of these species have been confirmed in the past 8 years. A full century, 101 sp. (so far), have been found at the 208 acre Stengl "Lost Pines" Biology Station between Smithville and Bastrop.

Membership Policy Change

As of July 2005, club membership has changed from rolling renewal to calendar year renewal. The cost is \$20 per household, as usual, but mid-year and late-year membership fees will be prorated for the remainder of the year. For example, a person joining the club in October '05 would pay \$5 for membership through December '05 and then renew at \$20 for 2006.



Crimson Patch Caterpillar (D. Dauphin)

A Garden Grows in Mission

by David Dauphin

Jan and I thoroughly enjoyed visiting with the Austin Butterfly Forum and talking about the great finds of 2004 and how our yard was established. In one year, we had 121 species of butterflies in our yard. The yard is tiny, 100ft X 50ft with a house in the middle of it. However, we have managed to put in a small pond, stream, and bog and 74 species of host and nectar plants. Very little planting space is left, but we still have 3-5 more plants we want to use. Our garden is almost 2 years old.

The landscapers who designed our yard knew little about butterflies but knew a great deal about the native plants of the lower Rio Grande valley. Fortunately, we had Mike Quinn's "Butterfly Plants for the Lower Rio Grande Valley" and "Caterpillar Food Plants for the Lower Rio Grande Valley of Texas" lists to go by. Of the 74 plant species in the yard, most are native to within a 50 mile diameter circle with our Mission house in the center, with the exception of two Porter Weeds, a Dwarf Dorante, a Flame Acanthus, Wooly Ironweed, Late Eupatorium, Cardinal Flower that we put in the bog, a Guamuchil Tree (*Pithecellobium dulce*) host plant for Red-bordered Pixie, Mexican Love Vine (*Senecio confusus*) and a Guava Tree.

Mission averages about 25" rain/year, but in the last few years has been under a severe drought.

Through the first six and a half months of 2005, we have had just 5.85" of rain. Fortunately, with everything being mostly native, we only water the yard about every 10 days in our hot months. Watering the yard, therefore, is not much of a problem. Trimming, however, takes about 4 hrs/wk to keep all these plants from crowding each other, encroaching on our neighbors, and to maintain a general height of 4 feet.

We have lots of host plants, but our main nectar plants are the 15 Lantanas (4 species), the many Eupatoriums in the yard (*E. azureum, E. betonicifolium, E. incarnatum, E. greggii,* and *E. odoratum*), and the two species of Frog Fruit. With all the flowers we have, Texas Lantana (*Lantana horrida*), Crucita (*E. odoratum*), Blue Mistflower (*E. azureum*) and Heliotrope (two species) seem to provide nectar for the greatest number of butterflies—and this is true throughout all the Valley butterfly gardens. Lots of butterflies nectar on these five plants.



Palofoxia (D. Dauphin)

Our most abundant butterfly is the Queen. Oddly, we have never seen a Vesta Crescent in the yard, which is quite common in the Valley. However, we recorded the first US record of Common Melwhite, the third U.S. record of Pale-banded Crescent, and other rarities including Starred Skipper, Blue-eyed Sailor, Red Rim and Guatemalan Cracker. We have reared many Guava Skippers (which rationalizes the Guava Tree) and the Pale-banded Crescent was on the Mexican Love Vine, another non-native that attracts lots of butterflies.



Falcate Skipper (D. Dauphin)

Not counting the rarer butterflies, the two most unexpected butterflies in our yard were a Mexican Bluewing, which came to its host plant, *Adelia Vaseyi*, a tall compact shrub and a Malachite. Both were surprises because there are few trees in the neighborhood. South of our house, there are no large trees until you get close to the Rio Grande River, about 5 miles away.

The pond has a lot of Water Hyssop, the host plant for White Peacock, and its fun seeing these butterflies laying eggs there. We get many species of dragonflies and damselflies in our bog/pond. Five species of lizards and six species of frogs and toads have found the yard, along with numerous bird species attracted to the water.

We moved to Mission on April 1, 2003, from Baytown in Chambers Co., about 25 miles east of Houston. For almost 40 years we lived in a heavily wooded mixed hardwoods and pine forest, immediately on the banks of large bayou separating Chambers and Harris Counties. Avid birders, we had a halfacre yard filled with trees. Lots of birds, but due to the heavy shade, not a flower could bloom. We chose Mission, because we wanted to retire to a different habitat and because of Mission's close proximity to public accessible butterfly gardens. We chose well. Absolutely no regrets and we like everything about the Valley. We started landscaping the yard in July and it was completed in October.

We get many people visiting the yard and all are welcome, as are all of you. When coming to the Valley to chase the bugs, e-mail us at <u>ddauphin@flash.net</u> for directions to our yard. And check out our webpage <u>www.thedauphins.net</u> for Valley butterflying help.

Dung Beetles in Austin, TX

by Peg Wallace

I first found dung beetles about 5 years ago, when I was collecting insects for an entomology class. I became fascinated with these industrious little creatures, and in 2001 began to study them seriously. My current study involves the distribution of dung beetles that utilize dog dung in urban Austin. This is some of what I have learned about them.

Dung beetles belong to the family of Scarab beetles, which also includes familiar insects such as June bugs. In Texas, there are 544 species of Scarabs; about 140 of these could be called "Dung Beetles".

Dung beetles can be separated into groups according to how they live and use the dung. The main types are Dwellers, Burrowers and Rollers. They can often be found together in the same dung. Since each type has a different way to use the dung, they are able to co-exist very nicely.

Dwellers are generally quite small. They do not bury dung, but live and lay their eggs inside a dungpile. The larvae spend a period of time feeding there before they burrow into the soil below to pupate and become adults. These species tend to be found in cooler climates, or in cooler seasons. Many of these feed on deer or cow dung, although I also find some in dog dung.

Burrowers can bury substantial amounts of dung. A pair works together to build a tunnel, then drags dung down into it to create a tightly packed brood cell, where the female lays a single egg. Several cells can be made in one tunnel, or a separate tunnel can be created for each one. Where burrowers are found, dung can often appear to be intact, but if it is turned over, only the top crust will remain. Signs that Burrowers are present include large chunks removed from the dung, or _" or larger holes in the soil beneath.

Rollers are commonly known as "tumblebugs". Dung is a relatively scarce resource, and it is thought that the rolling behavior evolved so that individuals or pairs could protect their portion from competitors. Male and female work together to roll a ball of dung away from the source and bury it several inches below the soil surface. The female then hollows out the center and deposits a single egg inside. After closing the ball and covering it with a layer of soil, she leaves the egg to develop, having provided a safe and secure food source for her young. Two small rollers are quite common in Austin, and can be found almost all year. They can often be seen rolling balls during warm, wet weather, such as on summer mornings after a rainstorm overnight.

How do you know it's a dung beetle?

There are three main features that distinguish the Scarabaeine Dung Beetles from other beetles that you might find in or around dung. These are:

- 1. Lamellate antennae with three-lobed clubs: The antennae have "clubs" on the ends that can be expanded. They look almost like antlers when the beetles do this. Antennae are used for locating dung by smell.
- 2. Specialized legs: Fore-legs with serrated edges, used for digging. Rollers use the fore-legs for cutting dung, while their elongated rear legs are used for rolling dung balls.
- 3. Specialized mouthparts: Dung Beetles have biting/chewing mouthparts that are shaped into small paddles that are used to squeeze the liquid out of dung. This is what the beetles subsist on.

Encouraging Dung Beetles

Here are some guidelines for attracting dung beetles to your yard and for encouraging the dung beetles you already have:

- 1. Don't clean up all the dung; leave some as "habitat" for Dung Beetles.
- Don't use chemicals; do only spot treatments if necessary.
- "Transplant" a few Dung Beetles into your yard to start a population: bring in local beetles only! Beetles from elsewhere may not be adapted to our climate, or may displace native species.

Dung beetles are fascinating and valuable contributors to the biodiversity of Austin. I hope you'll find them as interesting as I do! e-mail: pegw@mail.utexas.edu



American Snout (M. Quinn)

South Texas Snout Migration Ecology

by Mike Quinn

Snout butterflies have been massing again across South Texas! Since late August, populations of American Snouts (*Libytheana carinenta*) have exploded from South Padre Island to Mission and beyond. Mission butterfly enthusiast, Jan Dauphin reported the following on September 2, 2005:

"Since 1500 hrs (and they are still streaming through) tens, if not hundreds of thousands, of American Snouts are streaming through our neighborhood. We have witnessed several of these movements through the Valley in the past, but nothing like this. You literally have to brush them off your clothes before going inside. Neighbors are standing outside watching them, cars are stopping to watch. All seem to be heading northeast."

Of the members of the hackberry family, the American Snout caterpillars prefer to feed on Granjeno or Spiny Hackberry (*Celtis pallida*). This plant, which occurs widely in the arid southwest, puts on new leaves after significant summer rains.

If a drought precedes the heavy rains, then the tiny wasps that parasitize the snouts are probably uncommon at the time when the rains hit. Female snouts lay their eggs on the new leaves that the rains induce. The young caterpillars prefer the tender leaves and with the parasites being rare, most of the snout larvae then survive to the adult stage.

Two south Texas lepidopterists, Larry Gilbert and Raymond Neck, worked out the above ecological factors that trigger the periodic massive snout outbreaks. I checked the weather data from the National Weather Service station at McAllen to see if the rainfall patterns prior to the current outbreak did indeed fit what Gilbert's and Neck's research suggested.

Sure enough, McAllen was in rain deficit for every month from September 2004 until July 2005, when McAllen was hit with 7.37 inches, 5.72 above the norm! This significant mid-summer rain would have triggered the granjeno to leaf out. Chris Best, plant ecologist for USFWS reported that the host plant near

La Grulla area, west of Mission, has been almost completely defoliated. Sounds like the parasites weren't active in controlling the larvae...



American Snout (M. Quinn)

The most colossal snout migration ever reported occurred in late September 1921 when an estimated **25 million per minute** southeasterly-bound snout butterflies passed over a 250 mile front (San Marcos south to the Rio Grande). Observers noted that this flight lasted 18 days. It may have involved more that 6 billion (6,000,000,000) butterflies.

Earlier in the same month as that near-biblical snout migration, the most severe rainstorm ever recorded in the continental United States occurred in Thrall, approximately 40 miles NE of Austin. A total of **36.4 inches of rain fell in 18 hours**, a world's record. The 24-hr total exceeded in one day the expected precipitation of an entire year!

Given the awesome amount of rain that contributed to that colossal swarm, I think I'd rather read about such phenomena rather than witness it live!

If you want to read more about the American Snout's South Texas migration ecology, go to:

http://www.texasento.net/snout.htm

Monarch Numbers Up

by Phil Schappert

I'm seeing an unprecedented (for 8 years of records) build-up in Monarch numbers. From first arrival about 3 weeks ago, they came in in ones and twos, often females (there are many eggs and caterpillars on the curassavica) but over the last 2 days the numbers of males have exploded. There were 5 or 6 here yesterday and there are an astounding 15 to 18 here today, just in the gardens (two have good crops of frostweed and another has a good patch of curassavica). When the goldenrods break (soon) the attractiveness of that garden should also increase.

To put this in some perspective, I've never had fall Monarch larvae -- often Queens but no Monarchs -despite extensive searches, and even during good years the spring numbers have never been more than 8 to 10 butterflies at a time. Are the butterflies tracking further east this year, possibly because of the high pressure ridge-created storms through the panhandle and west TX?

Haven't seen this much Monarch activity since leaving Canada -- nice to see! I hope Rita doesn't put too much of a damper on the activity! The latest reports have it passing directly over us -- still as a category 1 or strong tropical storm -- on Saturday morning but a lot can change between now and then.

Upcoming Events

We keep a calendar of upcoming events on the austinbutterflies.org web site. Please visit the site to learn of changes and new additions.

Mon Sep 26 - Club Meeting. See details in box at front of newsletter

Mon Oct 24 - Club Meeting. Roy Burton is presenting on "Insects and Related Arthropods of Medical Importance."

Please submit newsletter events, corrections, and suggestions to the editor, Joe Lapp:

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