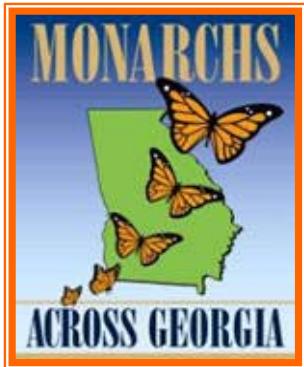


Monarchs Across Georgia Newsletter

Winter 2005
Volume 1, Issue 1

An Initiative of the Environmental Education Alliance of Georgia
www.eealliance.org



Upcoming Events

- **By February 10**

Remember to nominate someone at www.eealliance.org/conference.htm for the *Monarchs Across Georgia Service Award.*

- **February 12**

MAG is traveling to Mexico and is looking for donations of school supplies to give to two Mexican schools. Contact MAG for details on how you can help.

- **March 11 - 13**

Annual EEA Conference at Unicoi State Park and Lodge in Helen. Register online:

www.eealliance.org

- **April 27 & 28**

Monarchs Across Georgia Educator Workshop at NW RESA in Rome. For more info call Kim Kilgore at (706) 295-6041.

Our Mission

To engage schools and families in learning experiences involving monarchs and other native butterflies. The MAG program promotes stewardship of the natural environment through multi-disciplinary exploration and scientific investigation.

A Wet Visit to the Western Monarchs

by Susan Meyers

Monarchs Across Georgia Co-Chairs, Trecia Neal and Susan Meyers, left Atlanta on the day after Christmas bound for San Jose, California for a weeklong adventure to discover the overwintering grounds of Western Monarchs. The weather was probably the worst that the California coast had seen all year! Rain, rain, rain...

Our first stop was California's only Monarch preserve at Natural Bridges State Beach. The small visitor's center had a modest display on Monarch ecology and biology and a fabulous gift shop. As part of the display we spied a Chestnut-backed Chickadee eating a Monarch and asked the ranger about other bird species in California are known to munch on the regal butterflies. Stellar's Jay is such a species adapted to tolerate or avoid the toxic 'cardenolides' that are stored in the adult Monarch's abdomen.

Behind the visitor's center was a pollinator garden with several species of *Asclepias*.



Pictured here are the ballooned seedpods of an African native called *A. physocarpa* (AKA Goose plant). Surprisingly, even on this rainy cold day in late December, there were caterpillars munching away on the leaves of the *A. curissavica*. The boardwalk to the small eucalyptus grove was handicap-accessible and led us a few hundred yards to an observation deck where we looked up into the branches and spied clusters of Monarchs hanging about 40 feet above our heads. There were a few single butterflies scattered low in the bushes wet from all of the rains. The

Thanksgiving Count for the Natural Bridges colony was estimated to be 11, 000 this year.



Thanksgiving Monarch Butterfly Counts are done annually November 15 - December 5 and coordinated by the Xerces Society's California Monarch Campaign and Ventana Wilderness Society.

This date is chosen for the count because most Monarchs in the west arrive along the coast and locate selected groves during this time, as there is usually a climate change before the Winter solstice, which influences Monarchs to disperse or move to a more protected habitat. A few of the colonies are being monitored/ counted on a weekly basis and this year a New Years Count was planned for January 1-14 to estimate the "overwintering" population that has spent the entire winter in the colony.

Next we traveled down the coast on famous U.S. Highway 1 to our next stop, Pacific Grove, "Butterfly Town, USA," home of the Friends of the Monarchs. ...It was surprising how close to civilization the grove was located. It was practically in the backyard of homes and the Butterfly Grove Inn!...

To read more about Trecia and Susan's adventures please visit the MAG website at:
www.monarchsacrossgeorgia.org.

Monarch Facts



Western Monarchs	Eastern Monarchs
Overwinter in over 300 known sites along 1000 km stretch of California coastline, mostly at sea level, approximately 1 mile from the ocean.	Overwinter in 14 known sites in an approximately 800 square km area in the transvolcanic mountain range at 10,000 feet in elevation in Mexico.
Approximately 1 to 2 million Monarchs overwinters in California.	Approximately 100 million overwinter in Mexico.
Sites easily accessible, in the midst of human development	Site located in remote areas, horseback riding and hiking for an hour or more to the butterflies common
Overwinter in <i>Eucalyptus globulus</i> (Blue Gum), a tree native to Australia, originally planted as a windbreak or ornamental. Some groves are interspersed with <i>Pinus radiata</i> (Monterey Pine) and/ or a variety of cypresses.	Primarily overwinter in Oyamel Fir forest (<i>abies religiosa</i> , but as spring approaches colony sites also exist below these forests, primarily because the butterflies move to lower altitudes where mixed forest stands occur.

Gems from the Garden: Sowing Milkweed Seeds

With Monarchs butterflies looking for milkweed to lay their eggs your garden can be the perfect nursery if you sow your seeds early, transplanting them into the garden when springtime



What You'll Need

A Sunny Window:

Plants like a southern exposure. If you don't have a window that will do, consider investing in some cool-white fluorescent bulbs.

Containers:

Try all kinds to see what works for you. Make sure they are clean and have good drainage. If you are using a fiber or peat pot, soak it well before adding soil. Dry fiber pots draw moisture away from the soil.

Seeds:

You'll get the best results if you purchase fresh seeds, packaged for the upcoming growing season. However, you can collect seeds in the fall when the pod is almost ready to burst. Some species may need to be "cold-stratified," or kept in a refrigerator for two months, before they will germinate. Many southern or "tropical" species may grow without cold stratification.

Growing Medium:

Nothing beats a good commercial medium because it is sterile and free of unwanted weed seeds. If you use your own soil you should sterilize it first in order to kill off organisms that can cause disease. To do this bake it in a shallow baking pan until the soil temperature reaches 180 degrees.

Sowing Seeds

When seeds are ready to plant, plant them 1/8 inch below the soil surface using a deep pot, since most milkweeds have a long taproot. Don't plant the seeds too deep,

because they need plenty of light and warmth to germinate and grow. Cutting back the top of the plant promotes fullness and more leaves. It takes about two months before the plant is large enough for larvae to eat. After the leaves have been eaten, simply cut the plant off about one inch above the soil and the plant will grow back.

Moisture and Humidity

Germinating medium should be kept evenly moist, but not soaking wet.. Use a fine sprayer to water newly planted seeds and tiny seedlings or slip your pots into clear plastic bags to keep the humidity and moisture even.

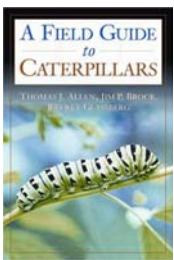
The seeds usually germinate in 7-10 days if the flats are maintained at 70° F at a minimum.

Transplanting

When the seedlings get their first set of real leaves, they can be planted directly outdoors, or if it's still too early, transplanted into a pot. Water the ground outside and the seedlings thoroughly before transplanting. This helps prevent transplant shock. It's preferable to transplant on a cloudy day so strong sun won't wilt your seedlings. Dig a hole about twice the size of the root ball and set the transplant into the hole, so the root ball will be covered by 1/4 inch of soil. Press the soil firmly around the roots. A small depression around the plant stem will help trap moisture. Water immediately after transplanting and every day for the first week.

Most milkweed species evolved in open areas where they were exposed to full sunlight and they will do best if they are planted in the sunniest areas of your gardens.

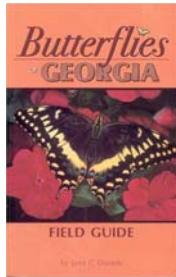
Monarch and Other Butterfly Resources



A Field Guide to Caterpillars

ISBN: 0195149874

Jeffrey Glassberg's acclaimed *Butterflies through Binoculars* guides have revolutionized the way we view butterflies. Now there's a field guide in the same practical format, and with the same emphasis on conservation, to identify caterpillars.



Butterflies of Georgia Field Guide

ISBN: 159193057X

Jaret C. Daniels focuses on 164 species of butterflies that are found in Georgia. Illustrations and full-color photos are included for the adults, as well as larval photos for most species. He also includes larval host and adult nectar plants to help you plan a garden.

Grants

For an extensive list of grant opportunities, for not only butterfly gardens, but also outdoor classrooms please visit the Environmental Education Alliance of Georgia web page at www.eealliance.org. Also, included is a link to a tutorial on how to write successful grant applications.

Journey North Website

<http://www.learner.org/jnorth/>

Visit this website to have your students track migration of monarch butterflies. Additional activities, lesson plans, and information may be found on this interactive site.



Growing Seeds Activity

Purpose: Students will understand that some seeds germinate better in some types of soils than others.

Materials:

- Four different types of seeds, each group will plant only one type
- Clear, plastic drinking cups
- Four different types of planting mediums (potting soil, sand, clay soil, peat moss, etc.)
- Spray mister with water
- Labels or permanent marker
- Journal

Procedures:

1. Divide students into groups of 3 or 4. Provide each group with the four different types of planting mediums, 4 plastic drinking cups, and 4 labels or a permanent marker. Also, distribute the seeds to each group. Remember each group will only be planting one type.
2. Have each group label each cup with the different planting medium (Cup 1: Potting Soil; Cup 2: Sand; Cup 3: Clay soil, Cup 4: Peat Moss, etc.) and their group name and seed type.

3. Each group will now fill each cup with the various planting mediums.
4. Have them plant several seeds in each cup according to the packet directions.
5. Lightly mist each cup with water. The planting medium should be kept slightly damp, but not soaked. No standing water should be in a cup.
6. All cups from a group are to be kept together and placed in a sunny/warm area.
7. Before the seeds are planted, each group needs to write a hypothesis concerning the outcome of the experiment. This is to be recorded in their journal.
8. Students are to draw pictures on day 1, day 5, day 9, and 13, noting the progress of the seeds in their journals.
9. Make a chart/graph, using the data from each group of students to show which soil types supported the most seed germination.
10. Write the conclusions of the group in the journal, comparing with the original hypothesis. Allow the students to comment on the experiment in the journals, as well as share their results and comments with the entire class.



Monarch Butterfly Tag Found in Mexico!



It seems like such a long journey for such a small creature, but millions of monarchs handle this migration annually. Tricia Rhinehart and her students from Armuchee Elementary in Armuchee, Georgia tagged one of the butterflies that made this trek to Mexico. In fact, they tagged nine butterflies, but only one was recovered in El Rosario, Mexico on 2/24/04. That was a journey of 1,376 miles! Their

assistance in the tagging program helps to further the scientists' knowledge about monarchs and helps promote monarch conservation. When a tag is recovered Monarch Watch mails a Certificate of Appreciate to notify the person. If you are interested in the tagging program contact MAG for training or visit the Monarch Watch website at: www.monarchwatch.org.

We're on the Web!
www.monarchsacrossga.org

 Each issue we will spotlight a butterfly found in Georgia. Cut along this line to create your own Georgia butterfly field guide.

Egg



Caterpillar



Pupa



EASTERN TIGER SWALLOWTAIL (*PAPILIO GLAUCUS*)

Fast Facts

- Georgia State Butterfly, widely distributed throughout the state.
- Adult wingspan is 3.5 to 6.5 inches (9 to 16.5 cm)
- Host plants: tulip tree (*liriodendron*), sweet bay, wild black cherry (*prunus*), ash (*fraxinus*), wild poplar (*populus*), basswood (*tilia*), birch (*betula*), lilac, aspens, or choke cherry.
- It takes about a month for the adult to develop (from egg to pupa to adult).
- Some females are black, with blue interlaced with black bands on the hind wings. These females superficially resemble a Pipevine Swallowtail.
- Preferred habitat includes gardens, woodland glades, orchards, & streambanks.
- They pupate close to the ground. The pupa is the overwintering stage.

Adult



Notes: