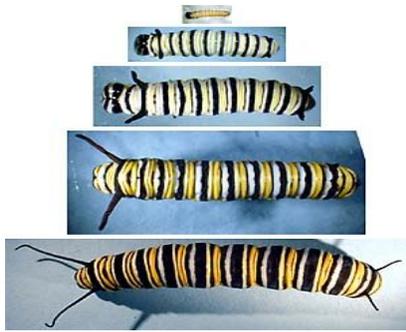


## My Monarch Story, 2020

I became interested in Monarch Butterflies two years ago. I began planting store purchased milkweed and growing my own from collected seeds. This extra milkweed was to enhance the huge amount of native Green Antelope Horn Milkweed that grows all over our 31 acres of the Texas Hill Country, but dries out mid May to mid June, depending on rainfall amounts. I wanted to be able to have some in the yard (about an acre and a half) that I could water through the summer months.

I was designated as a Monarch Way Station in 2018. I planted a large amount of Mistflower. I have found Monarchs like nectar from Mistflower, Prairie Verbena, Frostweed (fall), Purple Thistle, and of course, Milkweed.

Last year I found and raised numerous Soldier and Queen Caterpillars, but was never able to locate a Monarch Caterpillar. This year, on April 6th, I found my first Monarch Caterpillar. That began the hunt for more. I had the whole family out searching native milkweed plants. From April 6th - May 13th, I have collected 63 Monarch Caterpillars in various Instar Stages (they go through 5 before becoming a Chrysalis).



Instar 1 on top, through  
Instar 5 on bottom

I found the larger the caterpillar, the more likely it is to be infected with a parasitoid fly, in this case a tachinid fly. I researched this anomaly as this was my first experience with a parasitoid fly. The adult fly lays an egg on the caterpillar, the egg hatches and burrows inside the caterpillar where it begins to eat. The fly larva effectively eats its host from the inside. The larva eventually exit the caterpillar. The caterpillar always dies. I had four caterpillars that did not reach the "J" stage, they appear to deflate, lay on the cage floor, turn darker and eventually a maggot (up to four) will exit. I had three that made a chrysalis before the maggot(s) exited and 19 that died in the "J" stage. Of those that made "J"s, 17 made the proper "J", hang there for up to 12 hours, drop the "J", turn dark, and maggots would exit. Exiting maggots would attach themselves to a silk string and drop from the string to the bottom of the cage; they also exited this way from a chrysalis. Two "J"s were made inverted before succumbing to the maggot. In all instances, these occurred in caterpillars collected between the 3rd and 5th Instar.

According to Monarchwatch.Org, parasitoid flies are a common affliction with Monarch Caterpillars. The adult fly lays an egg on either the Monarch egg or caterpillar, once the fly egg hatches it burrows into the host caterpillar and begins to eat the host from the inside. Eventually the host dies and the maggot emerges, makes a pupa and hatches into an adult fly. I collected several maggots, which turned into a pupa within 12 hours of emergence, and hatched into an

adult fly approximately 3 weeks later. There is also a parasitoid wasp that goes through the same process, but I have no experience with this type of parasitoid.



Caterpillar with fallen "J" and string from maggot (larval stage)



Deflated Caterpillar with maggots emerging (larva)



An infected Chrysalis and a pupa formed after the larval stage



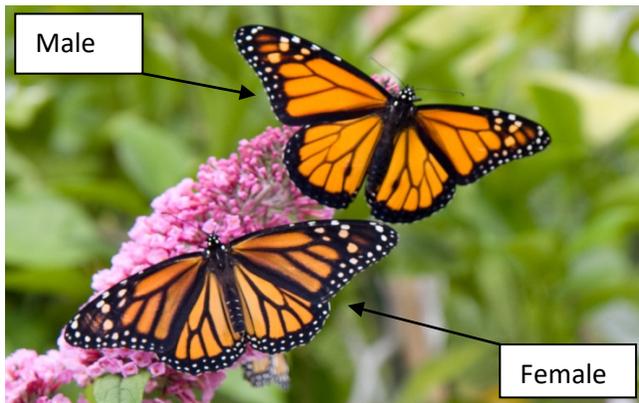
Two pupa and one adult tachinid fly

My analysis of this year's Monarch Caterpillar crop:

1. Collect your Monarch Caterpillars as early as possible, Instar 1 is best, but I was successful with Instar 2 and most of Instar 3. Monarch egg collection would be ideal, although they are quite hard to find/see. I prefer Instar 1.

2. Watch for migrating Monarch Butterflies to appear in the Spring. As soon as they arrive, watch to see them visit your milkweed, eggs hatch approximately 4 days after they are laid, so continue to search for either eggs, or newly hatched (Instar 1) caterpillars.

Of the 63 Monarch Caterpillars I have collected, I have released 27 butterflies, 18 females and 9 males. I have 3 Chrysalis' preparing to hatch and 6 caterpillars still munching on milkweed.



The male has two distinct spots on his lower wings. Also notice the male has thinner line markings on his wings

Female has no spots and darker lines on her wings.