



Tales from a Sisters Naturalist
by Jim Anderson

They're baaaak!

By golly, this is a strange time for Pandora moths to pop out of the woodwork... er... soil. They were here in grand numbers back in 2017, and it's usually five to 10 years before they appear again. Must be climate change; something is taking place in and around us that is favorable to this species.

And another species is on the rampage. Over on Green Ridge, near Sisters, white satin moths are defoliating the aspen trees and the adults make it appear as though it is snowing in July.

In past times, pandora moths were known as a forest pest, defoliating pines about every 20 years — which ruined the attempts of foresters to grow pine timber for lumber.

But the native peoples of this region looked at them very differently; they harvested, stored and ate the larvae of these delicious moths, and as far as I know, some families still do it to this day. The larvae were collected just before they were ready to pupate, before they began their July migration from the high green boughs to the forest floor to pupate in the soil.

They were/are gathered by hand once or twice a day, and temporarily stored in trenches in the ground. The larvae were then roasted in fire-heated sand for 30 minutes; the sand not only cooked the insects but also served to remove the fine hairs — setae — from their bodies.

The cooked larvae were/are then washed, sorted, and dried. Stored in a cool and dry place, they keep for

at least a year and perhaps as long as two. The dried larvae — known as piuga — are reconstituted before consumption by boiling for about an hour in plain or salted water.

I've heard the boiled insects have an aroma described as that of cooked mushrooms and are eaten as a finger-food; the entire larva is eaten except for the head. (This reminds me that big brown bats who come here in summer and eat our Jerusalem crickets don't eat the heads either.) The cooking water is also consumed as broth, or used as a base for a piuga-and-vegetable stew. Yum, yum...

This also reminds me of the time I spent living with an aborigine family on a billabong near Darwin, Australia, years ago. My host's 14-year-old daughter Daphne teased me as she was chomping down on the roasted wood-boring beetle larvae she dug out of the eucalyptus. I still get a funny feeling in my tummy thinking back on those interesting times.

So... back to our own pandora moth larvae. I don't know if you ever gave any thought to the process of metamorphosis — when the larva builds the outer shell it will change inside from a wiggly caterpillar to an adult insect that has the ability to fly and mate. (In butterflies, the shell is known as a chrysalis, and in moths, a cocoon).

The adults emerge and then as they age their calendar of life triggers the recognition of sex, and the females begin to put off a perfume that today is known as a pheromone.

Wikipedia says a pheromone is a secreted or excreted chemical factor that triggers a social response in members of the same species. Pheromones are chemicals capable of acting like hormones outside the body of the secreting individual, to impact the behavior of the receiving individuals.

In fact, adult male moths go nuts over it, and can sense it from several miles away, especially if there's a breeze

blowing through the forest.

Way back, when I was a kid on my grandfather's farm on Jones Hill Road in West Haven, Connecticut, I woke up one summer night in the upstairs bedroom to the sound of soft thumping on the screen of the open window.

I discovered a cecropia moth outside acting like it wanted to come in the bedroom. I went and woke up my Uncle Ben, the naturalist of my three uncles, and told him about the moth.

He rubbed his eyes, blinked and, throwing the sheet off himself said, "I don't believe it!" I had to

jump out of his way as he leaped out of bed and ran back into the room where I was sleeping. He turned to an old bureau, pulled the top drawer out, removed a cigar box, lifted the lid and out flew an adult female cecropia moth.

Yep, you guessed it. Her pheromones had drifted out of the cigar box, out of the bureau, and out of the house to get the male moth all fired up. Ben stood there in his BVDs exclaiming how he had collected the cocoon that fall on a trip into our kitchen garden.

What goes on inside that cocoon after the pandora caterpillar drops to the forest floor and buries itself in the soil is one of the miracles of nature. And speaking of soil, you won't find pandora moths in just any old place; they need the loose soils of a ponderosa pine forest to make it from caterpillar to adult moth — other soils won't do.

It's inside that cocoon that the miracle takes place. Once the caterpillar buries itself to the right depth in the soil, it spins a silken blanket around itself and then dissolves into kind of a green soup — but is still alive. The



PHOTO BY JIM ANDERSON

Typical Pandora outbreak.

soup then begins to slowly reform into the adult insect.

Laying there in the ground for several years, it goes from an animal with only stubby little legs to get around on, and a mouth that's formed to munch on pine needles and with a gut to digest them and changes (metamorphoses) into the adult insect with three body parts, a whole new breathing apparatus, wings and a method to reproduce.

With all that's going on in our environment today I hope this cycle will carry on long after we've gone out among the stars.



PHOTO BY SUE ANDERSON

Satin moths.

2019 SISTERS FOLK FESTIVAL
ALL THE TOWNS A STAGE
SEPTEMBER 6, 7 & 8
TICKETS ON SALE NOW
SISTERSFOLKFESTIVAL.ORG

BRUCE COCKBURN
PETER ROWAN'S
FREE MEXICAN AIRFORCE
FEATURING LOS TEXMANIACS
LE VENT DU NORD
RISING APPALACHIA
THE EAST POINTERS
DELLA MAE
FLOR DE TOLOACHE
RON ARTIS II & THE TRUTH
MARTYN JOSEPH
THE HAMILTONES
THE SUITCASE JUNKET
CEDRIC BURNSIDE
RED DIRT BOYS · PHIL MADEIRA
WILL KIMBROUGH
DAVID JACOBS-STRAIN
& BOB BEACH
PHARIS & JASON ROMERO
CARRIE RODRIGUEZ
AARON LEE TASJAN · ALEX CUBA
KEITH GREENINGER & DAYAN KAI
VANDOLIERS · LULA WILES
THE BROTHER BROTHERS
ELLIS · LINDSAY LOU · KUINKA
SUSAN GIBSON · SVER · JOHNSMITH
AND MORE...

Bring in this coupon for

\$2 OFF any 30-35-40 lb. bag of Dog Food

or

\$1 OFF any 16-20 lb. bag of Cat Food

SISTERS FEED & SUPPLY
102 E. Main Ave.
541-549-4151

Offer good through 8-21-19. Coupon not valid with any other promotion. Limit one coupon per customer per month.