

# Pestilence and the Perfect Storm

The scene: A meeting house somewhere on the outskirts of Medford, Massachusetts.  
The year: 1868

Written by **Titos Menchaca** Photography by **Lance C. Bell**

A stately, scholarly-looking gentleman presides over a meeting of the Greater Medford Entomological Society. They have been here for hours, all engaging in lively discourse about spider minutiae and the social behavior of ants. All except for one. He is a quiet man sitting in the back waiting for his turn to speak.

Finally, after all have had their say, the presiding gentleman asks if there is any new business to discuss. The quiet man raises his hand and, rising, clears his throat.

"Yes, Mr. Teravel, is it? How may we help you?"

"It's Trouvelot, sir."

"Yes, of course. Please forgive me. How may we help you, sir?"

"Well, you see. Being an amateur entomologist, I have been trying for some time to solve an issue of low disease tolerance in native silk-producing moths. Well, some months back I got the idea to cross-breed them with the Gypsy Moth from my home region in France, some of whose egg masses I had brought back with me from a trip to see my family."

"I see."

"Yes, well, I was cultivating them in my back yard under some large nets and well, some seem to have escaped."

"Escaped, really? And is it your wish to have this assembly assist you in capturing them?"

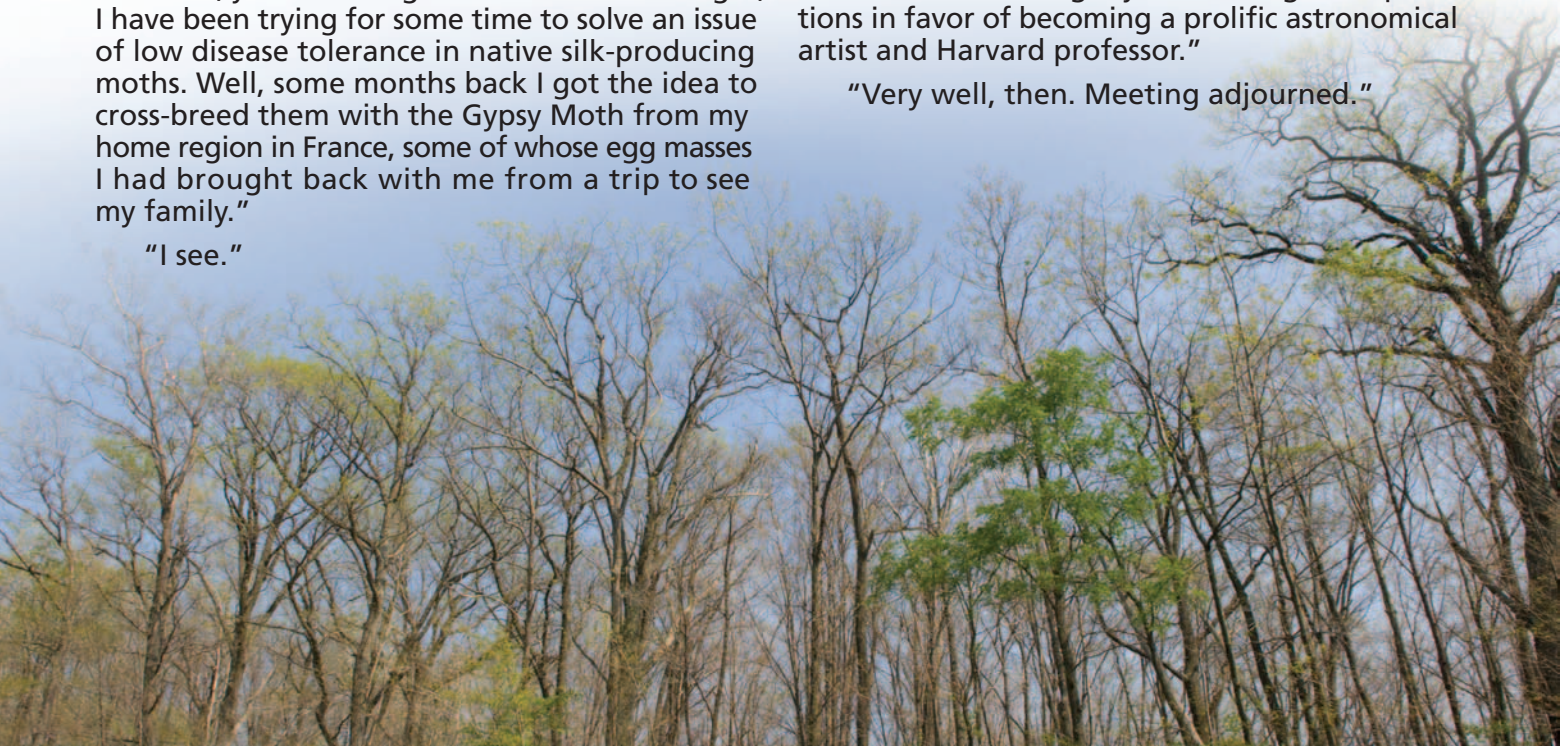
"No, sir. It is my suggestion this assembly find the means to burn the square-mile wooded area behind my home."

Silence. Then...

"Sir, we are learned scientists, not arsonists. All of nature has balance. I am sure these gypsy moths will find their place and all will be right once again. Now, is there anything else, Mr. Trouvelot?"

"No, thank you. However, I wish to announce that I will be retiring my entomological aspirations in favor of becoming a prolific astronomical artist and Harvard professor."

"Very well, then. Meeting adjourned."







**EYE TO EYE with an adult male Gypsy Moth.**

As unlikely as it is that this farcical dialogue actually took place, the facts remain: In about 1868, amateur entomologist Leopold Trouvelot brought a mass of gypsy moth eggs from Europe back to Medford, MA; some escaped; a warning was ignored; they've been wreaking havoc in the American northeast since. The tri-state area has certainly suffered its share of deforestation at the peds

**MORE THAN JUST A LITTLE OFF THE TOP:** An up-close look at the devastation an army of hungry caterpillars can do. This canopy (left) should be thick and lush with leaves this summer instead of looking like it does here. This summer, gypsy moths have decimated over 40,000 acres of forest in Garrett County alone.

of these ravenous creatures, and certainly numerous efforts have been made to control them, some being more successful than others. However, in the summer of 2007, a sinister combination of weather, timing, politics and natural cycles conspired to make this year's infestation the worst it's been in over a decade. It truly was the summer of the perfect storm.

By way of introduction, the gypsy moth (or *Lymantria dispar* Linnaeus, if you prefer) is one of the most infamous vermin of hardwood trees in the eastern United States. In the last quarter century or so, it has defoliated close to a million or more forested acres each year. The worst was in





**THE MAN MANY TURN TO FOR ANSWERS:** Wendell Beitzel is Garrett County's Delegate in Annapolis. He receives stacks of letters weekly from constituents asking for help with the gypsy moth plague. He and Sen. George Edwards are working hard to find additional funding in next year's budget to combat the infestation.

**WHICH WAY TO THE BUFFET?:** The ravenous caterpillar stage of the gypsy moth's development spells big trouble for surrounding forests.



was in 1981, when a record 12.9 million acres were defoliated. Think Rhode Island, Massachusetts, and Connecticut combined and you'll have a good idea of the area.

The main problem with invasive species of this sort is, of course, lack of natural predators from their native regions to keep populations in check. (Anyone remember the Africanized Honey Bee scare — the dreaded “killer bees” — in the southwest United States back in the early '90's?) The question, then, is how do you control that which is seemingly uncontrollable? Well, for over three-quarters of the last century (1906-1986), scientists used a common,

parasitic European fly, *Compsilura concinnata*, as a bio-control. It worked like a charm. That is until they figured out that desirable moth populations were deteriorating as well. It turns out the flies had a much longer life cycle than the intended targets and were preying on other moths months after the gypsy moths pupated (that is, gone into their cocooning stage just before emerging as winged, adult moths). After that, it was too late for the flies to infect them with their parasites.

Learning from this experience and others, and with the advancements in science, today we rely on a combination of the pesticide Dimlin and a fungal agent known as BT (*bacillus thuringiensis*), both of which are sprayed onto infected areas. These agents, or more specifically their associated costs and delivery systems, were but two of the essentials in the mix of 2007's perfect storm.

### *The Waters Roil...*

Normally, the eggs hatch in late April or May, coinciding with the budding of most hardwood trees. This year,

however, a late cold snap delayed many egg masses from sprouting, giving the larvae inside a reprieve from the spraying that ensued at the end of May. The BT must be consumed to be effective, but these late bloomers didn't see the light of day until after the spray was no longer effective due to runoff from spring rains. Dimlin, for its part, has limited geographic effectiveness due to its toxicity. Then there's the fact that both funding and staffing for the spraying of these moths have been drastically reduced over the last decade.

It's the middle of the lunch hour and Wendell Beitzel is sitting at his desk, piled high with letters from constituents from Garrett County asking their State Delegate what can be done about the gypsy moth problem there. “Obviously, more funding is what we want, and I'm working very hard with Sen. George Edwards to find a solution,” he said, adding, “Hopefully, all agencies — local, county and state — will be able to come up with adequate additional funding to have an effective control of the next year's hatch.”

Asked about the combination of events that have made this a banner year for the pesky worms, Beitzel can't help but agree. “Yes, I would say “perfect storm” is a good





**FOLLOWING THE CALL OF NATURE:** With a very short life span, the adult gypsy moths (the females are white) pursue their sole ambition: to perpetuate the species. They're very good at it, too. The females can lay up to 1,000 eggs in a single egg mass.



**HOME SWEET HOME:** Egg masses over-winter in the nooks and crannies of hardwood trees until spring weather signals the larvae that it's time to emerge.

description. The dry winter, the warm spring, the cold snap and the missed window for spraying—coupled with the decreased funding—have definitely made for an unusual series of events and some very barren landscapes.”

### *The Waves Start To Roll...*

Aesthetics aren't the only issue here, though. Although pines and hemlocks sometimes wind up in their crosshairs, oak trees are by far the number one item on the gypsy moth's menu. No leaves means no acorns, and that means a whole host of woodland fauna will be very hungry. According to a 1999 National Wildlife article by Les Line, "...acorns are a significant food item for some 150 species of birds and mammals and typically make up at least 25 percent of the diets of black bears, raccoons, gray and fox squirrels, wild turkeys and white-footed mice, to name a few. White-tailed and black-tailed deer, meanwhile, eat oak foliage along with bushels of acorns.”

And as tragic and sobering as that is, it's about more than Bambi having to go to bed without supper. The

implications to the area—encompassing the local economy, quality of life and health concerns—are widespread as well.

Some numbers to consider from the Garrett County Forest Board:

- 2 – the number of consecutive years of infestation it takes for an oak tree to die;
- 1,000,000 - 2,000,000 – the number of dollars in annual sales generated for the State of Maryland by Savage River State Forest;
- 20,000 – the number of acres (out of 54,000) decimated in Savage River State Forest this year;
- 50 – the percentage of trees lost per acre;
- \$35,000,000 – projected lumber revenue lost to the State of Maryland over time.

What about Potomac Garrett State Forest/Backbone Mountain this year? Four thousand acres severely damaged; \$4,000,000 in lost revenue over time. Add to these numbers





**ABOVE PHOTO: Monroe Run Vista Overlook off New Germany Road, August 2006.**

**BELOW PHOTO: Monroe Run Vista Overlook off New Germany Road, August 2007.**



the loss in dollars to plant nursery and tree farm owners, diminished hunting and tourist traffic, lowered real estate values and the cost to the county to remove dead trees and debris and the numbers seem incalculable.

But hey, if numbers aren't your thing, how about some images that are a bit more corporeal? The larvae are about 1/16th of an inch long and sport eyelash-length hairs on their backs that wave flirtatiously as they undulate along trees, cars, roofs, backyard swing sets and the occasional unsuspecting bouffant that unknowingly passes beneath them as they go about their day's work. And as for manners, well, they have none. Loud chewing (no doubt with their mouths open) and the patter of dropping fecal matter are their contributions to the forest's symphony. Neither are

they completely benign in their human contact. There seems to be some statistical evidence that the exposure to the caterpillar itself may cause rashes in school children, according to CDC.

As an aside, there is one fascinating aspect to these creatures. When they have decimated an area to the point where there are no more leaves to eat, they crawl to the tops of the trees and spin a thin thread of silk which is subsequently caught by a passing breeze. Then, like the bumbling wizard leaving Oz, they are whisked away to find another buffet, a phenomenon known as "ballooning."

Lastly, with all this undulating, loud chomping, forest decimating and dropping patter going on this summer, these fellas were, for the most part, certainly the talk of

*continued on page 11*

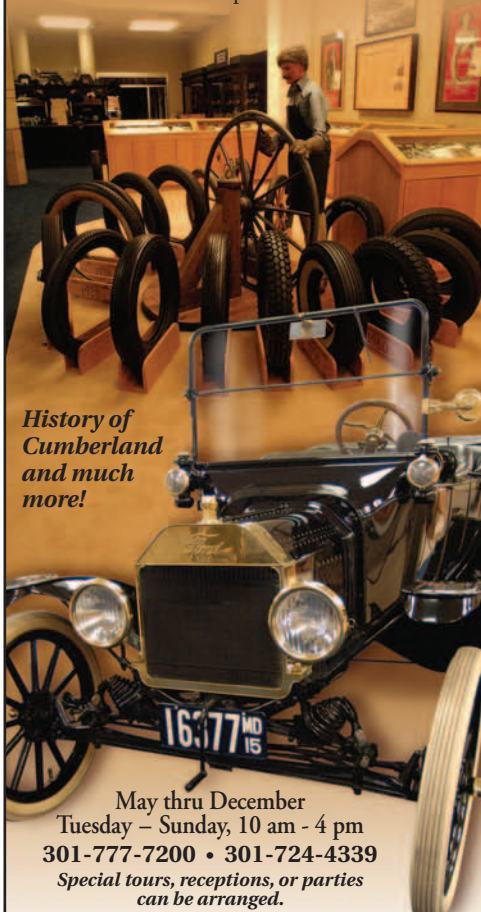


## Allegany County Museum

81 Baltimore St., Downtown Cumberland

### 2007 Calendar of Events

- May 5** **Antique Discovery Show**  
Weschler's of Washington, DC.  
*Identification and appraisal of  
antiques, collectibles, etc.*  
Sat. 10 am - 12 noon ?
- June 9-10** **Heritage Days Open House**  
*Special tours and exhibits.*  
Sat. & Sun. 10 am - 4 pm
- June-Sept.** **"Friday After Five"**  
Friday evenings 5-9 pm
- July 7-8** **Canal Fest/Rail Fest**  
**Museum Antique Car/Truck Show**  
*Model canal boats, model trains, etc.*
- Sept. 22** **7th Annual Ford Model T  
& Model A Car/Truck Show**  
*Exhibits & tours. Sat. 10 am - 4 pm*
- Nov. 18-  
Dec. 9** **Festival of Trees** 1 - 4 pm
- Nov. 23** **Holiday Open House**  
*Special decorations, quartet, carols.*  
Fri. 5-9 pm
- Dec. 6,  
13, 20** **Santa Claus Visitation**  
*Mr. & Mrs. Claus, carriage rides,  
photos, treats, etc. Free 5-9 pm*
- Dec. 31** **New Year's Eve Open House**  
*Music, exhibits, refreshments.*  
Sun. 9-12 pm



*History of  
Cumberland  
and much  
more!*

May thru December  
Tuesday - Sunday, 10 am - 4 pm  
301-777-7200 • 301-724-4339  
*Special tours, receptions, or parties  
can be arranged.*

## Pestilence and the Perfect Storm *cont. from page 8*

the county. Even the folks down around Deep Creek Lake, whose pristine lakefront terrain is dotted with fine restaurants and multi-million dollar homes are being whipped by the winds of the storm. "Yeah, I've heard some hubbub over in (lake community) Sky Valley as to whether the trees are gonna start dying out," says Bob Orr of Off Lake Rentals. "I think they've had major problems there for two years in a row now." Likewise, Steve Green of High Mountain Sports, an avid mountain biker, has come across the devastation firsthand. "On one ride out to Savage River Reservoir the forest suddenly turned from green to brown," he marveled. "It was like night and day, as though you suddenly rode into winter."

Now, as the last months of 2007 wind down, all through the forests oval-shaped egg-masses are lying dormant, waiting for the spring. What they find when they emerge to resume their rampage, and whether they even will, is being decided miles away in Annapolis. Hopefully the powers that be will hear the call of the wild... above the crunching of leaves... amid the perfect storm.

Thanks to Tom Pelton of the *Baltimore Sun*, The Maryland Department of Agriculture, the University of Maryland Extension Service and the Garrett County Forestry Board for information in this article.

*Titos Menchaca is a freelance writer, actor, musician, entrepreneur and former Garrett County resident now based out of Austin, Texas.*


*The*  
**RIDGE**  
FAST FRIENDLY SERVICE  
301.746.8710

**GREAT HOME-COOKED  
BREAKFAST  
24 HOURS A DAY**


- Locally Milled Buckwheat or Flour Pancakes
- Maple Syrup • Custom Blended Sausage
- Fresh Fruit & Juices • Plenty of Hot Coffee

*Conveniently located at Exit 14, I-68 & Rt. 219  
at Keyser's Ridge - Stop on your way to the Lake*

**LITTLE SANDY'S**



THE SIGN OF GOOD TASTE



**RESTAURANT, STORE, GAS & DIESEL • EXIT 14 OFF I-68**