

Bad News for Bats

A few weeks ago at a NYSDEC Fish and Wildlife Management Board Meeting I heard of the "White Nose Syndrome". Having absolutely no idea what the heck this was, I listened intently and soon understood the significance. It seems that for the past two years bats have been dying in caves in NY (8,000-11,000 bats have died). One cave's population dropped from around 1,500 two winters ago to 38, 1/2 of which are infected with the white fungus.

Over the past few winters, wildlife officials and cavers have discovered dead and dying bats in caves with a mysterious ring of white around the nose and mouth of the bats. Scientists have learned that this is a fungus commonly found in nature and are not sure what role it has played in the deaths of the bats. The bats are starving to death, and so far the prevailing theory is a virus that is making the bats use up their limited fat reserves and the fungus is a secondary issue. Wildlife officials are now asking that no one enter any caves and if they do, take extreme precaution to sanitize your clothing and equipment. At this point, no one seems to know if humans or bats may be spreading this disease. As of this week NY and VT have confirmed cases and I would imagine that soon cases in MA, NJ and WV will crop up. There is a great resource for this info at www.batmanagement.com/cgi-bin/yabb2/YaBB.pl?board=news

For many reasons it is of great concern to humans that the bats are dying. While there may be some folks who do not like the thought of them, most of us know the value of bats. In North America bats will consume many insect pests that we have, especially mosquitoes. The Little Brown Bat (*Myotis lucifugus*), which is very common in NY can consume up to 1,200 mosquitoes in an hour. Imagine how bad "enjoying the evening" would be without that pest control. In addition to the LBB, an average-sized colony of big brown bats can eat enough cucumber beetles to protect farmers from tens of millions of the beetle's root-worm larva each summer. Large colonies of Mexican free-tailed bats eat hundreds of tons of moth pests weekly. Pretty valuable in the insect control. In addition, some bat species in the tropics and sub tropics pollinate flowers. Check out the web for more information and hope that the wildlife scientist can figure this issue out quickly. There is discussion that this is creating a similar problem that the Chestnut Blight did to the American Chestnut, and that has folks scared.



Brain Basher faxed answers only (518.623.3519)

This Month's question will be at the WQS.

Last month's question: The names of five animals are hidden in the sentence below. Can you find them? (The letters are in consecutive order.)

"He is rich or seems to be, since he buys from expensive catalogs and ogles million-dollar homes for sale".

Congratulations to Dawn Howard of St. Lawrence County

Answer: Originally there were five—Horse, Cat, Dog, Lion and Pen. However, Dawn discovered another—a Lar, which is a white handed gibbon (a primate). I checked on that and the judges ruled it correct.

Hop Ed.

"Mike Hammer drinks beer because I can't spell cognac." - Mickey Spillane



Can anyone name a crop that in the last 15 years has decreased from a worldwide acreage of 236,000 to 113,114 acres, while in the last 2 years the price has increased 500%? Give up? It is the hop. Yes the hop, the plant that not only gives your favorite beer its bite and aroma, but also helps to preserve the beer. There is a hop crisis occurring as we speak, and it is a microcosm of other issues.

Hop plants are perennial climbing herbs, related to nettles and marijuana. They are primarily used for beer production, but have occasionally been used as a mild sedative, for ornamental purposes and as pillow stuffing. It is the hop flower (female plant only!) that we are interested in. These flowers are reminiscent of those which the Eastern Hophornbeam and American Hornbeam produce, small and papery, in clusters. Not all hops are the same and there are dozens of varieties. Some are used for the beer bouquet and some for the taste (bitterness). The difference between the varieties of hops is the amount of alpha acids that are produced. Lower alpha acid varieties like the Hallertaur (or Hallertau), a common hop comes in at 4%, and is used for aroma. Aromatic hops with low acids are referred to as *Noble hops*. Conversely, a higher acid variety such as Columbia has 13%, a considerable difference. Terms that have been used to describe the hop flavors and aromas include: *floral, citrus, spicy, piney* and *earthy*. Besides flavoring and aroma, there is another difference between hop varieties, which I will get into later.

In 1516, Germany officially recognized its beer and created the beer purity law known as the *Reinheitsgebot*, which restricted the ingredients to malted barley, hops and water. Instead of thinking that the Germans were just party animals or snobs, realize that the drinking water quality and sanitation methods of Europe were not all that great and beer was a much safer alternative to water, thanks to the hops. Hops were first planted in North America in the 1630's as the first European settlers came to the northeast. By 1830 hops began to become a major economic crop to New York. Shortly thereafter, an area that included Otsego, Madison, Oneida, Schoharie and Montgomery counties was the hops capital of the nation with over three million pounds produced. At the time of the Civil War, 90% of the nation's hops came from NY. A few things occurred that helped to effectively eliminate NYS as a hop producer in just one hundred years. What the heck happened?

The first was the American westward expansion into the state of Washington and Oregon. More favorable conditions were found (including higher yields per acre) out there. During this expansion, the prices of hops began to fluctuate greatly (price wars), and NY farmers grew to distrust the economic stability of this crop.

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The Upper Susquehanna Coalition: It All Goes "Downhill" From Here

Instead of profiling a District this month, I thought that we would find out about the Upper Susquehanna Coalition. A short phone call to Jim Curatolo, the Watershed Coordinator provided me with a plethora of information on the USC, and information that I was not aware of.

Way back in 1992, the USC was born. The Chesapeake Bay Program in coordination with the EPA had discussions with Mike Lovegreen (Bradford Co, PA) and a handful of NY Districts, about the formation a coalition group of the headwater entities of the Chesapeake Watershed. John Schumacher of the NYS Soil and Water Conservation Committee was a strong proponent of this formation, so the loosely formed group developed into a coalition. For your information the Susquehanna basin provides 50% of the freshwater to the Chesapeake Bay, and the intent of the Coalition is to reduce loading of nitrogen, phosphorus, and sediment from this part of the watershed.

From the USC website, www.u-s-c.org, the Coalition "is a network of county natural resource professionals who develop strategies, partnerships, programs and projects to protect the headwaters of the Susquehanna River and Chesapeake Bay watersheds. The USC is comprised of representatives from 16 counties in New York and 3 in Pennsylvania." The Coalition is now purely a District Organization, working under a Memorandum of Understanding based on state law. Jim feels that the USC really put the Susquehanna on the map for NYS. Before, it had been left out for funding, but it is now recognized as the lead for the Chesapeake Bay Program in NY and has generated excellent working partnerships at all levels of government. He likened it to a "One-Stop - Shop" for all of your Upper Susquehanna needs, very convenient around holidays and birthdays!

This program encompasses is 7,500 square miles, which contains 13,800 streams, 17,000 road miles and 197,800 wetland acres. The size of this area lends itself to the development of many projects and programs and the USC is involved with:

- Sustainable Agriculture (including grass based ag.)
- Stream Corridor, Wetlands and Floodplains
- Stormwater
- Planning, Outreach and Training
- Invasive species

One of the most interesting programs to me, is the Vernal Pool Program. Vernal pools are seasonally flooded landscape depressions that support distinctive (and many times rare) plant and animal species adapted to periodic or continuous inundation during the wet season, and the absence of either ponded water or wet soil during the dry season. These have been largely ignored as valuable habitat for organisms such as the spotted salamander and wood frog. The USC is looking to locate the pools and better understand their functions in the environment. As development continues, we may lose this type of ecosystem, which would have detrimental affects to the organisms that have adapted to utilize them for breeding and rearing purposes.

This is a very diverse and well organized organization. They take pride in building the conservation capacity at each county and develop new initiatives for the region. The website has many resources available including GIS Data, the ever popular "A Guide To Living in Harmony with Streams", informative maps and posters and much more. Check it out. If you have any questions about the program, contact Jim Curatolo at 607-546-2528, and I am sure he would be glad to answer any questions for you, and maybe even build you a vernal pool.

Hop Ed. Continued...

Much like the humidity problems that Long Island grape growers have, so did the hops growers. High humidity helped to promote mildew on the hops, and the "blight" took its toll, but the hearty hop held on through to the 1900's. In 1914 an infestation from the hop aphid led to the continued decrease of the plant in NY.

The final death knell to the hop industry was prohibition and although some hop growers held on until the 1950's, the glory days of hops being a viable agricultural crop was long gone. Right now hop prices have increased considerably for several reasons. The first is that the supply is not around to meet the worldwide demand, many developing countries are enjoying their beer. In addition, bad weather in Europe has decreased the available supplies from Europe considerably and last year a warehouse fire in Washington destroyed 4-5% of this nations hop supply. What in the world is going on?

It is the microbrewer and homebrewers that get hit the hardest as their supplies are not secured. Not only is it the weather that is driving prices up, but due to the demand of corn for ethanol, the overall hop acreage has decreased (barley prices have doubled as well for the same reason). In the beginning of this article I talked about the difference between the aromatic and flavoring hops, is that really important? Yes, considering that the Columbia hops will yield more pounds per acre, with a higher acid content than Hallertaur. That means the likely demise of certain varieties (especially the aromatics) as it is more beneficial for farmers to maximize their crops with high production yields. In 2004 there was a revival in NY to produce and utilize locally grown hops. The Ithaca Brewing Company has been brewing with hops from the Pederson Farm in Seneca Castle. Their Double India Pale Ale (IPA) uses 7.5#s of hops compared to 1# for their regular pale ale. India Pale Ale, by the way, was created by London brewers for the British army in India. The extra hops helped to preserve the beer and keep it unspoiled during the long hot voyage (6 months).

Now, can you legally produce beer in your home in NY? Yes you can. In all actually it is a bit fuzzy, since the statute mainly deals with the licensing and selling of beer, so don't sell any without a stamp and you should be OK. I checked other states and found out that there is a tremendous difference in the laws. For instance in some states there is a maximum that one can produce per year (100 -200 gallons), there is a maximum Alcohol By Volume (ABV) in Utah - 4.5%, an ABV range in NC of 0.5-6.0% and in Vermont you can make beer till the cows come home, but it can only be drunk at your house (or at the house of production). If you bring it to a neighbor's party, keep an eye out for "The Man".

What prompted this article? Well within the last week, four of us from Warren County SWCD have bottled 8 gallons of homebrew and have 4 more gallons getting ready to bottle. Prices are rising all over and I hope that I have illustrated the effects to the small producer.

Home brewing is a lot of fun, and is really a big science experiment. The variety of flavorings that can be used is only limited to your imagination. Home brewers may need to start using imagination as hops become scarcer for the next few years. It looks like things might improve by 2010, but who knows. It takes two years in the US to produce a viable crop and 3-4 in Europe. So if you are looking for a cash crop and want to help out the simple home brewer, plant us some hops and you will be richly rewarded. And, as the saying goes..."Relax and have a homebrew".