

Conservation

By Tom Marks

There are so many issues that can be lumped under the conservation “theme”. I know some believe it is preserving habitats, or protecting wildlife. Preserving unspoiled wildernesses from mankind is what some think is conservation. To others it is harvest from the wild only what you can utilize. There are a lot of folks who view conservation as not polluting or wasting energy. Some people view conservation as recycling and it may be just the newspapers, some bottles and cans each week in the trash they set out. There are people who feel maintaining gardens and feeding birds is conservation. Conservation can be protecting cultural and biodiversity. Conservation is about the environment man made and natural. It is economics and what the earth provides us to survive.

Before our technological industrial society man lived off the land. It was very obvious that he depended upon healthy ecosystems for his survival. Kill all the game in a forest and you will starve in the future. The lifestyle of man had to be sustainable, he was forced to practice conservation or die ... utilize only what is needed and save for the future. We often look at primitive societies as living in harmony with nature in reality they evolved with the ecosystem and were an integral part. The ecosystem provided man with services that helped him survive. Bees pollinated flowers to yield fruit, rains replenished aquifers and fed streams, and forests provided wood for shelter and energy. Trees and plants provide fresh air for us. Ecosystem services are vital to our existence but often they are not valued for their importance. Our modern economy takes them for granted.

Despite our technological and industrial advances today we are still inextricably linked to the ecosystem. We have the capability to alter huge expanses of land and environments to build cities and farms. Yet with all our ingenuity if bees were to vanish today many humans would starve. We still depend on bees to pollinate most of our food crops just as our ancestors did through the millennia. If we were to place a value on bees, they would have to be priceless because we need them to survive. Today bees are disappearing around the world at an astounding pace it has many scientists concerned. They call it colony collapse disorder, it is poorly understood but it could be environmental stresses, diseases, pesticides, pollution or even attacks by other insects.

Humans are made up of about 60% water. We can not survive for more than a week without it. With 20% of the earth’s surface fresh water at our doorstep we have a tendency to take it for granted. It is hard to imagine that there isn’t an endless supply. About 10% of this water drains to the sea through the Saint Lawrence River or is lost through evaporation every year, however it is replenished at the same rate but the replenishment rate is not constant so the levels of the lakes do vary over time. If the water was replenished more than what is naturally “lost” to the sea and evaporation every year we would be under water. We are at the point where we could use more water than what is replenished by nature. We bottle it up and send it to markets around the country. We

have been debating piping it out of the basin. We have the Great Lakes Water Compact to prevent diverting it, but don't be fooled there are provisions to divert water for humanitarian needs. In the central United States there is a source of water called the Ogallala Aquifer it is an underground pool of water under eight states from South Dakota to Texas left by the last Ice Age Glaciers. It has been nearly drained in some parts and is recharged at only 10% of the withdrawal rate. There will come a time soon when there is no water in the Ogallala Aquifer, those people will die of thirst. They are looking at the Great Lakes to quench their thirst. Can we deny them the water they need to keep alive? Obviously the region has developed far beyond its capability to sustain the population, industrial and agricultural demands.

These were two examples of how dependent we are on the environment and healthy ecosystems. Our lifestyle has to be sustainable or we will run out of resources. We are no different than our ancestors, we can not consume all the game in the forest or we will starve in the future. Our society today is not living a sustainable lifestyle. Our cities have grown beyond nature's ability to provide vital ecosystem services. However, all is not lost we have the ability to change, to conserve, to live within our means. To conserve means protect ecosystems from invasive species, which diminish biodiversity. To conserve means to utilize fresh water and recycle it to the aquifers or lakes where it came from. To conserve means not to pollute the environment with wastes. To conserve is to restrain unfettered growth and sprawl. To conserve is to recycle urban spaces for new development.

Conservation is to live a sustainable lifestyle both environmentally, and economically. After all, we do not own the ground or earth we stand on; we only lease it from the future. It is our responsibility to leave it better than the way it was when we inherited it.

EAB Discovered in the Southern Tier of New York State.

By Tom Marks

The Emerald Ash Bore (EAB) an invasive beetle that has destroyed millions of ash trees in Ontario, Quebec, Michigan, Ohio, Maryland, Virginia, Illinois Wisconsin, West Virginia, Indiana, Missouri, and Pennsylvania has now been discovered in New York State near the town of Randolph. The EAB is an invasive beetle that came to this country from Asia in wood packaging or wood products. The infected ash trees at Randolph were believed to be from nursery stock that was used for landscaping at a rest stop on the Southern Tier Expressway. 39 trees were cut down and chipped to eradicate the beetle on the site. It is believed they beetle had been present for almost five years. In a seven-mile radius around the site more than 2000 EAB traps were set out. A quarantine has been established around Cattaraugus and Chautauqua Counties restricting the movement of ash trees, firewood or lumber. Over 12,000 EAB traps were set out all across the state in an effort to detect the beetle. The traps were collected after Labor Day to see what they captured.

In other states ash trees were cut down in 25-mile radiuses around infested wood lots. New York has over 900 million ash trees or about 7% of all the trees in the state. Many of the ash trees are located in parks. The beetle traps detect the EAB after it is too late for the trees in the area. So, this summer I participated in a program at Syracuse University to learn how to identify the presence of beetles before they become too widely spread and do a lot of damage. I was trained to do what is called “Bio-Surveillance”. There is a digger wasp, *Cerceris fumipennis*, which hunts and captures beetles. It flies out to hunt and bring beetles back to its underground nest to feed its young. Finding colonies of this wasp and watching what beetles it returns with has been shown to be more effective than monitoring beetle traps. It is hoped to be an effective early warning technique for the EAB.

I asked a state forester what could be done if beetles were discovered in the area of my ash trees. He said cut them down and destroy them. There are no effective treatments for trees that are infested. Trees are infested long before there are any signs of damage. When the larvae mature they dig a small “D” shaped exit hole near the upper part of the tree. Usually when signs show EAB larvae are under the bark it is too late to save the tree.

Protect our forests, do not move firewood more than a few miles from its source. Learn to identify the emerald ash borer. Report any suspected damaged ash trees to the DEC.



Emerald Ash Borer (EAB)



EAB Trap



Tree damaged by EAB larvae