



An Ohio Woodland Stewards Program Publication

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What Do We Know About Ohio's Forests?

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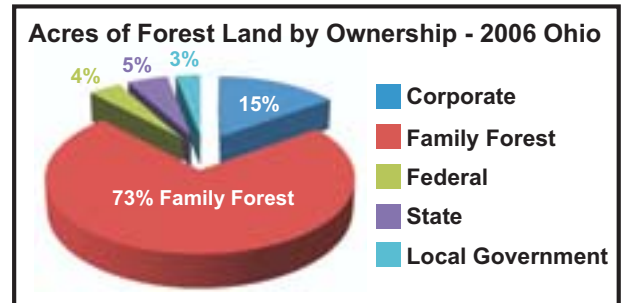
What do we know about Ohio's forests? Well, thanks to the US Forest Service and their Forest Inventory Analysis (FIA) program and the National Woodland Owner Survey we are getting a new snapshot of what Ohio's forests look like. This latest survey indicates that we have gained about 100,000 acres of forestland since the 1991 survey. The resulting 7.8 million acres of forestland encompasses about 30% of the state. This means Ohio's forests have doubled in area since the 1942 inventory but the rate of growth has slowed considerably in the last decade or so.

Where are Ohio's forests? The lowest percentage for forest land cover sits in northwest Ohio while the largest percentages sit in east central, south east and south central Ohio (see maps).

What does the future of Ohio's forests look like? The FIA survey found trees have increased in both size and number in our woodlands. As our woodlands become denser there is more competition for light, moisture, nutrients and growing space.

Those tree species better adapted to growing in these more shaded conditions (such as maple) will do better than those species that require more light and space (such as oak). Another indicator of what the future holds is what the data tells us about tree species and size. Sugar and red maple are the most numerous tree species in the smaller sized trees (< 11 inches in diameter) while the oaks are most numerous in trees that measure 11 inches and greater. This means that

as we lose the large oaks to timber harvests or natural mortality, they will most often be replaced by maples.



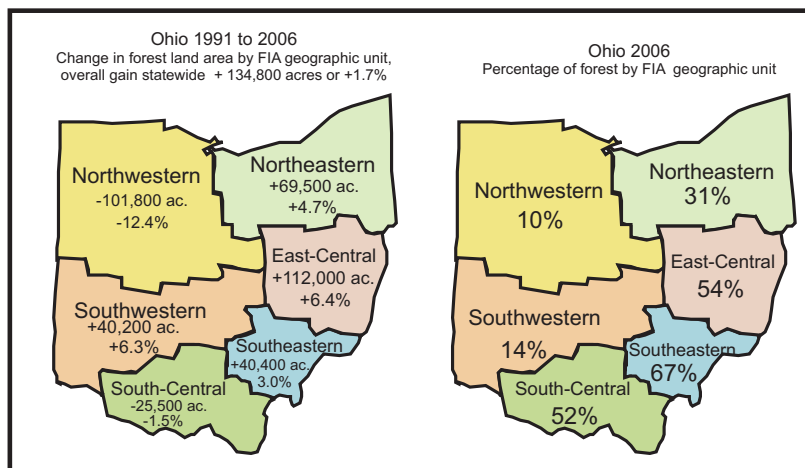
How Ohio's forest land is managed is primarily the landowners' decision and those decisions reflect the wide variety of goals and objectives that our landowners adhere to. To better understand the impacts of those decisions it helps to understand who those owners are. The largest segment of ownership is private individuals and enterprises who together own 88% of Ohio's forests. That breaks down into 15% owned by corporations, non-family partnerships, tribal lands, non-governmental organizations, clubs and other non-family groups and 73% is family forest owners (5.8 million acres).

The rest of the acreage is divided up between Federal (which includes the Wayne National Forest), State and Local Governments totaling 12% of Ohio's forest land.

The National Woodland Owners survey determined Ohio has approximately 336,000 family forest owners and that 93% of those owners hold fewer than

50 acres. This category of ownership size accounts for 3.2 million acres or 55% of our forest land.

So what does all this mean to Ohio's forests? We



know that the current trend is for smaller parcel size which can result in more landowners, further fragmenting the forest. Family forest owners and the practices they implement on their woodlands will shape the future forests of Ohio. Are you one of those?

Redoutey Family Awarded National Outstanding Logger of the Year Honors

Redoutey Logging, a family logging business based in Scioto County, recently accepted the 2009 National Outstanding Logger of the Year award in recognition of excellence in environmentally-friendly harvesting practices, business operations, employee safety training and for their community contributions.

The winner is selected from the nation's top loggers picked from several regions. The Redoutey family was named the Appalachian Regional Logger of the Year last fall, and before that, was named by the Ohio Forestry Association as Ohio's Outstanding Logger of the Year.

"The Redoutey family are leaders in promoting safe



Forest Resources Association Chairman Dave Liebetreu (right) congratulates the partners of McDermott, Ohio's Redoutey Logging as the 2009 National Outstanding Logger. Left to right: Ryan Redoutey, Reg Redoutey, Aaron Daniels, and August Redoutey.

working practices, innovative logging techniques and in assuring the highest environmental standards," said David Lytle, state forester and chief of the Ohio Division of Forestry. "We are proud to have worked with the Ohio Forestry Association in nominating Redoutey Logging for this award."

John Dorka, executive director of the Ohio Forestry Association, commented, "Redoutey Logging is one of the most professional, up-to-date logging

companies in the state. They have raised the bar for all of us over the years."

Since the late 1990s, Redoutey Logging has specialized in "low impact logging," employing the correct piece of cut-to-length equipment with properly trained operators for the specific timber, terrain, and ground conditions.

The Redoutey's recognition is the first time an Ohio logger has ever been selected the National Outstanding Logger of the Year. Congratulations to Redoutey Logging!

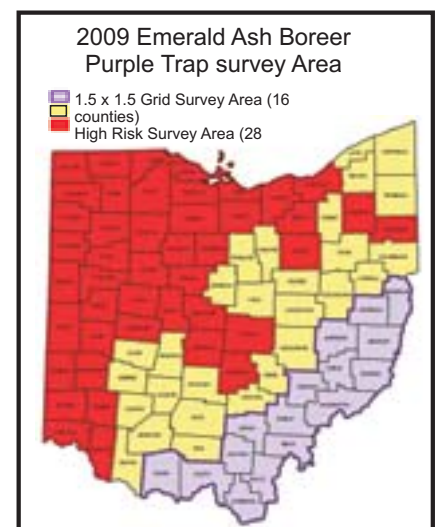
They're Baaack!

Kathy Smith, Extension Program Director Forestry
School of Environment & Natural Resources

Yes, as you drive around the state you are once again seeing these purple things hanging in trees along our interstate highways and local roads. What are they? In case you missed them last year, these are the purple emerald ash borer traps that are being deployed around the state by the Ohio Department of Agriculture. These traps will be set before the adults fly this spring and will contain a lure and a glue to attract and catch EAB

beetles. The traps will be monitored by the Ohio Department of Agriculture officials throughout the summer. The traps will then be removed and inspected this fall, after the adult beetles are no longer flying.

These traps are constructed of corrugated plastic and have three sides. They are roughly one foot wide by two feet tall and deep purple. In lab testing, this color of purple was



attractive to adult beetles, hence the purple color of the traps. The outside of the trap will be coated with glue and inside they will contain a lure that researchers have determined is also attractive to the adult beetle. These traps pose no risk to humans, domestic pets, or wildlife. The purple traps are simply a detection tool to see if EAB are already in the area. The traps are not meant to attract EAB from long distances, or be a method used for control purposes.

An Experiment Gone Wrong: Gypsy Moth Update

Amy Stone, OSU Extension Horticulture Educator, Lucas County

In 1869, E. Leopold Trouvelot, a French scientist was looking at ways to develop a superior silk. He brought the gypsy moth (*Lymantria dispar*) to Massachusetts in hopes it would be key in the creation of this "new" silk he was in search of. This insect introduction was a great example of an experiment gone wrong.

The first outbreak of the gypsy moth occurred in Medford, Massachusetts in 1882. Since its first escape over 100 years ago, the gypsy moth has advanced throughout the New England states, south to North Carolina, and west through portions of the Great Lake states and Canada. The first male moths were trapped in Ashtabula County (Ohio) in 1971. Two years later, 1973, the first chemical treatments were implemented to eradicate localized populations. Between 1973 and 1987, eradication efforts continued, but populations continued to spread. In 1987, Ashtabula County became the first Ohio county to have gypsy moth quarantine regulations imposed on it. Today, 46 counties in Ohio are under quarantine regulations.

Oaks are the preferred host species for feeding caterpillars, but apple, sweetgum, basswood, gray and white birch, poplar, willow and many others can serve as host plants for the caterpillars while in their feeding frenzy. Gypsy moths avoid ash (not the case with emerald ash borer), yellow-poplar, sycamore, black walnut, catalpa, locust, American holly, and shrubs such as mountain laurel, rhododendron, and arborvitae. Older larvae will also feed on a number of conifers such as hemlock, pines, and spruces.

The gypsy moth passes through four stages: egg, larva, pupa, and adult, and has one generation per year. Only the larvae damage trees and shrubs,

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Let's Hear it for Woodpeckers!

Marne Titchenell, Extension Wildlife Program Specialist
School of Environment & Natural Resources

It is woodpecker mating season for most of Ohio's native woodpeckers and if you haven't already, you may start to hear the familiar drumming sounds of the strong-billed birds pecking away at trees while you stroll through your woods. Perhaps you will even catch a glimpse of black and white wings and flash of red as a male downy woodpecker scurries up and around a tree trunk in search of nesting locations and tasty six-legged morsels. Ohio has seven species of woodpeckers, all of which feed primarily on insects and build their nests in tree cavities they excavate themselves. While their drumming, drilling, and pecking can sometimes get a tad bit annoying, especially if they choose the side of your house as their next excavation project, woodpeckers are nothing short of incredible birds. Not only do they contribute in curbing insect populations with their diet and create tree cavities that are used by many species of forest dwelling mammals and birds, but recent research has shown that woodpeckers are now putting the infamous ash tree killing little green bug, the emerald ash borer, on their menu of



Red-bellied woodpecker
Johnny N. Dell, Bugwood.org

choice! Annoying drumming or not, let's hear it for woodpeckers!

Woodpeckers have been referred to as nature's power tools and they are definitely deserving of that title. Their strong, sharp beaks remove bark and solid wood in a matter of minutes just like a chisel. Woodpeckers peck for four reasons: to find insects nestled up underneath the bark, to excavate cavities to nest in, to attract mates, and to let rivals know of their territories. Some woodpeckers will peck as many as 8,000 - 10,000 times a day and while they do send woodchips flying, they don't get a headache! A spongy, air filled tissue protects their brain from any trauma. While these amazing birds are chiseling away with surprising force, their stiff tails provide needed stabilization and their toes and feet provide a non-slip grip, just like any good power tool. While most birds have three toes facing front and one facing back, woodpeckers have two toes facing forward and two facing back, which



allows them to firmly and securely grip the tree trunk. If that isn't enough, they have very long tongues, up to four inches in some species, fully equipped with barbs and sticky saliva to ensnare unsuspecting insects.

The three species most common in the edges of woodlots are the downy woodpecker, hairy woodpecker, and

red-bellied woodpecker. The other four species of Ohio woodpeckers, the red-headed, yellow-bellied sapsucker, northern flicker, and pileated may not be seen as easily, but leave behind signs of their presence. The northern flicker and pileated woodpecker have very distinct calls that echo throughout the woods. The yellow-bellied sap

sucker will leave row upon row of neatly spaced holes circling around a tree trunk. Also, all seven species leave behind cavities in trees that will be used for denning and nesting again and again by other forest animals such as songbirds, squirrels, mice, snakes, and lizards.

When it comes to identifying the different species of woodpeckers, the downy and hairy woodpeckers can be hard to tell apart. With their black and white bodies and wings they are very similar in appearance. The hairy woodpecker is the larger of the two, but unless they are standing side by side, this is not a useful identification tool. Look for black dots on the white tail feathers of the downy woodpecker; the hairy woodpecker's white tail feathers do not have any dots. (Remember 'dots for downy'). There are two other species of woodpecker that are also mostly black and white; the red-headed woodpecker and the red-bellied woodpecker. The red-bellied woodpecker has black and white stripes on its back and can be distinguished from the downy and hairy woodpeckers by its red head. Why then is it named a red-bellied woodpecker? There is a twinge of red on its belly, but more importantly, the name 'red-headed woodpecker' was already taken! The red-headed woodpecker has a vibrant head of bright red feathers that cover its entire head, whereas the red on a red-bellied woodpecker is only on the crown and back of the neck. The pileated woodpecker is an easy species to identify. With its size equal to that of a crow and its flaming red crest, it is not easily confused with other species. The final two species of woodpeckers are the yellow-bellied sapsucker, identified by its pale yellow belly, and the northern flicker, which can be identified in flight by its yellow underwings and bright white patch on its rump.

All seven of Ohio's woodpeckers can be found most often in mature forests. It is within these forests that woodpeckers find all the resources necessary for their survival. Snag trees, or dead standing trees, are one of the most important resources for these birds. Not only do these dead, decaying trees attract the insects woodpeckers prefer to dine on, but they also make perfect nesting sites. It's important to note that not just snag trees provide excavation sites for woodpeckers, but many live trees will also serve this purpose. Most of the woodpeckers in Ohio will start looking for mates and excavating their nest sites in late winter and

early spring. In most species, the male and female will both help to build the nest and raise the young.



USDA Forest Service - North Central
Research Station Archive, USDA Forest
Service, Bugwood.org

As very devoted parents, they will stay with the young several weeks after they have left the nest, leading the young birds to food sources and warning them of potential predators.

Possibly one of the many words of wisdom these parents are passing on to their young is how tasty the larvae of the emerald ash borer are! David Cappaert and Deborah McCullough of

Michigan State University and Theresa Poland of the USDA Forest Service have been studying a link between woodpeckers and 'the little green destructors of ash trees.' While they are in the beginning stages of this research, they have found woodpeckers can reduce larval emerald ash borer densities as effective at the best pesticides, and woodpecker are free, well established, and a native species! Downy and hairy woodpeckers in particular are important predators of the emerald ash borer, often removing more than half of the larvae from pecking under the bark and into the sapwood. The use of woodpeckers as biocontrols of this invasive green bug is a topic that will hopefully receive more attention in the future so keep your eyes and ears open for more information.

Whether they are keeping our insect populations in check, aiding our ash trees in the struggle to survive, creating homes for many other species of wildlife, or amazing us with their incredible abilities, woodpeckers are an extremely important part of forests. No one can say they are not doing their part! So grab a pair of binoculars and a field guide and see how many different species of these amazing birds are in your woods!

and one 2 inch larvae will consume 1 square foot of foliage every 24 hours.

Gypsy moth egg masses can be laid almost anywhere. Egg masses are buff colored when first laid, but may bleach out over the winter months when exposed to direct sunlight and weathering. The egg masses tend to be laid in sheltered locations, so you may have to do some investigating, especially in low population levels.

Larvae are dispersed in two ways. Natural dispersal occurs when newly hatched larvae hanging from host trees on silken threads are carried by the wind for a distance of about 1 mile. Artificial dispersal occurs when people transport gypsy moth eggs thousands of miles from infested areas on cars and recreational vehicles, firewood, household goods, and other personal possessions.

Next is the pupal stage which usually lasts 7 to 14 days. The male gypsy moths emerge first, flying in



Gypsy moth caterpillars (above)

rapid zigzag patterns searching for females. When females emerge they don't fly, but rather emit a chemical substance called a pheromone that attracts the males. The female lays her eggs close to the spot where she pupated. Then, both adult gypsy moths die.



Gypsy moth egg mass hatching
Amy Stone OSU Extension

There is no "silver bullet" for dealing with gypsy moth. Successful management requires an integrated approach based on a number of

Continued from previous page

techniques. When population densities are high, the safest and most effective tool for preventing widespread defoliation is aerial applications of an insecticide derived from the naturally-occurring bacterium, *Bacillus thuringiensis*, commonly known as BT. The BT sprays used for gypsy moth affect only caterpillars, and are completely harmless to all other animals, including bees and other insects, birds, pets, and humans.

In regions where gypsy moth has been established for a number of years, natural controls help keep populations in check during most years. Natural enemies include insect parasites that attack egg and caterpillar stages, predators such as birds, and disease organisms. Gypsy moth is especially susceptible to a virus that is often responsible for the crash of high populations. A fungal disease of gypsy moth called *Entomophaga maimaiga* was introduced into Ohio and it is a promising tool for gypsy moth management.

Upcoming Classes

These classes are currently scheduled for 2009, though the information is subject to change. Check the website <http://woodlandstewards.osu.edu> for updates and registration information.

MAY

29	Wildlife in Your Woods	Union County
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JUNE

20	Vinton Furnace Landowner Workshop	Vinton County
26	Name That Tree	Union County

JULY

17	The Woods in Your Backyard	Cox Arboretum Montgomery County
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AUGUST

6	Bats: Not Just For Caves Anymore!	Cox Arboretum Montgomery County
14	Name That Tree	Clermont County
28	Grassland Management for Wildlife	Gwynne Conservation Area Madison County

Check Us Out On The Web!

Look for newsletter articles, links to fact sheets and other publications by browsing our site. Registration for upcoming Woodland Stewards classes may also be done electronically.

Go to:

<http://woodlandstewards.osu.edu>

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Keith L. Smith, Associate Vice President for Agricultural Administration and Director, OSU Extension

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