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COMMOM SPIDERS OF NEW YORK

Spiders evoke a combination of curiosity and horror in people of all ages. Spiders' seeming ability to appear suddenly out of nowhere on their fine silk lines can startle anyone. But their frightening reputation is largely underserved. Spiders are fascinating creatures! The webs of many species are intricate architectural wonders. They are superb predators that capture more prey than all other terrestrial predators combined. Spiders can be masters of stealth-blending into their surroundings or hiding so well that they are often overlooked.

While both insects and spiders are in the phylum Arthropoda, spiders are in the class Arachnida, which also contains scorpions, harvestmen, pseudoscorpions and ticks. All spiders (order Araneae) have eight legs, two body segments (cephalothroax and abdomen) separated by a waist, and unlike the insects, they do not have chewing mouthparts, antennae or wings. Spider jaws are called chelicerae, and include hollow fangs through which they inject venom to immobilize or kill their prey.

Spiders prey on small living invertebrates, such as insects or other spiders. Unable to swallow solid food, spiders liquefy their prey externally regurgitating digestive juices onto it. They then crush the prey with their chelicerae and suck up the juices. Spiders have a pair of jointed appendages (called pedipalps or palps) on either side of chelicerae that look like short legs. Palps help manipulate the prey during feeding.

Like all arthropods, spiders have a hard exoskeleton with flexible membranes at the joints so that the legs can bend. To grow larger, they molt, shedding the old exoskeleton and then sucking in air to inflate the soft underlying skeleton until it hardens at a larger size. Spiders molt up to a dozen times until they become sexually mature adults.

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All spiders produce silk-thin, incredibly strong protein strands produced from various glands in the abdomen and extruded through microscopic spigots arranged on muscular spinnerets, which are located at the tip of the abdomen. Depending on the gland used, silk has different properties: some is sticky for catching prey; but most are non-sticky and are used to cover egg sacs, construct parts of webs, wrap prey, or make waterproof retreats. While not all spiders use silk to capture prey, they all use silk to produce draglines, two fine strands that are continuously released wherever the spider walks. Many small spiders use these lines to disperse long distances, simply extruding a bit of dragline into the breeze which carries them away.

Spiders mate in a way that is unique in the animal kingdom. When a male becomes sexually mature, the ends of his palps develop into swollen structures that function as small, complex syringes. Before courting a female, the male constructs a small web on which he deposits a drop of sperm. He then sucks up the sperm into each of his "palp syringes" which are then used to inseminate the female. Mating is a risky business for males as female spiders of many species attempt to cannibalize males after mating.

In New York's northern climate, spiders typically live only one year. Most pass the winter as eggs that develop into adults in summer and then die in fall. However, some species overwinter as inactive adults, hiding in crevices under bark, or stones, or in window casements. To avoid the lethal effects of freezing solid, they secrete antifreeze into their blood. In spring, they complete their life cycle by mating, laying eggs, and dying.

There are about 40,000 identified spider species worldwide. This can make properly identifying an individual tricky. By focusing on certain physical traits you should be able to narrow down to the group. For instance, the shape of the abdomen, relative sturdiness of the legs, or eye patterns are often characteristic of a specific group. Likewise, the presence and shape of a web are important clues. Spiders living in webs are built differently than their non-web living relatives who must support their weight against gravity while walking. Knowing a spider's habitat is also informative--fishing spiders live near water, crab spiders hunt in flowers, while cellar spiders are common near ceilings in homes.

Fishing or Nursery Web Spiders

Pisauridae

Nursery web spiders resemble wolf spiders, but have smaller eyes and legs that are held more widely to the sides of their body. They get their name from the fact that some species fish for aquatic prey, such as insects, crustaceans, or even small minnow. Standing on the backs of streams or ponds with their legs lightly touching the water, the spiders feel for vibrations passing prey and then quickly dive into the water to pursue it. Other species of this spider hunt vertically on vegetation or basement walls. Fishing or nursery web spiders build a characteristic "nursery" web in vegetation, where they guard their egg sacs and spiderlings.

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Sac Spiders

Clubionidae, Miturgidae

Sac spiders are typically light colored spiders with noticeably protruding spinnerets and dark fangs. They weave small silk sacs under rocks or loose bark that they use for sleeping retreats and rearing young. Sac spiders lack capture webs, and wander in vegetation and occasionally in homes looking for prey. There are two family groups of sac spiders. Two species of small, pale, yellow spiders, called yellow sac spiders *Cheiracanthium mildei* (pictured below) and *C. inclusum*, are the only spiders in New York that are moderately poisonous to humans. They have necrotic venom that causes itchy or painful ulcerating sores that are slow to heal. In New York, bites attributed to brown recluse spiders are almost certainly from yellow sac spiders.

Black & Yellow Garden Spider

Araneidae: Argiope aurantia

One of the largest, most conspicuous spiders in New York, the diurnally active black and yellow garden spider occurs in sunny fields and gardens. Like all orb weavers, its web is an architectural wonder, designed to greatly extend the spider's sensory system while using a minimal amount of silk to trap or slow down flying prey. The web has several parts: non-sticky spokes (radii) and lines that frame the web provide structural support; the sticky spiral ensnares flying insects; and the broad swaths of white zigzag silk deter birds from flying through it. The web is rebuilt each morning to refresh glue on the spiral. Large prey items are wrapped and immobilized with broad bands of swathing silk. Sexually dimorphic, adult females are hundreds of times larger than the tiny males.

Havestmen

"Daddy-Long-Legs"

Are daddy-long-legs spiders? Daddy-long-legs and ticks are not true spiders, but spider relatives. All three types of animals are arachnids, but harvestmen and ticks have only one body segment, whereas spiders have two. Harvestmen have oval bodies and long, thin legs. They are omnivores that hunt small insects, scavenge on decaying material, or feed on plant juices. They do not have venom, but can produce a foul smelling scent. Ticks are external parasites that suck blood from reptiles, birds or mammals. They are typically flat with very short legs that barely protrude beyond the body. If they have recently taken a blood meal, the body may swell up to the size of a lima bean.

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Sheet Web Weavers~*Linyphiidae*

Often overlooked because of their small size (less than a quarter inch long), sheet web weavers are among the most abundant spiders in vegetation. They build fine, non-sticky, sheet webs in vegetation. The webs are composed of a lace-like horizontal web with "knock down" threads, or many fine, disorganized vertical strands that are invisible to small flying insects, which crash into the threads and fall onto the sheet. The spiders run upside down on the underside of their webs and bite prey through the web. Some local species may vary the shape of the sheet web. One species, called the "bowl and doily" spider, weaves a cup-shaped web above the horizontal sheet and hangs from the bowl. Another, called the "filmy dome" spider, weaves a dome under which it lurks.

Jumping Spiders

Salticidae

Jumping spiders are easily identified by their large eyes, squat bodies and sturdy legs. They are very intelligent, colorful spiders with distinct personalities. Jumping spiders have excellent vision and will often turn to look at you as you approach. They hunt during the day, eating insects and other spiders. They get their name from their ability to jump impressive distances while searching in vegetation or catching prey. Before jumping, these spiders will touch their abdomens to the ground to tack down their draglines. That way if they miss their destination, their spinnerets clamp the silk so they only fall a short distance. When jumping spiders see prey that they cannot jump onto directly, they are known to take a detour route through the vegetation to put them into a position above the intended prey. Male jumping spiders court females by moving their brightly colored chelicerae, palps or leg tufts. In autumn, many jumping spiders build silken retreats in goldenrod plants, windowsills, or mailboxes.

Funnel Web or Grass Spiders

Agelenidae

Grass spiders build sturdy, non-sticky sheet webs with a few "knock down" threads on top of vegetation. One corner of the sheet tapers into silken funnel where the spider waits facing outward for insect prey to land on the sheet. Once an insect lands, the spider dashes out on top of the sheet and bites the prey before it can take off again. Grass spiders are about three quarters of an inch long, with brown bodies and long conspicuous spinnerets. They can be spotted on low hedges or evergreen plantings around buildings.

Source: New York State Department of Environmental Conservation, "Common Spiders of New York"

FOREST FINANCE 101

Money Matters for Forest Owners

Holiday Inn Turf, Route 9, Lake George, NY

December 6, 2008

8:30am-4:00pm

Forest Management is all about good planning, and that involves both forestry and finance - The keynote speaker is Dr. Peter Smallidge of Cornell Cooperative Extension, the State Extension. As Cornell's Senior Extension Associate, he provides leadership statewide for educational efforts to support productive, sustainable management for private forest owners.

What About the Kids?

Long term planning and estate planning - Thom McEvoy; Associate Professor and Extension Forester University of Vermont

Property Tax Management: Is '480-A' the way for you?

Steven Warne, Forester and Rich McDermott, Forester

NYS Department of Environmental Conservation

What about Conservation Easements?

Laurel Gailor, Natural Resource Educator, CCE Warren County

Ethan Winter, Conservation Director of NE Land Trust Alliance

Income Taxes and Planning

Stephen Goodman, Internal Revenue Service Forester

Bring it All Together: Q & A Panel

The day's speakers will present as a panel to answer your questions.

Pre-registration is required by November 25. The fee is $20 (please make check payable to CCE Warren County). Mail to CCE Warren County, 377 Schroon River Road, Warrensburg, NY 12885

INSECT TRAPS AND BARRIERS

Insect traps and barriers are in widespread use and have been on the market for many years. However, many misconceptions exist among home gardeners as to what they will and will not do. Here we will categorize traps as to type, and will help you decide whether the trap or barrier will be appropriate for use in your garden.

Mechanical Traps: Sticky traps for home gardens are one option. They may be purchased commercially, or they may be handmade. These traps have a sticky surface so that an insect or small animal encountering them will adhere to the surface. Sticky cards are available for monitoring such pests as whiteflies; when traps are properly placed, they may help reduce the populations. Placement of the trap is important, as is renewing the sticky surface or discarding traps when they are full. Pitfall traps are sometimes used to help detect and monitor crawling pest. A well known trap of this type is the pie-tin beer trap for slugs (Home remedy*). A small pan or tin is placed in the soil with its top flush with the soil surface. The pan is filled half-way with beer. Beer attracts slugs, which fall in and drown. A similar pitfall trap has been used to monitor black vine weevil populations in nurseries and home landscapes. Other traps employ such tactics as placing boards or grapefruit skins in gardens to provide hiding places for slugs and insects. Rolled up newspapers can serve as similar device for catching earwigs.

Visual Lures: Visual lures are generally effective for a limited number of species. Light traps have been used for many years to monitor insects, helping to determine which are present and in what number. Unfortunately, light traps catch many types of insects, including both beneficial and damaging species. Some day-flying insects are attracted to specific colors. Colored traps can be coated with a sticky substance to capture these insects. Proper construction and placement of the traps

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are critical since they must present the proper appearance (visual image and/or color) to the targeted pest be effective. Some visual traps that can provide partial control of insects when properly used include red sticky balls for apple maggot, yellow sticky cards for aphids and whiteflies, and white cards for plant bugs. In addition, some visual traps are enhanced with chemical lures.

Chemical Lures or Bait Traps: Pheromones are a well known type of chemical lure. Pheromone traps utilize a sex attractant for the pest species. They are excellent monitoring devices, and several have been shown to provide control of certain species such as codling moth.

Aggregation pheromones are used in traps to collect elm bark beetles. Feeding attractants are also used to trap insects. Japanese beetle traps, which have been on the market for a number of years, often contain a feeding attractant; some also contain a sex pheromone. The effectiveness of the Japanese beetle trap as a control method continues to be investigated, and it is likely that they can protect small garden areas from too much damage if properly placed. Improper placement, however, can attract more hungry beetles to the garden area. Situate traps of this type well away from the garden, so beetles fly away from garden plants.

Barriers: Barriers are useful for preventing damage from certain pests. Unlike traps, they are used for blocking the feeding activity of the pests. Cutworm collars are valuable for reducing losses to transplanted tomatoes, peppers, broccoli, and related plants. They can be constructed of cardboard, metal, plastic or similar materials. They should be 4 inches tall, and placed firmly in the soil as soon as the crop is transplanted. The collars must be pushed down into the soil approximately one inch to be effective.

Partial control of cabbage root maggot on transplanted crops can be achieved with tar paper shields. To make a shield, cut a round or square piece that is at least 6 inches across. Make a small hole in the center, cut a slit from the edge to the center, and fit the paper around the base of the stem; it should lie flush with the ground. This shield will serve as an egg-laying barrier to the adult flies if it is placed promptly after transplanting and fitted snugly around the stem.

Rowcovers are used as barriers to some insects such as leafminers that attack beets, spinach and Swiss chard. They can be effective as long as: 1) there are no gaps or tears in the materials; 2) the material is placed over the crop before or immediately upon crop emergence or transplanted and 3) no hosts of the pest were grown on that site the previous year.

If you use row covers to exclude pests such as striped cucumber beetles, remember that rowcovers exclude pollinating insects as well. Covers must be removed or opened up daily to allow for pollination. Commercial covers made of polypropylene, polyester, or polyvinyl alcohol are available, but cheesecloth or screening can also be used. These rowcovers let light and water, and allow continued plant growth. Even ventilated plastic rowcovers can help keep out some pests.

***Home remedies:** These remedies are not endorsements by Cornell University of a product or procedure. They are not recommendations for use either express or implied. Neither Cornell University, not its employees or agents, are responsible for any injury or damage to person nor property arising out of the use of this information.

Source: Awesome Answers - CCE Oneida County

GROWING TIME FOR TRANSPLANTS

The amount of time required from planting seed indoors to transplanting outdoors varies. Plants will need at least a week to harden off before planting outdoors. This consists of providing cooler temperatures and cutting down on the water and fertilizer. See Table on right.

Best Time to Plant Outside

MID-LATE APRIL or **EARLY MAY** - as soon as ground can be worked

COOL SEASON CROPS - can tolerate a light frost. Grow best 50 degrees or 65 degrees F.

Vegetable: Onions, lettuce, peas, spinach, garlic, cabbage, radishes, turnips, rhubarb, parsley, endive, carrots, broccoli, beets, cauliflower, brussel sprouts, salsify and parsnips.

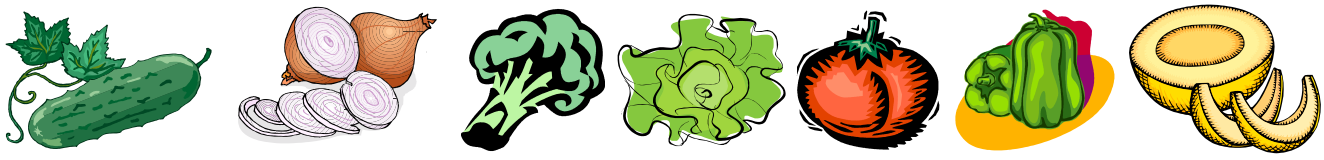
LATE MAY - after soil has warmed and all danger of frost is past.

WARM SEASON CROPS - cannot tolerate frost, grows best at 60 degrees - 80 degrees F.

Snap beans, sweet corn, cucumbers, tomatoes, eggplant, peppers, pumpkins, Swiss chard, winter squash, potatoes, muskmelons, watermelons, and lima beans.

Vegetable	Start Seed Indoors	Transplanting Seedlings Outdoors
Onions	Early March	Late April-Early May
Broccoli 5-6 weeks	Late March-Early April	Late April-Early May
Brussels Sprouts 5-6 weeks	Late March-Early April	Late April-Early May
Cabbage 5-6 weeks	Late March-Early April	Late April-Early May
Cauliflower 5-6 weeks	Late March-Early April	Late April-Early May
Lettuce 4-5 weeks	Early April	Late April-Early May
Cucumbers 2-3 weeks	Early Mid-May	Late May-Early June
Melons 2-3 weeks	Early Mid-May	Late May-Early June
Squash, Pumpkins 2-3 weeks	Early Mid-May	Late May-Early June
Tomatoes 5-6 weeks	Late March-Early April	Late May-Early June
Peppers 5-8 weeks	Late March-Early April	Late May-Early June
Eggplant 6-8 weeks	Late March-Early April	Late May-Early June

Source: Awesome Answers - CCE Oneida County



STARTING SEEDS

Cultural requirements. Success in raising seedlings indoors depends upon the availability of optimum cultural conditions. For adequate germination of the seed and development of the seedlings, you must provide:

1. **Sunlight** - preferably a window or sunporch with southern or western exposure where sunlight will not be obstructed by curtains.
2. **Temperature** - optimum temperature for the germination of most seeds is 68°F. (Larkspur, an exception germinates best at 55°F). After germination, the temperature should be maintained at approximately 55°F. Temperatures higher than 60°F will result in weak, spindly seedlings which will be difficult to handle.
3. **Ventilation** - especially on warm days.
4. **Water** - facilities for watering plants often, where water will not damage floors of furniture.

Seeding. Garden soils are not a reliable medium for sowing seeds indoors because they lack necessary organic matter and they are often infested with diseases and weeds. Therefore, the Cornell Peat-lite Mix A* is suggested for use in starting seeds in the home. A small quantity can be made in a hurry. The basic ingredients are vermiculite no. 2 size (sold as Terralite) and sphagnum peat moss. Here is the recipe for a one-peck mix:

Vermiculite no. 2 size	4 qts.
Shredded sphagnum peat moss	4 qts.
Limestone (preferable dolomitic	1 TBS.
Superphosphate (20%)	2 tsp.
5-10-5	2 TBS.

Mixing is less dusty if the peat moss is slightly moistened. Mix the materials thoroughly on a clean surface. You can use the mix immediately or store it moist in a plastic bag. Plants may be started in pots or containers of plastic, styrofoam or fiber. The container must have holes in the bottom for drainage. Fill the flat or containers with mix and firm it well at the edges and corners. Make rows by pressing the edge of a 1/2 inch board to a depth of 1/4 inch. Do not cover fine seeds such as petunia, snapdragon, and begonia. Cover most other seeds to a depth of about 1/4 inch.

Slip the container into a plastic bag and store it in a warm place (68° to 70°F) with good light but not direct sunlight. Remove the bag when green sprouts appear, move the plants into sunlight and keep the medium moist. Transplant the seedings as soon as 1 or 2 sets of true leaves appear. Fertilization will be necessary about every two weeks if plants remain in the mix for a long time. Use a completely soluble fertilizer at 1 to 2 tablespoons per gallon.

Table 1. Tune to sow seeds and to transplant annuals to have plants ready to set in the garden the last week in May.

Plant	Sow seed in	Transplant seedlings in:
Ageratum	March, 3rd week	April, 3rd week
Amaranthus	April, 3rd week	May, 1st week
Anagallis	April, 1st week	April, 4th week
Babysbreath	April, 3rd week	May, 1st week
Balsam	April, 2nd week	May, 1st week
Bachelors button	April, 3rd week	May, 1st week
Calendula	April, 3rd week	May, 1st week
California poppy	April, 3rd week	May, 1st week

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Plant	Sow seed in	Transplant seedling In:
Calliopsis	April, 1st week	April, 3rd week
Candytuft	April, 3rd week	May, 1st week
China aster	April, 2nd week	April, 4th week
Chrysanthemum	April, 3rd week	May, 1st week
Clarkia	April, 4th week	May, 2nd week
Cleome	April, 3rd week	May, 2nd week
Cockscomb	April, 2nd week	April, 4th week
Cosmos	April, 4th week	May, 2nd week
Cynoglossum	April, 1st week	April, 4th week
Dahlia	March, 1st week	March, 4th week
Dianthus	April, 1st week	April, 4th week
Dimorphotheca	April, 1st week	April, 4th week
Gaillardia	April, 3rd week	May, 1st week
Godetia	April, 2nd week	April, 4th week
Gomphrena	April, 3rd week	May, 2nd week
Hunnemannia	April, 1st week	April, 4th week
Kochia	April, 2nd week	May, 1st week
Larkspur	April, 1st week	April, 4th week
Lavatera	April, 2nd week	May, 1st week
Lobelia	March, 3rd week	April, 3rd week
Marigold	April, 2nd week	April, 4th week

Plant	Sow seed in	Transplant seedling In:
Mignonette	April, 3rd week	May, 1st week
Mimulus	April, 3rd week	May, 1st week
Morning glory	April, 3rd week	May, 1st week
Nasturitium	April, 3rd week	May, 1st week
Nicotiana	April, 2nd week	May, 1st week
Nierembergia	March, 3rd week	April, 1st week
Nigella	April, 1st week	April, 3rd week
Petunia	March, 3rd week	April, 1st week
Phlox	April, 2nd week	April, 4th week
Poppy	April, 4th week	May, 2nd week
Salpiglossis	April, 1st week	April, 3rd week
Salvia	April, 1st week	May, 1st week
Scabiosa	April, 3rd week	May, 2nd week
Schizanthus	April, 3rd week	May, 1st week
Snapdragon	March, 2nd week	April, 1st week
Statice	April, 1st week	April, 3rd week
Strawflower	April, 1st week	April, 3rd week
Sunflower	May, 1st week	May, 2nd week
Sweet alyssum	April, 2nd week	April, 3rd week
Verbena	March, 2nd week	April, 2nd week
Vinca	April, 1st week	April 3rd week
Zinnia	April, 4th week	May, 2nd week

LAST SEEDING AND TRANSPLANTING DATES FOR VEGETABLES IN NEW YORK

Questions often arise on how late a vegetable can be planted in the garden in New York State and still reach maturity or usable size before frost or cold weather stops growth. The last dates listed below for each crop are for Central and Northern New York State. Most years the crop will reach the harvestable stage if planted by the date indicated, but yields of crops requiring multiple harvesting (tomatoes, peppers, cucumbers, etc.) likely will be rather light unless the fall weather is warmer than normal, and first frosts are unusually late.

<u>June 1-7</u>

Beans, lima
Edible cowpeas*
Herbs, most
Muskmelons*
Okra
Popcorn
Edible Soybeans
Tomatoes (late)*
Watermelon*

<u>June 20-27</u>

Beans, pole, snap
Brussels sprouts
Cabbage (late)*
Celeriac
Celery
Eggplant*
Leeks
Peppers
Sweet corn (medium)
Tomatoes (early)*

<u>July 5-8</u>

Beans, snap
Cabbage (medium)*
Carrots
Cauliflower (late)*
Chinese cabbage
Cucumbers
Lettuce, head
Lettuce, romaine
Onions, green
Parsley
Parsnip
Rutabagas
Squash, Summer
Sweet corn (early)

<u>July 21-24</u>

Beets
Broccoli (late)*
Collards
Endive
Kohl-rabi
Lettuce, bibb

<u>July 21-24</u>

Mustard
Radishes, Chinese
Swiss Chard

<u>August 1-3</u>

Broccoli (early)*
Cauliflower (early)*
Lettuce, leaf
Spinach

<u>September 1-7</u>

Radishes

*Indicates the crop normally is transplanted and the date is for setting transplant in the garden

Notes:

1. Success at these last dates will vary for the location and the year.
2. Onions should be seeded by April 30 or transplanted by May 15.
3. Many crops normally transplanted can be seeded directly in the garden. These include broccoli, cabbage, cauliflower, musk, melons and tomatoes. The last safe seeding is 2-3 weeks earlier than the transplant date shown above.
4. The early, medium, late in parenthesis, refer to the variety. Early maturing varieties can be seeded later than slower growing late varieties.

Source: Awesome Answers; CCE Oneida County

HEATING SEASON IS HERE ~ BURN WOOD SAFELY

You can use wood safely in home heating units. But each year, because of disregard for safety, many costly, tragic fires occur. This doesn't have to happen. You simply need to use common sense and take the following precautions against fire:

- Construct the chimney properly, and keep it in good repair and clean of tars and creosote.
- The heating unit must be well-designed and constructed so burning coals, sparks and smoke cannot escape.
- Set the unit on an inflammable base large enough so coals or sparks cannot spill on a flammable floor surface.
- Protect flammable walls or ceiling by keeping the stove or pipes an adequate distance away or use a heat shield.
- Don't place wood, clothing or other flammable materials where the heat from the unit could ignite them.
- Don't place or store oils, gases or volatile liquids where open flames can ignite fumes.
- Don't fully load a heating unit, set the draft and immediately leave because the fuel may flare up and overheat.
- Provide adequate ventilation so oxygen consumed by combustion can be replaced.
- Don't use volatile liquids to start a fire.
- Be careful when removing ashes; live coals are often present, which might fall or otherwise contact flammable materials.
- Avoid fuels such as large pieces of cardboard or dry Christmas greenery, which produce high flames that can cause flue fires. Some materials you should never burn in a fire include plastics, poison ivy twigs and stems and chemically treated woods such as discarded poles and railroad ties. Many people are sensitive to small amounts of these smoke-associated chemicals.

When wood is harvested and seasoned properly and burned in an efficient and safe heating unit, it is a safe efficient, economical and desirable fuel from a renewable resource. See the Table below for information about which firewood will work best for you.

Source: Empire State Farmer

Ratings for firewood	Relative amount of heat	Easy to burn?	Easy to split?	Have heavy smoke?	Pop or throw sparks?	General rating and remarks
Hardwood trees						
Ash, red, oak, white oak, beech, birch, hickory, hard maple, pecan, dogwood	High	Yes	Yes	No	No	Excellent
Soft maple, cherry, walnut	Medium	Yes	Yes	No	No	Good
Elm, sycamore, gum	Medium	Medium	No	Medium	No	Fair--too much water when green
Aspen, basswood, cottonwood, yellow poplar	Low	Yes	Yes	Medium	No	Fair--but good for kindling
Softwood trees						
Southern yellow pine	High	Yes	Yes	Yes	No	Good, but smoky
Cypress	Medium	Medium	Yes	Medium	No	Fair
Eastern red cedar	Medium	Yes	Yes	Medium	Yes	Good--good for kindling

FIRST, SECOND AND THIRD LAKES -- HERKIMER COUNTY

The phrase “big things come in small packages” can easily be applied to First, Second and Third lakes of the famed Fulton Chain in the Adirondacks.

Sure, Fourth and Seventh lakes - the biggest waters in the chain - draw more angling attention, both during the open water and ice fishing seasons.

But First, Second and Third shouldn’t be overlooked.

“Whatever is in Fourth Lake is in First, Second and Third,” says DEC Region 6 Fisheries Manger Frank Flack. “And Old Forge Pond, too. Fish can actually go all the way up to the dam at Sixth Lake.”

First, Second and Third lakes lie within Herkimer County; Fourth straddles Herkimer and Hamilton. And while First, Second and Third at 736, 262 and 179 acres, respectively, fall well short in size of Fourth’s 2,138 acres, they hold some sizeable fish.

“First and Second are a little shallower, more of a warmwater fishery,” Flack says. “There’s bass and northern pike and tiger muskies. The pike were illegally introduced about 10 years ago and there are some big fish that we hear about every once in a while - 20 pounders. There are some really big pike in the system now.”

Flack says DEC’s stocking efforts on tiger muskies have been successful, with anglers encountering tigers in the Fulton chain topping 30 inches. The state generally stocks about 1,800 tigers - yearlings of about 9 inches - in First Lake each year. Flack says Region 6 has had consistent success with their trigger muskie stockings, and the Fulton chain is no exception.

“They’re doing well,” he said

Rainbow trout are also stocked throughout the Fulton chain; Old Forge Pond, which is linked to First Lake, and Third Lake typically see the rainbow stockings of yearling fish. Brook trout have, in situations where there’s a surplus of state-reared brookies, been stocked in First Lake as well. “There’s also wild brook trout in pretty much all of the tributaries, so there’s a chance you’ll encounter them, “Flack said.

Flack says thousands of yearling lake trout are stocked in Third Lake as well each year. Although they have the ability to move throughout the system, don’t expect to find them In the shallower, warmer waters of First and Second lakes. There, it’s pretty much a largemouth bass, northern pike, tiger muskie and panfish (yellow perch, rock bass, sunfish) game. The same holds true in Old Forge Pond, although early in the year when the rainbows are stocked they're likely to hang around until the water warms. You may encounter a rainbow or laker later in the fall or during the ice-fishing season when the waters are more trout-friendly in terms of temperature.

Fourth Lake is a popular ice fishing destination in a winter that can begin early and stay late in the Adirondacks. First, Second and Third are worth a visit as well if you’re looking for northerns, tiger muskies, landlocked salmon (which are stocked in Fourth and move into the other waters), lakers or rainbows.

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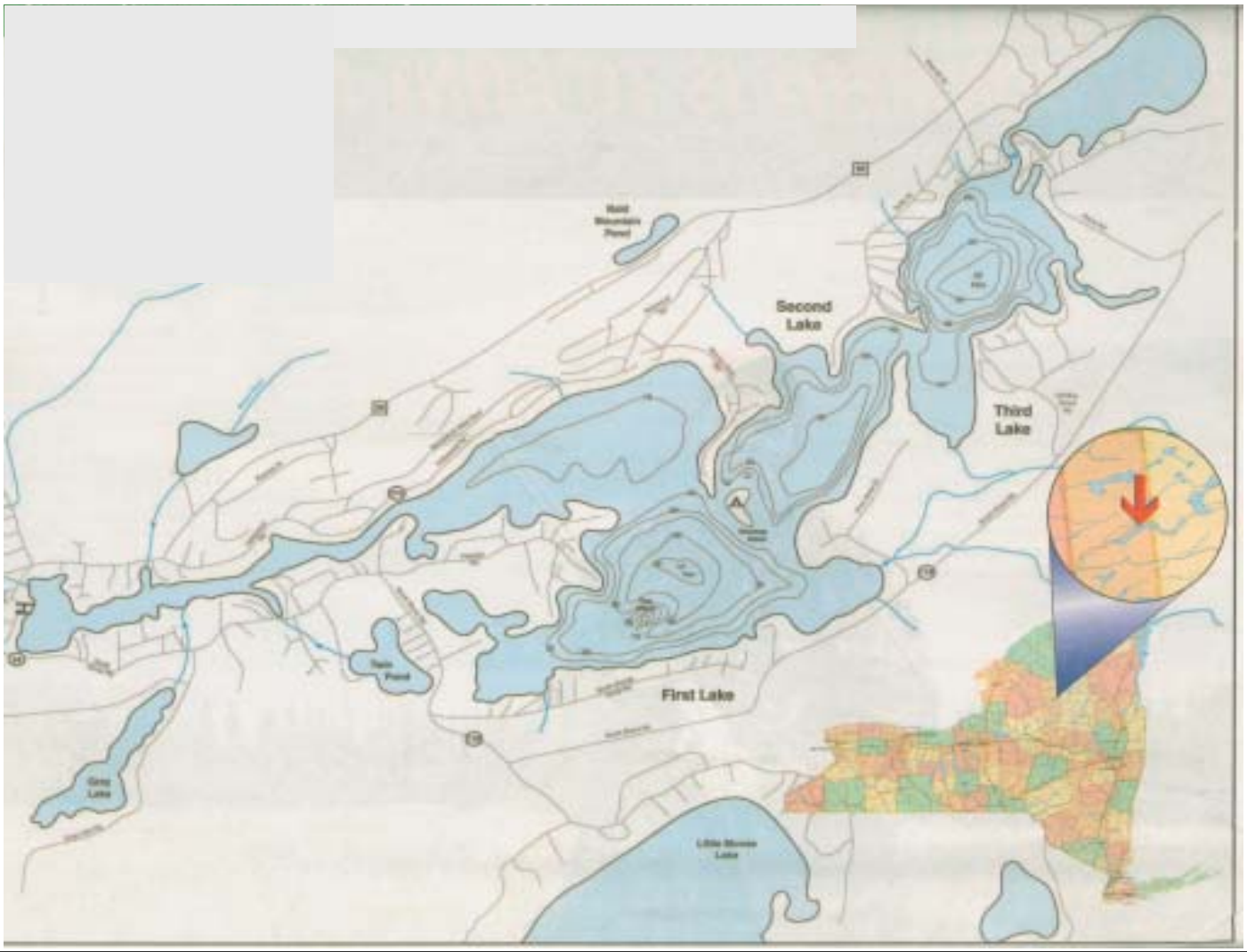
"Fourth gets hit pretty hard during the ice fishing season," Flack said. "It's probably your best chance of catching a big pike or tiger muskie. And a lot of guys will jig for smelt and then use the smelt for lake trout. And probably your best chance of catching a landlocked salmon is through the ice; that's probably when most of them are caught."

In the summer, much of the fishing pressure is of the recreational variety as thousands of visitors flock to the nearby village of Old Forge. While the bigger waters of the Fulton chain can get pretty crowded, you can get in some serious fishing on First, Second and Third, early in the morning or later in the evening when the recreational traffic has subsided.

Access to First, Second and Third is, in some respects, limited. There's a carry-down launch site off Route 28 at Old Forge Pond/First Lake, but your best bet for Launching a larger boat is via Fourth Lake. A fine hard-surface ramp can be found there off Route 28, about 10 miles east of Old Forge. You will, however, have to traverse the entire length of Fourth Lake to access Third, Second and First. That's not a huge headache, however; there's fine fishing to be had every inch of the way.

Fourth Lake also offers a hand launch site at a state campground on South Shore Road at the west end of the lake. From there, it's a short trip onto Third Lake.

Source: New York Outdoor News



HEATING SEASON IS HERE ~ WOOD FUEL FOR HEATING

To get as much heat as possible from wood fuels, use specially designed equipment and operate the equipment by methods adapted to the fuel. Many types of heaters, furnaces and fireplaces exist, but their efficiency varies because of design and construction.

Most fireplaces, including Franklin-type stoves, are inefficient because their open front allows lots of heat to escape up the chimney. Installing glass fire screens with proper draft controls, or "heatilators," often increases fireplace efficiency. Properly designed fireplaces also can decrease heat loss. Modern fireplaces may have metal side walls and backs with space for air to circulate between the walls and backs with space for air to circulate between the walls and the fireplace setting. Inlets near the floor and outlets near the mantel provide convection-air heating and circulation in addition to the radiant heat from the fireplace.

The old technique of admitting room air under the fire and letting it flow up through the fuel bed and then into the chimney flue is inefficient. To heat efficiently, combustible gases released during the burning process must be mixed with ample oxygen at a minimum temperature of 1,100 degrees.

For complete combustion of the wood gases, supply about 80 percent of the air needed over and around the fuel. The desirability of having air supplied over the fire bed has led to the design of "down-draft" combustion heating units. Such units force combustible elements to pass along a circuitous route where they are mixed with a current of hot air and nearly all burned. In less-efficient units these elements escape up the chimney or are deposited in the flue in the form of soot and creosote.

Best woods for burning

The fuel value of wood varies by the type of wood and depends on its density and moisture content. Any wood will burn, but the denser (heavier) woods, if properly dried, will deliver more Btu per cord. The advantages of drying wood to at least a 20-percent moisture level are indicated by the Table below. The average moisture content of green wood varies considerably by wood species.

By looking at the Table below, you can see that if you bought a cord of green red oak and burned it without proper seasoning (to 20-percent moisture content), you would, for all practical purposes, reduce the amount of available Btu by the number it takes to vaporize 1,379 pounds of water.

Table: *Approximate weight per standard cord (80) cubic feet of solid wood content) of various woods (green and air-dried to 20 percent moisture content) and potential heat of air-dried wood.*

	Pounds green	Pounds air-dried	Million Btu available
Ash	3,940	3,370	23.6
Basswood	3,.360	2,100	14.7
Box elder	3,500	2,500	17.5
Cottonwood	3,920	2,304	16.1
Elm (American)	4,293	2,868	20.1
Elm (red)	4,480	3,056	21.4
Hackberry	4,000	3,080	21.6
Hickory (shagbark	4,980	4,160	29.1
Locust (black)	4,640	4,010	28.1
Maple (silver)	3,783	2,970	20.8
Maple (sugar)	4,386	3,577	25.0
Oak (red)	4,988	3,609	25.3
Oak (white)	4,942	3,863	27.0
Osage orange	5,480	4,380	30.7
Pine (shortleaf)	4,120	2,713	19.0

Source: Empire State Farmer

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Readers' comments are always welcome.

Please contact:

Cornell Cooperative Extension of Herkimer County
5657 State Route 5 Herkimer, NY 13350
Phone: 315.866.7920
Email: herkimer@cornell.edu

Editor:

Bernard Armata

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