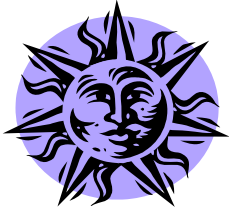




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***Eastern Cougar Deemed Extinct***



The US Fish and Wildlife Service (USFWS) recently completed it's 5-year review on the eastern cougar that has been on the Endangered Species List since 1973. The Endangered Species Act, requires the USFWS to conduct a full review of each protected species every 5 years to ensure the accuracy of its listing. The 2011 review concludes that this cougar is now extinct. Although cougars have been spotted in the east over the years, including here in Maine, the USFWS states that there is no evidence that these sightings are the subspecies known

as eastern cougars.

The eastern cougar's range extended from Maine to Georgia, east into eastern Illinois and eastern Missouri, north to Michigan and Ontario, Quebec and New Brunswick Canada. The USFWS wrote a recovery plan for the eastern cougar back in 1982, even though no breeding population was known. Due to the secretive nature of the eastern cougar, it was believed that the cougar still survived in very remote areas of it's historic range.

The USFWS recovery plan calls for at least three self -sustaining populations in the US with a minimum of 50 breeding adults in each. No such population is currently evident in the eastern United States or Canada with the exception of the population in Florida, known as the Florida Panther. Populations of cougars, such as those found in Florida and the Dakotas, leave substantial evidence of their existence including tracks, photographs, scat, hair, genetic samples, road kill and cougars shot or caught in traps.

Evidence dating from 1900 to 2010, in the form of 108 records, documented the presence of cougars in the eastern United States, however, after careful examination it was concluded that all reports of cougars could be traced to animals that had been released or escaped from captivity or were animals that were dispersed from the western United States.

Since 1973 when the Endangered Species Act was first introduced, 38 plant and animal species have been removed from the list. Of the 38, 13 of the species have recovered and 9 animals were removed from the list due to extinction (some believed to be extinct at the time of listing), and 16 were removed following the

*Continued page 2*

**Natural Resources  
Department**

**Telephone Numbers**

**(207) 532-4273**

**1 - 800-564-8524 (ME)**

**1 - 800 - 545 - 8524**

**Fax - 207-532-6883**

**Cara O'Donnell - ext 212**

**Matthew Edberg - ext 220**

**Rhonda Jewell- Smart ext 221**

**Sharri Venno - ext 215**

**Sue Young - ext 202**

## Mystery on the Meduxnekeag

by Cara O'Donnell, HBMI Water Resources Program

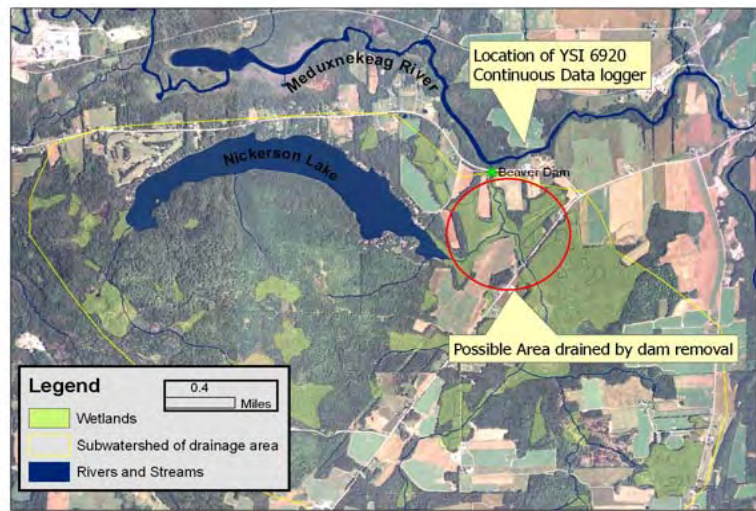
In the summer of 2009, HBMI Water Resources staff identified two occasions when river flow rose drastically, yet absolutely no rain had fallen in previous days. The amount of water was substantial, approximately 5.65 million gallons, which is equivalent to a football field, approximately 60 feet deep! Where did all that water come from?

A clue to the mystery of the rising water was found in the data recorded by our continuous monitoring water quality equipment. At the exact same time that the high water release occurred, we recorded *extremely* low, potentially lethal, dissolved oxygen levels of 2.65 and 4.54 mg/l. Oxygen levels below 5 mg/l may adversely affect function and survival of biological communities and below 2 mg/l can lead to death of most fish.

After talking with a few local and state agencies, the Maine Department of Transportation (DOT) mentioned the breach of a beaver dam quite close to the location where the high water levels had been recorded. The dam had been broken up two times that summer and both

times corresponded to the high water readings we recorded. Though it is known that quick release of water from behind a beaver dam can cause negative impacts downstream by releasing sediments and causing erosion, a flush of low-level oxygen water may not have been recorded before.

Cara O'Donnell and Rhonda Jewell-Smart will present these findings at the Maine Water Conference this month in Augusta, so that other water professionals in the State can be made aware of the potential consequences to fish and aquatic life when beaver dams are breached too abruptly for the river system to handle.



## Just What is an Equinox?

An equinox occurs twice a year, when the tilt of the Earth's axis is inclined neither away from nor towards the Sun, the center of the Sun being in the same plane as the Earth's Equator. The name "equinox" is derived from the Latin *aequus* (equal) and *nox* (night), because around the equinox, the night and day are approximately equally long.



An equinox happens each year at two specific moments in time (rather than two whole days), when there is a location on the Earth's equator, where the center of the Sun can be observed to be vertically overhead, occurring around March 20/21 and September 22/23 each year.

At the time of the equinox, the sun is believed to rise exactly in the East, travel through the sky for 12 hours and set exactly in the west. Every place on the earth experiences a 12 hour day.

sources: [www.wikipedia.com](http://www.wikipedia.com) and [www.answers@yahoo.com](http://www.answers@yahoo.com)



## Cougar continued

discovery of new information. There are currently 1,955 species listed on the Endangered Species List, that number changes fairly regularly as species are added and removed from the list.

For more information  
about the eastern cougar see  
[www.fws.gov/northeast/cougar](http://www.fws.gov/northeast/cougar)  
the Endangered Species Act  
[www.fws.gov/endangered](http://www.fws.gov/endangered)

Even though the eastern cougar is deemed extinct, it is likely that it will still be illegal to hunt or kill cougars that are found within its historic range. To learn more on this topic please contact your state fish and wildlife agency.



# Rasputitsa - Eastern Europe's "Mud Season"

Ask anyone in Maine - what's "Mud Season" and you'll get a colorful, often comical description of that wonderful season that comes between Winter and true Spring. Folks from away just don't seem to grasp how much "fun" mud season can be. Toss is a couple of frost heaves and we're good to go.

"Mud Season" - the name comes from dirt paths, such as roads and hiking trails, which become muddy and often impassible from melting snow, rain and frost leaving the ground. When these muddy paths and roads are traveled over by wheels, they develop ruts. It is regarded in some northeastern states as both blessing and a curse because, although it is generally a messy time of year, it is an interlude between the standard tourist seasons of summer (hiking), fall (leaf peeping) and winter (skiing and snowsledding).

Mud season occurs only in places where the ground freezes deeply in winter, is covered by snow, and thaws in spring. Dirt roads and paths become muddy because the deeply frozen ground thaws from the surface down as the air temperature warms above freezing. The snow melts, but the frozen lower layers of ground prevent water from percolating into the soil so the surface layers of soil become saturated with water and turn to mud. This mud is often very slippery and can lead to "mud wrestling" as the slippery mud seems to try to pull your vehicle all over the road as you drive.

Mud season is also characterized by giant puddles on the side of paved roads, from large piles of snow melting, with no place to drain off to. Sidewalks, parking lots, drive ways, and all other surfaces become a muddy mess.

In addition to the mud being tracked in on your shoes, these conditions also lead to soil washing into surface waters causing pollution and silting of brooks, streams, ponds and rivers.



*"Mud season is a yearly ritual that gets stuck in your soul."*

*Sara Ann Corrigan.*

But we in the United States are not the only ones who experience a mud season. It takes on many names in Europe. Rasputitsa refers to the biannual seasons when unpaved roads become difficult to traverse in parts of Belarus, Russia and Ukraine. The word may be translated as the "quagmire season" because during this period the large flatlands become extremely muddy and marshy, as do most unpaved roads. The rasputitsa occurs more strongly in the spring due to the melting snow but it usually recurs in the fall due to frequent heavy rains.



*Endless mud on the Eastern Front in the spring of 1942*

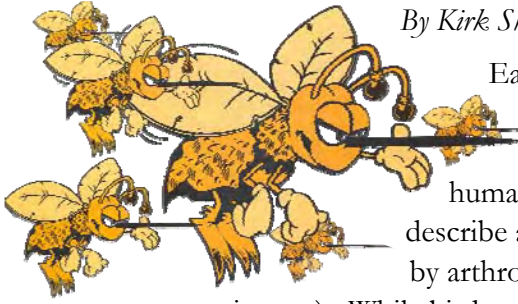
The rasputitsa seasons of Russia are well known as a great defensive advantage in wartime. Napoleon found the mud in Russia to be a very great hindrance in 1812. During World War II, the month-long muddy period slowed down the German advance during the Battle of Moscow, and may have helped save the Soviet capital, as well as the presence of "General Winter", that followed the autumn rasputitsa period.

The corresponding term in Finnish is *rosputto*, denoting "roadlessness". Most non-paved roads in Finland turn into mud. In olden days, this would make them virtually unusable; modern unpaved roads can be used but are dangerously slippery. In Finland's Archipelago, the period is known as *kelirikko* (literally "weather break"), implying the ice is too thin to bear the weight of people or vehicles, but is still too hard to be passed through by seagoing vessels not equipped with icebreaker bows. The only practical vehicles during the *kelirikko* are hovercraft, hydrocopters, or aircraft such as helicopters. Unlike in Russia where both the spring and fall seasons are affected, the Finnish *rosputto* and *kelirikko* occur mainly in the spring when the snow melts and the vernal rains begin.

source: [www.wikipedia.org](http://www.wikipedia.org)

## Surveillance for Eastern Equine Encephalitis (EEE) in Maine

By Kirk Shively, USDA, Wildlife Services, Augusta, Maine



Eastern equine encephalitis (EEE) is a rare but serious arbovirus that is spread by mosquitoes, and which causes inflammation of the brain (encephalitis) in horses and humans. “Arbovirus” is a term used to describe arthropod-borne viruses (spread by arthropods, mostly blood-sucking insects). While birds are the primary species that get the virus, the disease is transmitted through the bite of infected mosquitoes. Many native birds are resistant to EEE virus, but some birds, particularly introduced species, are very susceptible to the virus. Death in birds has been noted in migratory songbirds, game birds, and shore birds, in particular. Some mosquitoes carry disease from bird to bird, while others are called bridge vectors (those that bite both birds and mammals). Human cases of EEE, though fairly rare, have occurred across much of the eastern and Midwestern United States in recent years (CDC 2010) with serious illness and frequent long-term complications resulting from infection. Approximately one third of people infected with EEE die, and most survivors have permanent brain damage. There is no specific treatment available for EEE infection.

Treatment is supportive and based on symptoms. The best way to avoid EEE infection is by using insect repellent (especially one containing DEET), wearing protective clothing (long sleeves, long pants, etc.) and staying indoors during the highest mosquito activity (especially mornings and evenings). Additional information can be found at the US CDC website:

<http://www.cdc.gov/EasternEquineEncephalitis/gen/qa.htm>.

An unprecedented outbreak of EEE virus occurred in several counties in southern and central Maine from July to October, 2009. Maine Department of Agriculture reported sixteen potential livestock deaths (15 horses, 1 llama) due to EEE. Thirteen of the deaths were confirmed by blood testing and examination of the brain tissue. In addition, the Maine Department of Inland Fisheries and Wildlife reported substantial mortality (deaths) in three ring-necked pheasant (*Phasianus colchicus*) flocks. When those deaths were observed, the flocks were tested for several arboviruses, including EEE. One wild turkey that was captured in January 2010 and translocated within the state was tested by USDA, APHIS, Wildlife Services and found to have antibodies for EEE in its blood, which means it had the virus at some point. No human cases were reported during this period.



**Photos (above)** Chuck Hulsey, ME IFW Regional Biologist collects sample from wild turkey with the assistance of a volunteer March. 4, 2011 in Norridgewock, ME.

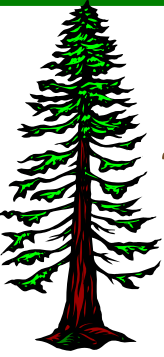
**(left)** ME IFW staff used rocket net to catch wild turkeys for sampling in Dixfield.



# Dendrology Corner

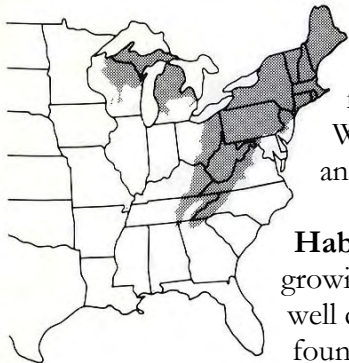
Dendr = tree ology = study of

Prepared by: Matthew P. Edberg, HBMI Natural Resources Specialist



## Eastern Hemlock (*Tsuga canadensis*)

Hemlock is one of the amazing coniferous evergreen tree species found in the Acadian forest.



**Native Range:** Hemlock is found growing in forests from Nova Scotia, Canada West to Northern Minnesota and South to the Carolina's.

**Habitat:** Hemlock may be found growing on a wide range of cool well drained sites but is commonly found growing along the margins of rivers, streams and swamps.

**Natural History:** Eastern hemlock is truly a "power" plant. It is classed as extremely shade tolerant and its seedlings are capable of persisting in the shade of the forest for hundreds of years waiting patiently to take a dominant position in the forest canopy. Hemlock commonly achieves diameters of 3'+ (record diameter of 7') and a height of 100'+ (record hgt. 175'). It also has an amazing life span of up to 800+yrs (record age=988yrs) and is capable of withstanding low temperatures of minus 35°F.



The very flexible growing tips of hemlock branches typically point away from the direction of prevailing winds (South East to East in Maine). The hemlock shown here is at the edge of the Administration parking lot.

### Special Uses:

Historically, in Maine, the bark of hemlock which is high in tannins (tannic acid) was harvested for use in the leather industry.

Dimensional lumber, was and still is, used in light construction and is known for its extremely hard knots and excellent nail holding ability. It is also thought to be rot resistant. Hemlock is also extremely important to a wide variety of wildlife species as a source of food and shelter.



**Medicinal Uses:** Eastern hemlock leaves (needles), and more often the inner bark, are used to make tea to treat a variety of medical ailments such as colds, fevers and diarrhea. **It should not be confused with POISON HEMLOCK *Conium maculatum* a very toxic herbaceous plant.**

**Remember:** When collecting any wild plant species for medicinal or edible use be absolutely sure you have identified the species correctly. Be sure to take only what you need and harvest carefully leaving some behind for the future and for others.

**Utilitarian Uses:** Hemlock roots are one of the better species for use as a natural lacing for birch bark craft. It's bark can also be used to create reddish-brown dye.

### Literature Cited

Silvics of North America Vol. I Conifers, USDA, Handbook 654

Foster, 1990, Medicinal Plants, Peterson Field Guides.

Wilbur, 1990, Indian Handicrafts, The Globe Pequot Press.

## Timely Tips on Starting Seedlings at Home



Starting plants from seeds in your home is a good way to get a head start on the growing season. At least 4 to 8 weeks can be cut from the time between planting and harvesting or getting effective landscape color by setting vigorous transplants rather than seeds into the garden.

Growing your own plants may be the only way to obtain a new or special variety you want. Commercial plant growers cannot be expected to grow all of the hundreds of varieties offered by seed houses. And, plant nurseries are often reluctant to offer varieties which have not been given widespread publicity.

Consult the table below for the optimum starting dates. Peppers require 7 to 8 weeks and tomatoes 5 or 6 to grow to transplanting size. Squash and cucumbers require only 2 to 3 weeks to grow to an ideal size. Members of the cabbage and lettuce families need 4 to 5 weeks. Flowering annuals also vary in the time required to produce a size suitable for transplanting. Much depends on local growing conditions. It is important to keep a garden notebook and record seeding dates, length of time to germinate and time required to reach transplant size. Seedlings are ready to transplant when they have their first set of true leaves.

Kind of vegetable	Weeks needed to grow transplants*	Seed planting depth	Optimum soil temps for germination	Plant-growing temps	
				Day	Night
	(weeks)	(inches)	(°F)	(°F)	(°F)
Cabbage, broccoli, cauliflower	5 to 7	1/4 - 1/2	85	60-70	50-60
Lettuce	4 to 6	1/4 - 1/2	75	60-70	50-60
Onions	8 to 10	1/2	75	60-70	45-55
Tomatoes	5 to 6	1/4 - 1/2	85	70-80	60-65
Peppers	7 to 8	1/4 - 1/2	85	70-80	60-70
Eggplant	7 to 8	1/4 - 1/2	85	70-80	65-70
Cucumber, squash, muskmelon, watermelon	2 to 3	3/4 - 1	85	70-90	60-70

\*Depends on type of plant-growing structures used, heating facilities, and lighting available.

By E. E. Janne, Extension Landscape Horticulturist (deceased), and Dr. R. E. Roberts, Vegetable Specialist (retired), Texas A&M University, College Station, Texas

**Sprouting Seeds Using the Baggie Method** - A fun easy way to start seedlings is to create your own mini-greenhouse with a zip-lock bag, some paper towels or coffee filters and some seeds.

- Stack up to 4 paper towels and fold them in half. (Brown paper napkins and unbleached paper coffee filters work really well too.)
- Use a permanent marker to label the plastic bag with the name of the seeds you are planting.
- Dampen the paper towels.
- Carefully place your seeds on the damp paper towels, using only one kind of seed per towel.
- Once the seeds have been placed, fold the towels again. Place the towels into a re-sealable plastic bags.
- Gently add enough water to the bag so that the towels are thoroughly moist. The paper towels should soak up all the water you add, if not pour out the excess.
- Close and seal the bag being sure to trap some air in side.
- Place the seeds in a warm location and wait for them to sprout.
- Check on the seeds every 3 days by opening the bag (letting air in). If mold should appear on the towels, change out only the outer paper towels, the towels touching the seeds should remain mold or no mold. Re-seal the bag when done.
- Sprouts will appear from 2 days to 31 days depending on the type of seed you have planted. Gently plant each sprouted seed into a small pot filled with potting soil, water daily and keep in a sunny location until it is strong enough to be planted outdoors. Remember wait until all danger of frost has passed.





# Springtime Flower Trivia

It'll still be awhile before flowers appear in Maine, so here's some fun flower trivia to share.

- ◆ The rare and expensive spice Saffron comes from a certain type of crocus.
- ◆ A tulip bulb can be used in place of an onion for cooking.
- ◆ Honeybees collect nectar from 2 million flowers to make one pound of comb honey.
- ◆ Of the approximately 270,000 species of flowers, honeybees prefer yellow and blue ones. Meanwhile, hummingbirds prefer red ones.

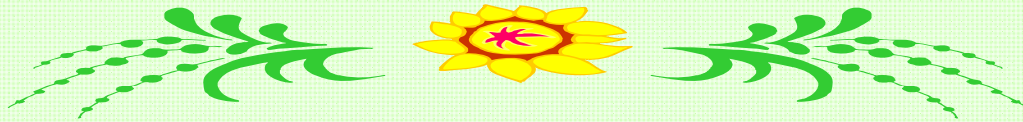


- ◆ In 1986 Congress made the rose America's national flower.
- ◆ Romans believed that white roses grew where tears fell as Venus cried over the loss of Adonis. Her son Cupid, stung by a bee, shot arrows in the rose garden. The sting of the arrows became thorns on the roses.
- ◆ Scientists confirm the first fossil flowers date back over 90 million years.
- ◆ Studies show women prefer pastel colored roses, men prefer red.
- ◆ Maine's State Flower is the White Pine cone and tassel -

(photo - right).



## Spring Maliseet Word Search Puzzle



Find both the English and the Maliseet words in this puzzle. For an added challenge, can you match the English words to the Maliseet ones?

- |             |                |
|-------------|----------------|
| Bloodroot   | Coqols         |
| Daylight    | Espotewset     |
| Fiddleheads | Mahsus         |
| Flower      | Nesqskihqessos |
| Frog        | Pesqahsuwehsok |
| Frost       | Qasqomete      |
| Goldthread  | Siqon          |
| Smelt       | Somelts        |
| Spring      | Spote          |
| Sun         | 'Tomaway       |
| Thaw        | Wastewoton     |
| Tobacco     | Wiphulaksons   |
| Woodcock    | Wisawkeskil    |

```

F Q W E R T W Y U I O P L K J H
F R O S T G O F Q S P R I N G D
F L O W E R O S A A Z C X N C V
P B N G M N D B S I Q O N E F V
C E E X Z A C S Q D F Q D S I G
W A S T E W O T O N H O A Q D J
I K P Q H M C L M P O L Y S D I
P U O T A A K Y E T R S L K L E
H W T O Q H W A T S D F I I E G
U F E B H S S M E L T S G H H J
L H W A S U N U F H B V H Q E C
A D S C F S U S W J K L T E A M
K N E C J N S O M E L T S S D A
S E T O M A W E Y K H N H S S E
O B L O O D R O O T N S P O T E
N W I S A W K E S K I L O S C A
S G O L D T H R E A D G F K V B
    
```

*Houlton Band of Maliseet Indians  
 Natural Resources Department  
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 Littleton, ME 04730*

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## Calling Maliseet Veterans

The Maliseet Veterans Honor Committee is looking to hear from you. It's the goal of the committee to recognize and honor all Maliseet Tribal members who served in the U.S. or Canadian armed forces during war and times of peace.

The Committee is looking for the following information from veterans and their families:

- Dates of Service • Branch of Service • War or Conflict •
- Commodations/Medals • Photos in uniform

Please see the enclosed postcard for more information.

**Woliwon**



## Puzzle Answers

B L K V B  
 N W I S A W K E S K I L O S C A  
 O B L O G O B R O O T I N S P O T E  
 S E T O M A W E X K H N S S E  
 K N E C J N S O M E L T S S D A  
 A D S C F S U S W J K L T E A M  
 L H W A S U N U F H B V H O E C  
 U F E B B S S M E L T S G H H J  
 H W T O O H W A T S D F I E G  
 P U O T A K Y E T R S L K L E  
 K P O H M C L N P O L Y S D I  
 W A S T E W O T O N H O A Q D J  
 C E X Z A C S O D F O D S I G  
 F B N G M N D B S I Q O N E F V  
 F L O W E R O S A Z C X N C V  
 F R O S T G O F O S P R I N G D  
 F Q W E R T W Y U I O P L K J H

- Bloodroot - Wiphulaksons Daylight - Spote - Fiddleheads -
- Mahsus Flower - Pesqahsuewhsok Frog - Coqols Frost -
- Wastewoton Goldthread - Wisawkeskil Smelt - Somelts
- Spring-Siqon Sun - Espotewset Thaw - Qasqomete
- Tobacco - Tomawey Woodcock - Nesqskihqessos