

Newsletter Winter 2016



Sunrise in Newmarket, photo by Rachel Stevens

Happy New Year! 2016

The calendar is clean, the year is new,
The Lamprey Committee has a few things to do:

Water Quality:

We're working our data, got our ducks in a row,
We've made a good start, so our water you'll know.

We have many measures; sadly, sometimes too much,
Our goal is so simple: to keep you in touch.

Outreach:

We have many movies to share with you all.
We'll meet you in libraries big and small.

We hope to work closely with rec. leaders and tots,
We'll hike, bike, and like some of the Lamprey's great spots.

Recreation:

The National Park Service is 100 years young.
We'll try for a Volksmarch for fresh air in the lung.

We'll work with Newmarket for those who canoe,
An access for portage, 'round the dam there, it's true.

Ecology:

Most towns have problems with culverts small and old.
We hope to address this with research that's gold.

River herring are using the river to spawn,
We'll work with the state fish guys to help this go on.

Miscellaneous:

We're working with partners to conserve pristine land,
We do what we can to give nature a hand.

When projects are planned for sites that are wetter,
Our team will review and send in a letter.

The calendar is clean, the year is new,
Saving the river is something we can do!

Lamprey River Watershed Clean-up 2015



Newmarket



Raymond

photos by Dawn Genes

A watershed-wide river clean-up event was held on Saturday, September 19th in Deerfield, Raymond, Epping, and Newmarket. This event was organized by the Lamprey River Watershed Association as part of a Small Grant provided by the Lamprey Rivers Advisory Committee. The clean-up was held on the same day as other coastal clean-up efforts to demonstrate that a healthy watershed, from headwaters to the ocean, depends upon community cooperation.

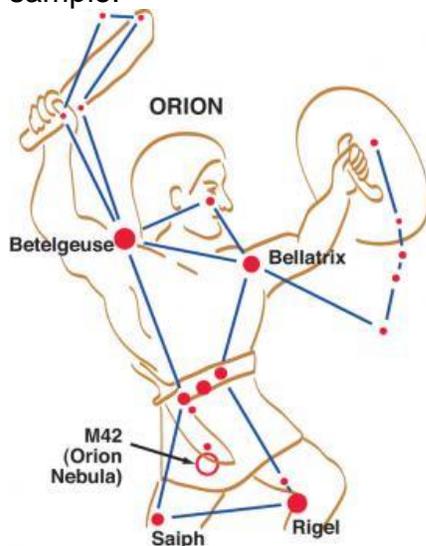
In Raymond, the treasure hunt for trash yielded an old mattress, tires, cemetery flower pots and flower wrappers, broken chairs, and many bags of ordinary trash. This amounted to several hundred pounds. In Newmarket, 26 pounds of trash were collected near the McCallen Dam. In Deerfield and Epping, about eight pounds of trash were cleaned up from each site. Most of what was collected was plastic bottles, beer cans, fast food wrappings, and hundreds of cigarette butts.

Volunteers learned that the Lamprey River begins in Northwood and collects water from fourteen towns and five major tributaries along 47 miles before becoming tidal in Newmarket. It is the largest river system to empty into Great Bay Estuary. Those who use the river for fishing, boating, and other water sports, and those who live along the river know that trash dropped elsewhere often ends up in the river, migrating down from tributaries, smaller streams and other areas, especially during heavy rainfall.

Among the fifteen volunteers in Raymond were Boy Scouts, church group members, and a select board member. In Deerfield, the Deerfield Community School physical education teacher took on the task single-handedly. In Epping, two volunteers, one of whom is a member of both the Epping Recreation Commission and the Epping Conservation Commission, worked the river between the Mill Street Bridge and Rte. 125. In Newmarket, eight volunteers cleaned the area near the Rte. 108 bridge, McCallen Dam, and Heron Point.

Meet Orion, the Hunter in the Winter Night Sky

The nights in January and February are long and cold. They are also bug-free and full of stars! One of the northern hemisphere's most familiar winter constellations is Orion. Most people readily recognize the three bright stars that comprise Orion's belt, but Orion is so much more than a belt. Here is a quick sample:



from <https://stardate.org/nightsky/constellations/orion>

Betelgeuse, on Orion's shoulder, is one of the largest stars known. This red supergiant is at least 300 times the diameter of the sun and is 15-20 times as dense as the sun. Through the process of nuclear fusion, it puts out about 100,000 times more energy than the sun, reaching temperatures in the billions of degrees in its corona. (The sun's corona has a more modest temperature of 27 million degrees F.) The star appears to pulsate, expanding and contracting unpredictably. Scientists know that it is running out of fuel and it will stop producing energy at some point in the not-to-distant future, in terms of astronomic time.

When that happens, the star will implode on itself and then explode in a massive supernova. Betelgeuse is 430-650 light years away from Earth, so the explosion will not impact life on Earth; however, it will appear as an awesome light in the sky for a few weeks or months, possibly even during the day.

Rigel, at Orion's knee, is a blue supergiant. This kind of star is rare in the universe. It is exceptionally bright, about 100,000 times as bright as the sun, but that brightness also means that it expels vast quantities of ultraviolet light. Life anywhere near this star would be very unlikely if not impossible. In a few million years, Rigel might have acquired enough helium in its core to become a red supergiant like Betelgeuse.

Stars and constellations are free for the viewing in the night sky near you. Dress warmly, grab some binoculars, and enjoy the view!

Fields of Study

Many scientists study the Lamprey River and the surrounding landscape. See if you can match the field of study with the subject of study. Example, biology is the study of living things and processes.

field of study	subject of study
___ climatology	A. algae
___ dendrology	B. amphibians & reptiles
___ ecology	C. animals
___ entomology	D. bacteria, protozoans, viruses, yeast, & mold
___ geology	E. birds
___ herpetology	F. distribution & movement of groundwater
___ hydrogeology	G. fish
___ hydrology	H. fungi
___ ichthyology	I. inland rivers and lakes
___ limnology	J. insects
___ meteorology	K. interrelationships among living things & environment
___ microbiology	L. long-term weather patterns
___ mycology	M. movement, distribution, & quality of water
___ ornithology	N. physical history of earth & rocks
___ phycology	O. trees
___ zoology	P. weather

To view a sampling of studies involving the Lamprey, please visit <http://www.lampreyriver.org/multi-media-research>.

If you are good at etymology (the study of the origin of words and the way in which their meanings have changed throughout history), you should have aced this quiz. Some other people might be left scratching their heads and thinking, "It's all Greek to me!" (And it is!)

Fields of Study Quiz Answers: L, O, K, J, N, B, F, M, G, I, P, D, H, E, A, C