

Lake Stewards Newsletter

Summer 2017

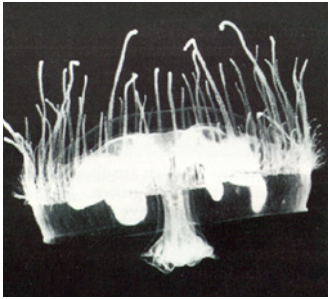


Freshwater Jellyfish

by Lynda Corkum

About this Species

Cottagers have reported the presence of freshwater jellyfish in Big Gull Lake in North Frontenac (eastern Ontario). This is a surprise to many, because the relatives of freshwater jellyfish are found in the sea! There are more than 20 species of freshwater jellyfish, but only one freshwater species, *Craspedacusta sowerbii*, occurs in North America.



The medusa body form, courtesy Dr. T. Peard

Distribution & Habitat

Freshwater jellyfish are not native to Canada, having arrived originally from China. They now occur in lakes and rivers in temperate climates all over the world. According to information posted by the U.S. Geological Survey, freshwater jellyfish likely spread throughout North America from one lake or river to another by bait bucket transfer by anglers, or by attaching to aquatic plants, stocked fish and waterfowl. They were first reported in the U.S. in Kentucky in the early 20th century, and spread to the Great Lakes within a generation. Once in Ontario, freshwater jellyfish spread quickly throughout the province. Blooms of jellyfish were first noticed in Big Gull Lake in late summer of 2012 – one of many Ontario reports in recent years.

Life Cycle

There are two body forms, the polyp and the medusa. Polyps, which form colonies, live on the bottom of lakes and rivers, often attached to rocks. Polyps are cold tolerant and overwinter as resting bodies. They reproduce asexually and, given the right conditions, form a medusa that breaks away from the colony. Medusae are bell or umbrella-shaped bags of jelly that float in the water. Medusae are white, translucent animals that grow up to reproduce sexually. Medusae may form dense blooms in some years, but may be absent in other years.

Cottagers see the floating medusa stage, not the polyp. Watch for blooms of medusa in August and September when water is warm and prey are plentiful.

Predators and Prey

Both polyps and medusae eat zooplankton and so may compete with larval fish for food. The polyp feeds when zooplankton comes into contact with the stinging cells at the top of the polyp. These stinging cells surround the mouth opening at the center of the polyp top. By contractions, the polyp engulfs the trapped food. Medusae have short and long tentacles that extend along the edge of the velum. Short tentacles, which sting and paralyze zooplankton, are used for feeding; long tentacles stabilize the animal when it swims.

Other Interesting Facts

Unlike their marine relatives, freshwater jellyfish don't harm humans because their stinging tentacles don't pierce the skin of mammals.

Status of this Species

Ontario's Invading Species Awareness Program tracks invasives sightings using an online application: the Early Detection & Distribution Mapping System, or "EDDMapS Ontario." View distribution maps and additional info here: www.eddmaps.org/Ontario.

ACKNOWLEDGEMENTS

I thank the kind assistance of Dr. Terry Peard (Retired Professor, Indiana University of Pennsylvania) and Jeff K. Brinsmead (Senior Invasive Species Biologist, Ontario Ministry of Natural Resources and Forestry). For more information on freshwater jellyfish, I recommend Dr. Peard's website: www.freshwaterjellyfish.org, while videos of freshwater jellyfish medusa can be found by YouTube search.



ABOUT THE AUTHOR

Lynda Corkum has a life-long interest in lakes, rivers and their surrounding landscapes. Lynda pursued graduate studies and a distinguished career in biology. At the University of Windsor, she has been an active researcher in the field of Aquatic Ecology. She is a Past President of the International Association of Great Lakes

Research, active with her local lake association, the Big Gull Lake East End Cottage Association, and joined the FOCA Board of Directors in 2015.