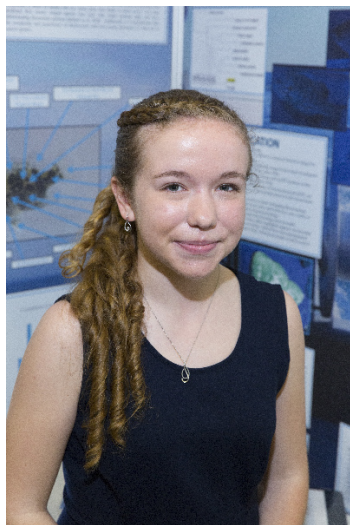


# CWSF 2018 - Ottawa, Ontario



## Sophia Cottrill

### Go With the Glow: UV Induced Fluorescence in Great Lakes Biota

**Challenge:** Discovery

**Category:** Intermediate

**Region:** Bluewater

**City:** Tara, ON

**School:** Owen Sound District Secondary School

**Abstract:** Biofluorescence in marine fish is a recently discovered phenomenon, but has not been studied in freshwater fish. In this study, 128 specimens of freshwater biota from 12 locations around Lake Huron and Georgian Bay were photographed under ultraviolet light. It was discovered that biofluorescence is widespread across freshwater taxonomic families and species. The discovery of these fluorescent pigments is important to developing biomedical imaging technology.

#### Biography

My name is Sophia Cottrill and I am in grade nine at Owen Sound District Secondary School. I am 15 years old and live in Tara, Ontario. I enjoy studying multiple fields of science, as well as math and music. In my spare time, I teach my dog new tricks and volunteer at the local day camp. Outside of school, I participate in a number of extra-curricular activities such as soccer, running, envirothon, and playing saxophone and piano. Science Fair has been a huge part of my life since the time I was eight years old. This is my second trip to Canada Wide. This year, I have studied biofluorescence in Great Lakes biota, focusing on the genotypes and the phenotypes associated with biofluorescence. My inspiration for this project came from the NOVA documentary "Creatures of Light", which discussed the discovery of biofluorescence in marine species of fish. My advice to other students is to do what inspires them and to not be afraid to question the unknown! In the future, I plan to pursue a career in biology or medicine. I am truly excited to be attending the Canada Wide Science Fair this year in Ottawa!

#### Awards

#### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 000