

## CWSF 2018 - Ottawa, Ontario



### Clara Biernacki

#### Water Bear Don't Care: A First Look at Eastern Ontario's Tardigrade Fauna

**Challenge:** Environment

**Category:** Junior

**Region:** Renfrew County

**City:** Pembroke, ON

**School:** Highview P.S.

**Abstract:** Tardigrades, also known as water-bears, were extracted from moss and lichen samples collected in Eastern Ontario, observed and classified; their various states of being were also studied, specifically how they use their unique protein, "TDP", to survive desiccation. Understanding how tardigrades use TDP to repair their DNA and protect cells against heat, cold, drought, and radiation has many potential real world applications for humans.

#### Biography

Hi, I'm Clara. I'm 14 years old, in Grade 8 French Immersion, at Highview Public School, Pembroke, ON. I love learning about environmental science and space. Apart from learning in school, I participate in almost every sport you can think of. As well, I have a great interest in the arts. In 2016 I was part of an improv team that competed at Destination Imagination, Global Finals in Tennessee. In 2017 I was offered an apprenticeship position with the SQX Dance Company. I toured around Western and Northern Canada for 4 months performing and teaching dance. In 2017, I also attended CWSF in Regina, SK and was awarded a silver medal for my project on microfibers, water filtration, and bio magnification. This year my project examines tardigrades; I located, classified, and studied their various states of being, specifically how they use TDP to survive desiccation, and potential human applications. I plan to investigate this topic further by hopefully partnering with a mentor at a university, where I would have access to better equipment and would be able to implement my ideas for future research and development.

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