

CWSF 2016 - Montreal, Quebec



Patrick Geertz

The Effect of Dissolved Oxygen and pH on Wetland Aquatic Invertebrate Diversity

Challenge: Environment

Category: Junior

Region: Central Okanagan

City: Summerland, BC

School: Summerland Middle School

Abstract: This experiment demonstrated that increasing human impacts negatively affect wetland health as demonstrated by decreasing aquatic invertebrate diversity ($R^2=0.9$). Except for the wetland impacted by cattle, the effect of dissolved oxygen and pH on invertebrate diversity over the five tested wetlands proved insignificant ($p = 0.1$). More investigation is needed to determine other factors affecting wetland health.

Biography

My name is Patrick Geertz and I am in 7th grade in Summerland, BC. I like wildlife photography, my farm and playing basketball and baseball. I have been awarded a prize from the Summerland Climate Action Committee for my school vermicomposting project. I was also awarded the best Peewee Rep hockey player of the year. When I grow up I would like to become a wildlife vet or a wildlife biologist. I want to give a voice to animals and the ecosystems where they live. The inspiration for this project was the many healthy, wild wetlands on my property. Poking around and looking at all the bugs and tadpoles, I always wondered what made them healthy. I plan to further investigate this concept of 'health' by studying the role of riparian vegetation in invertebrate diversity. The advice I would give to other students is to get as many tests as possible, learn the concepts of standard deviation and beef up your bibliography to support your work. I would also recommend finding a good mentor that can help you think about and look for things that you wouldn't normally look for.

Awards

Value

4-H Canada Sustainable Agriculture Award - Junior Sponsor: 4-H Canada	\$500
Excellence Award - Junior - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 500