# CWSF 2012 - Charlottetown, Prince Edward Island


## Meagan Haugen-Koechl

### Feeding the Bees:A Seasonal Protein Analysis for Bumblebees of the Peace

**Challenge:** Environment
**Category:** Intermediate
**Region:** Northern British Columbia
**City:** Charlie Lake, BC
**School:** Charlie Lake Elementary

**Abstract:** Bumblebees are disappearing along with honeybees. In my study, I collected pollen used by bumblebees from May to October. I measured the amount of relative protein in the pollen using a protein assay procedure. Introduced and native plants were compared for protein content to determine if bees lost native plants, would they be able to survive on introduced plants.

## Biography

I am a grade 9 student in Northern British Columbia. I have a passion for skiing and playing the piano. Skiing is my physical release and piano is my stress release. My life has revolved around science fair since grade 1. I have always been encouraged to ask questions about topics that interest me. In grade 4 I wanted to open my own bakery, so for a project I created 20 new flavors of dog biscuits by changing only one ingredient to limit my variables. I scientifically tested the biscuits on all the neighborhood dogs. The following year, I did a psychological study on the marketing of my biscuits by creating an ad campaign. I learned how colors and pictures influenced people's choice. In grade 6 I became interested in bees when I heard of worldwide declines. That year I inventoried local pollinators, and the following year, I did a statistical study of the size of pollen collected by local bumblebees. This has led me into wanting to know the nutritional levels of pollen. Over the past year I have collected pollen and determined the protein level. Further investigations would be to break the protein into amino acids.

| Awards | Value |
|---|---|
| Excellence Award - Intermediate - Silver Medal<br>Sponsor: Youth Science Canada | $700 |
| Western University Scholarship<br>Silver Medallist - $2000 Entrance Scholarship<br>Sponsor: Western University | $2 000 |
| Total | $2 700 |