

The Affect of Water  
Health on Snails in the  
Sibun River

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### Introduction

The Sibun River, like most rivers has many tributaries. While I was in Belize I realized there was an abundant amount of snails. Few people are aware that the direction a snail's shell grows is an indicator of the quality of water. When a snail's shell turns to the right it indicates that the water is healthy. The snail that I tested is called *Pachychilus indiorum*, also known as a "jute" snail. If the snail's shell turns to the left this would indicate that the water is unhealthy. I predicted that most of the snail's shells would turn to the right.

### Materials and Methods

#### Materials:

- Six hundred snails from six different locations
- Pencil- for writing information
- Journal- for recording information
- Cups- to hold the snails
- Marker- to label cups

#### Methods:

1. I collected a total of six hundred snails from six different locations.
2. I set up my area on the patio to count the snails.
3. Drew the map of the areas where I collected the snails from, sites 1, 2, 3, 4, 5, and 6. All from the surrounding area around the Sleeping Giant Lodge.

4. Counted all of the snails
5. Recorded the amount of snails that turned to the right and to the left in my journal.

## Results

There were differences in size, consistency, color, and texture of shells at each site I gathered from. However, all the snails in my observation had shells that turned to the right. This evidence is a good indicator that the snails were in healthy water. My hypothesis was proven correct, all the snails turned to the right, indicating healthy water.

SITE	Snails that turned Left	Snails that turned Right
Site 1	0	100
Site 2	0	100
Site 3	0	100
Site 4	0	100
Site 5	0	100
Site 6	0	100

## Conclusion

In the end of the experiment my hypothesis was proved to be correct. All of the sites I took snails from proved to be clean. Though the two tributaries and the Sibun River itself were clean, that does not indicate that further down in the River or the other tributaries are also clean. The water in other areas of Belize would need to be tested to be proven healthy.

To continue with my project I would travel further down the river and to other tributaries and collect more snails and compare the amount of shells and the direction they are turned. If I were to find a site where snail's shells started turning to the left I would look for a source of

pollutant that was causing the water to be unhealthy. Once I found the pollutant, hopefully I could stop it from continuing to enter the river. The last thing I would do, would be to continue testing snails farther down the river once the water was cleaned up. This project could always be continued because the water is constantly flowing and natives are continuously using the river.

## Sources

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