Snail Populations in the Kohala Forest

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Hawaiian Snails

- Animalia Kingdom, Mollusca Phylum, and Gastropoda Class
- Lifespan of a snail is usually five years
- Nocturnal and herbivores
- Some species of snail in Hawaii are found nowhere else in the world.
- Usually found on a specific tree
- A lot of the Hawaiian Tree Snails are now extinct.
- On the islands of Hawaii, the snails are found in the mountains, dry regions to wet forests and shrub lands
- Snails are disappearing:
    - Polynesian settlers took away the habitats
    - Animals and bugs came to the islands and they ate a lot of the snails
    - Shell collectors
    - Settlers were taking and crowding out the native snails habitat.
- Today, there are only about seven to eight species left and two are endangered.

Purpose/ Experimental Question:

- How does the amount of snails differ in different elevations?

Independent Variable

- Elevation

Dependent Variable

- Number of Snails

Hypothesis

- If we travel higher in elevation, then there will be less snails because there are less plants which are snails homes.

Materials

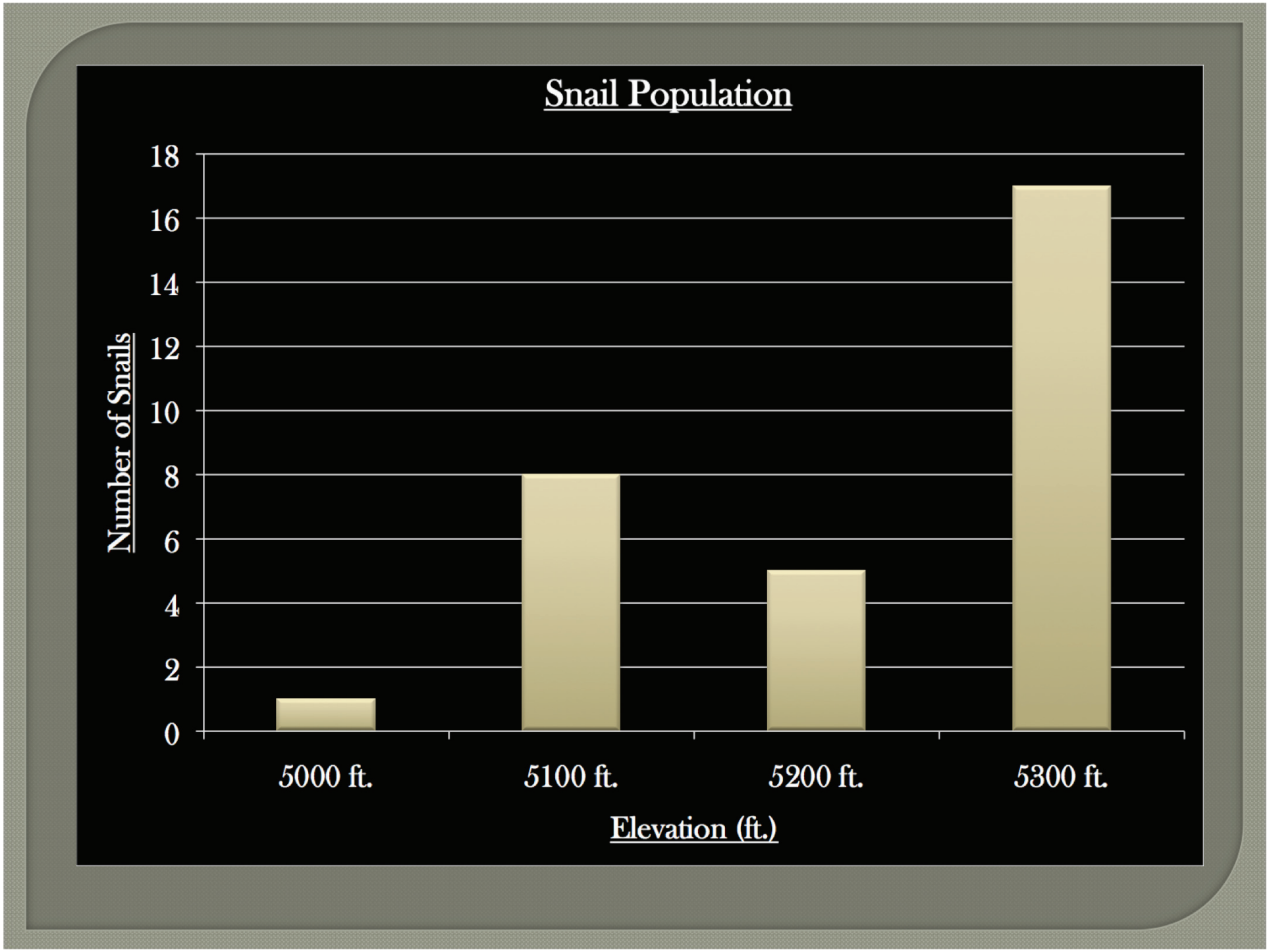
- Lab Folder
- Pencils and Pens
- White Sheet
- Snail ID Guide
- Nets

Procedures

1. Put down white sheet by tree.
2. Shake tree lightly.
3. Count the number of snails.
4. Check on leaves.
5. Count the number of snails.
6. Flip over rock/log.
7. Count the number of snails. Repeat steps 1-7 at each elevation.

Snail Population

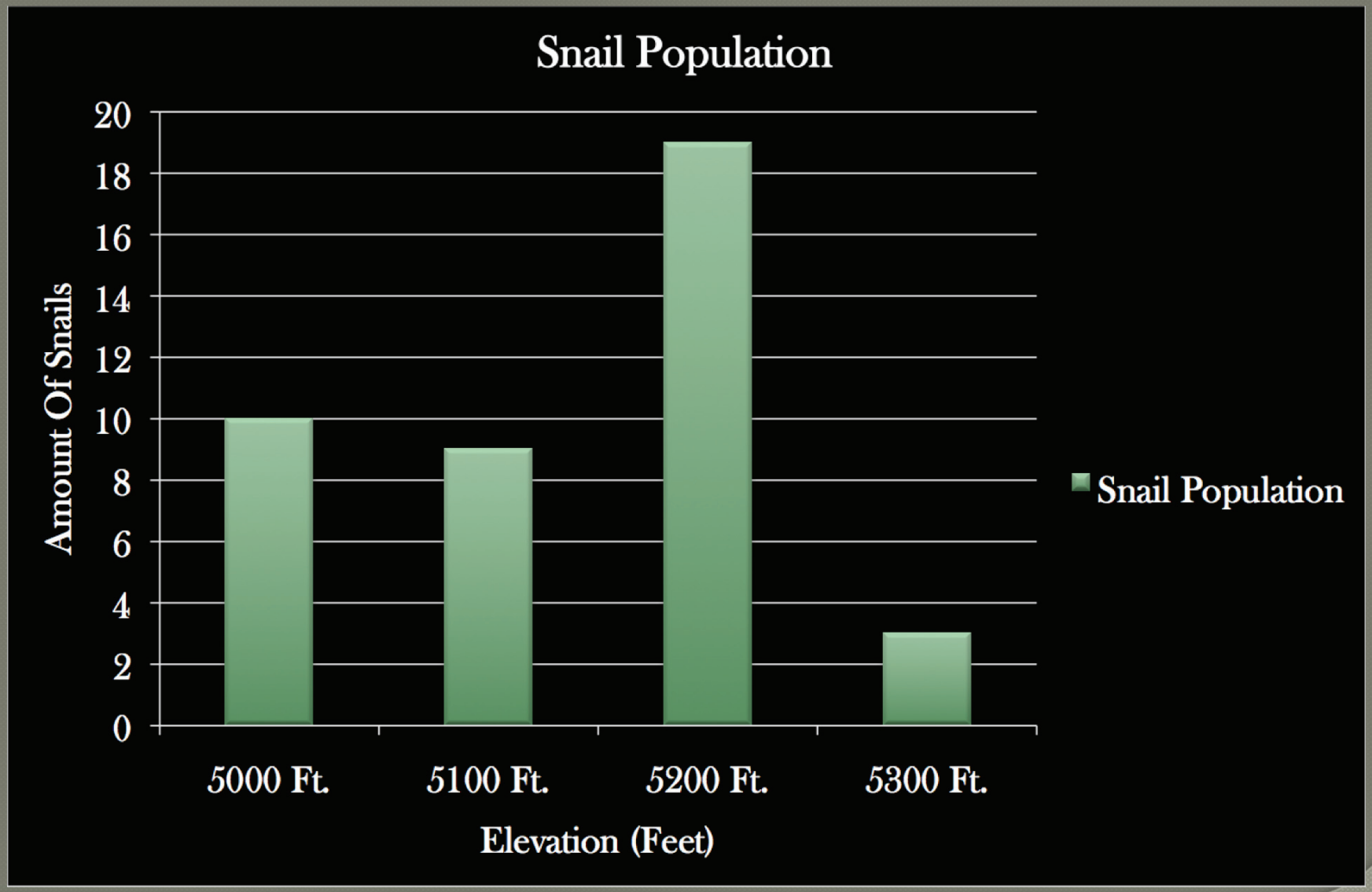
	Trial #1			Trial #2			Trial #3		
	Shake Tree	Check Log	Check Plants	Shake Tree	Check Log	Check Plants	Shake Tree	Check Log	Check Plants
5000 Ft.	1	0	0	0	0	0	0	0	0
5100 Ft.	0	0	2	0	0	2	0	0	4
5200 Ft.	0	0	0	0	0	1	0	0	4
5300 Ft.	0	0	5	0	0	3	0	0	9


Snail Population
Number of Snails
18
16
14
12
10
8
6
4
2
0
5000 ft.
5100 ft.
5200 ft.
5300 ft.
Elevation (ft.)

Conclusion

- What we found out from our lab is that snails prefer higher elevations, and it might have to do with the humidity. In the lower elevation, it was darker and very cold; not what the Succinea snail is used to living in.
- Our results did not support our hypothesis. We hypothesized that there will be fewer snails in the higher elevation because of the lack of plants.
- Possible scientific reasons we got the results that we did is because the snails lived on a certain type of plant that was more common on the higher elevation.
- A possible error that occurred in our experiment is we did not know what plant the snails lived on. Also, when we were looking for the snails, we did not spread out and we only looked in one small area.
- If we could revise our experiment for the next time, we would check how many snails were at each elevation in general, without the nine trials; now that we know where the snails live.

Other Groups Results:



Other Group

The other group found the Philonesia snail. It is native but can be mistaken for the non-native “garlic snail.” The native Philonesia snails are found on the leaves on trees. The “garlic snails” are found on the ground.

Thank you for watching.

Do you have any questions?