

#6 Turn alterations in pill bugs

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1. Purpose

- Observe the alternating turning behavior (turn alternation) in pill bugs

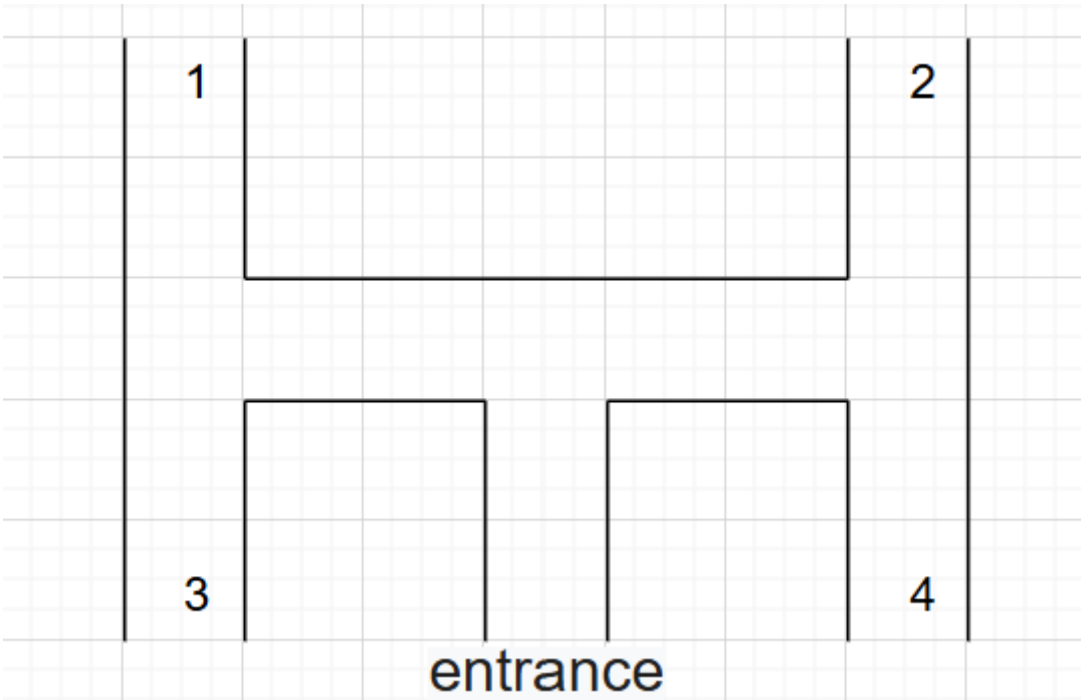
2. Background

- Verify the trait that if a pill bug turns right, it tends to turn left next

3. Method

- Use an H-shaped(*fig.1)
- Release a set number of pill bugs and record which direction they turn
- Note number of bugs passing each route

<*fig1>



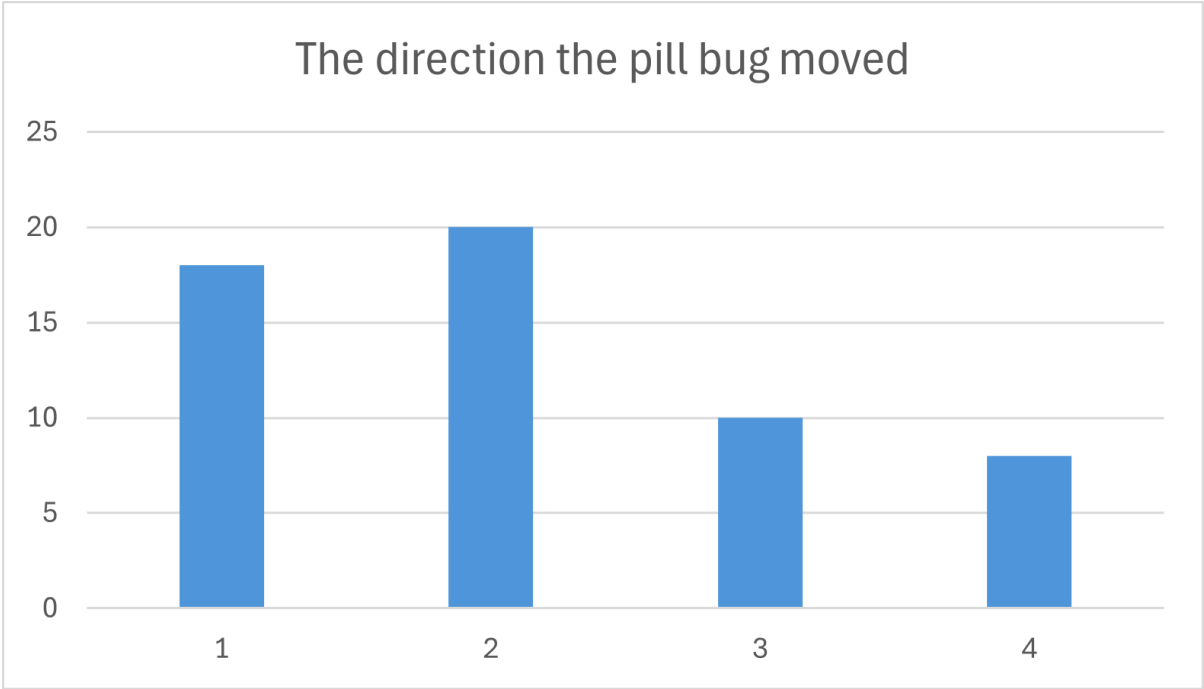
4. Results

- **passage counts**

EXIT	COUNTS
1	18
2	20

EXIT	COUNTS
3	10
4	8

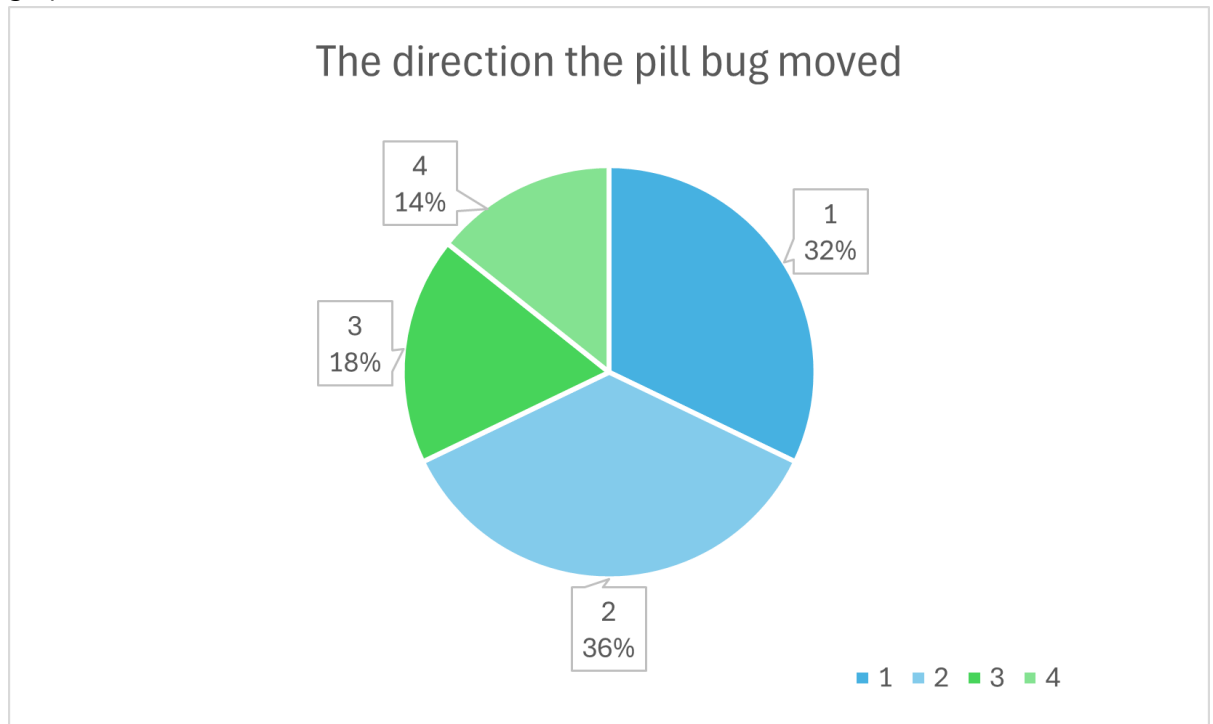
◦ graph



• proportion

EXIT	PROPORTION[%]
1	32.14
2	35.71
3	17.86
4	14.29

graph



5. Discussion

In the professor's introduction, we heard that a turn alternation response was observed at a ratio of 9:1. However, in our actual experiment, only about 60% of the turn alternation response was observed.

Possible reasons include the following:

- **Environmental factors related to the passage width**

The passage might have been too wide or too narrow, making the "stimulus from one side," which triggers turning, rather ambiguous.

- **External factors due to pill bugs' aversion to light**

Because pill bugs exhibit negative phototaxis, the unstable light from either side might have caused them to prioritize avoiding light over turn alternation.

Similarly, in

6. Conclusion

As a result, although the ratio was not ideal, a turn alternation response was still observed.

Personally, I found these experimental results very interesting and felt motivated to learn more about animal habits.

It is said that, when humans are undecided between right and left, they choose left 70% of the time. This experiment has given me a good opportunity to research that as well 😊