

How does a guppy recognize its predator

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1 Motive • Purpose

- We have been interested in our senior's study about courtship behavior of guppies.
- We examined whether the courtship behavior changes or not with the presence of small carnivorous fish.

2 Hypothesis

We thought courtship behavior would decrease when there is an oyanirami.

And the courtship behavior would be caused by whether guppies share water with an oyanirami and whether they can perceive it.

3 Experiment method

First, we put the guppies pair in the tank and find out what is the in courtship behavior.

We carried out the target experiment divided into 8 patterns with two transparent tanks and three types of partitions.

We recorded the tank in from the front for 30 minutes with a video camera and measured the time of the courtship behavior.

	①	②	③	④	⑤	⑥	⑦	⑧
Whether there is an oyanirami	○	○	○	○	×	×	×	×
Whether the guppies share water	○	○	×	×	○	○	×	×
Whether the guppies can see the oyanirami	○	×	○	×	○	×	○	×

Situation of experiment



4 Result

Chart1

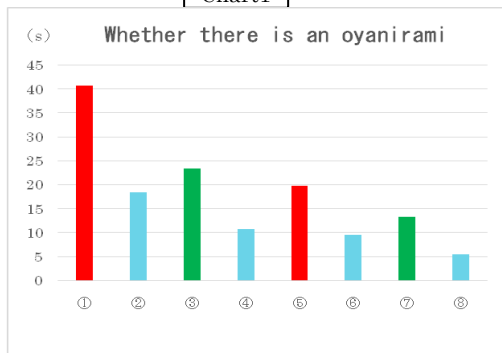


Chart2

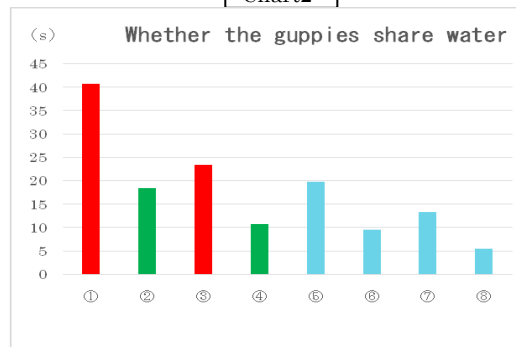


Chart3

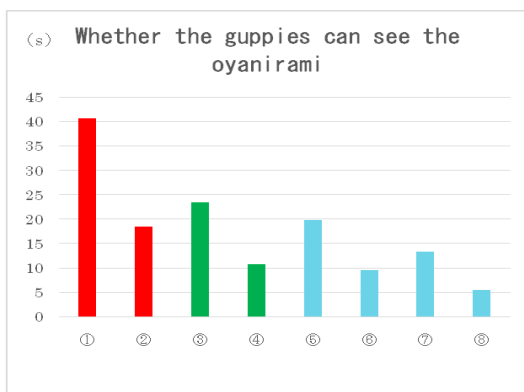
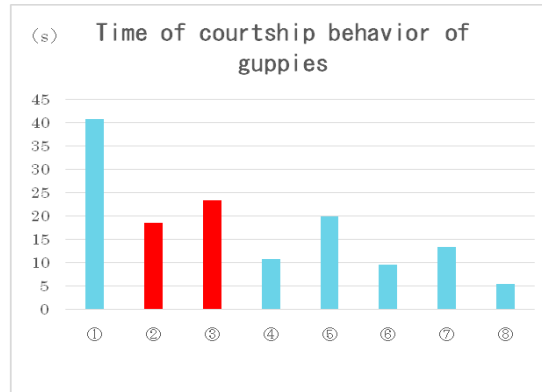


Chart4



5 Consideration

We found that courtship behavior of guppies is influenced by three conditions: whether there is an oyanirami, whether the guppies share water with the oyanirami and whether the guppies can see it. So, we think guppies put leaving offspring before fleeing.

Moreover, we found that whether they share water with oyanirami has more influenced on courtship behavior rather than if they perceive it or not. So, we think guppies mainly recognize oyanirami by sight.