Lab Report 8

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A freshwater fish named as Goldfish which belongs to the family of Cyprinidae is most commonly seen in the aquariums. Goldfish is actually native to East Asia and this particular fish shows variations in fin configuration, body shape, size, and colors. A number of behaviors of Goldfish can be observed such as swimming upside down, stillness, scratching against the objects, lethargy, and illness. Behaviors like feeding, breeding, and avoidance of danger contribute to their success. Goldfish is normally termed as a friendly fish but the competition for food is considered as the only threat that these particular fish represent to each other. The competition for food among the various varieties of Goldfish can lead to starvation and stunted growth sometimes. This lab report will provide an insight into one of the most important behaviors of Goldfish i.e. reproduction or breeding.

# Materials and Methods

It has been mentioned in the introductory portion that Goldfish is a freshwater fish and it is normally considered a pet fish. For any observer, the behavior of Goldfish can be easily observed in an aquarium where it is kept as a pet. On technical grounds, no one would be able to observe mating in Goldfish as they don’t mate but spawn. For any observer, it is advised to observe the movement of Goldfish because male Goldfish chase the female in a whacky fashion when they spawn. Such a movement sometimes lead to mild injuries as well (Bjerselius, Lundstedt-Enkel, Olsén, Mayer, & Dimberg, 2001). The timing of this process is not fixed as it can be as short as a few days or can take place once or more than once in a season. So, one needs to be very careful while observing the movement of Goldfish after regular intervals. As of me, I used to observe the movement of Goldfish during late May through early June (Schreck & Hopwood, 1974). This is the time when the first spawn of the summer season can be witnessed. As far as the time of the chase is concerned then it is advised to observe spawn around 1 to 2 p.m.

# Results

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| Mating Start | Goldfish gets ready to mate it develops white spots which run along its gills.  Following the development of white small spots on the male Goldfish, female Goldfish gets fatter.  Constant chasing of female Goldfish by male Goldfish.  Female Goldfish releases eggs in the tanks following the chase of male Goldfish. |
| Egg Release | Female Goldfish releases eggs when she gets tired of the chase.  Released eggs get entrapped in the plants and more often than not stick to the walls of the tank.  Male Goldfish will then release the milt to fertilize the eggs.  The whole tank gets cloudy. |
| Egg patterns | Color will be developed on healthy fertilized eggs while fungus will be witnessed on unhealthy fertilized eggs. |
| Hatching | Eggs will be fully fertilized around 4 to 5 days.  After seven days eggs will be hatched and speck can be witnessed coming out of the eggs.  These black specks will get attached to the walls of the tanks of plants. |

All the above behaviors mentioned in the table can be well observed. These are all the behaviors related to the mating of Goldfish. Spawning process continues for several hours sometimes. During the spawning, process nipping can be witnessed on the tail and fins of male and female goldfish respectively. Fertilization process makes the whole tank look cloudy and it is advised not to carry out a water change. After hatching, newborns will either have or blue or black color but their color will change as they age and grow (Schreck & Hopwood, 1974). Newborn Goldfish which is termed as fry more often than not die of a lack of food. So, it can also be deduced that food is very important during the development stage of fry.

# Discussion

The hypothesis presented in the report is well supported as it was observed in real time. The results can also be discussed in the context of parental selection theory as Goldfish is also choosy during the spawning process and when the spawning process start male Goldfish will keep on chasing the same female it selects at the start of the chase. In addition, female Goldfish will also continue to release to the same that started chasing female. Temperature is a very important factor in the mating behavior Goldfish because the chase is normally witnessed prior to the temperature or heat of the day gets too strong (Kobayashi, Sorensen, & Stacey, 2002). The temperature of the water also plays an important role in the mating process because if the water temperature stays moderate then spawning can be witnessed more than once. The population of the Goldfish does not experience a declining trend despite many of the newborns are eaten by adults. It is because female Goldfish lays thousands of eggs at each spawn.

# References

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