

Practical Project #1A – 20 pts.

Ethograms of Male *Bettas* When Confronted by a Mirror or Another Male

Eth. & Behav. Ecol.
Biology 287
revised 1/22/2008

It is our goal to construct a specialized ethogram of the behavior of male fighting fish in a number of contexts. We will then use the ethogram to guide the collection of sequence data and the construction of a sequence diagram. We will construct the sequence diagram from class data.

You will work in pairs. The fish will be located in the genetics lab. The observation time for this project (both parts) will be somewhere around 1 to 1.5 hours (at most). Here are the conditions for observation:

- Place a male in the observation tank such that he can see no others and watch him for at least fifteen minutes. He may not do much in this context but describe his major action patterns.
- Then put a mirror where he can see it and try to keep it within close range of the male (don't react immediately to his movements but if he ignores it or leaves, after about 30 sec, move the mirror slowly to near him. When you are done, remove the male (use the net) and place him back in his jar.
- Take another male and introduce him into the same tank and wait for 5 minutes. Place the mirror near the male. Observe for 15 or 20 minutes and work out his ethogram for this situation. Remove the male and put him back in his tiny tank.
- Note: two groups will use females instead of males for this part of the observations.

Write a description of each action pattern **that you observe more than two times**. Make sketches or take photos of the various postures. **Be sure to review the class notes on ethograms (pp and your notes) before attempting this.**

Note that in some cases, two or more action patterns may combine to form a behavior by themselves. In the past, people usually get somewhere between 8 and 14 action patterns for the situation we have outlined.

Your finished ethogram should be typed, less than 4 pp long and ideally would contain drawings. Note – it is OK for each person to independently do half of the work as long as it is combined and both members of the pair review the final product (you both get the same grade).

You should turn in your ethogram with both person's name by the date and time given on the class web page.