

Color Preferences of Zebrafish: Can they affect mating behavior and reproductive performance?

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Zebrafish Husbandry Workshop
Aquaculture America 2014
Seattle, Washington**

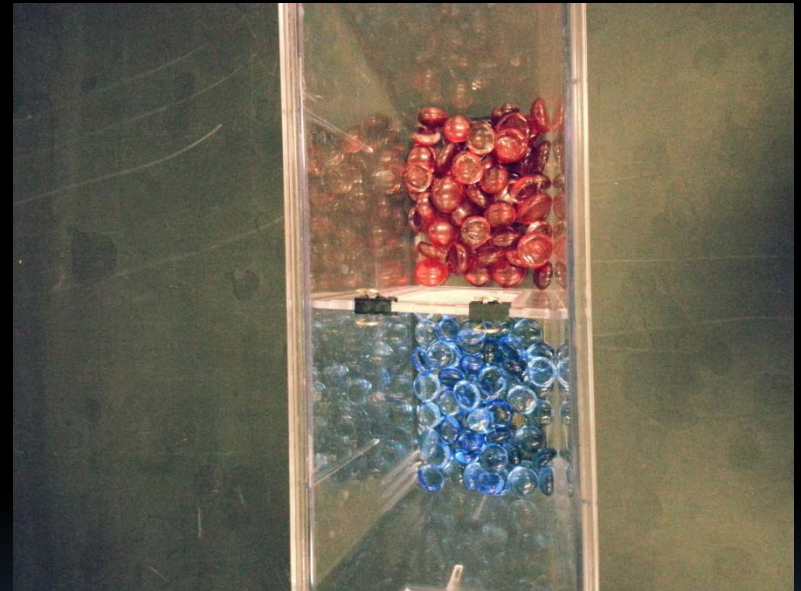
Breeding over Marbles



Experimental Design

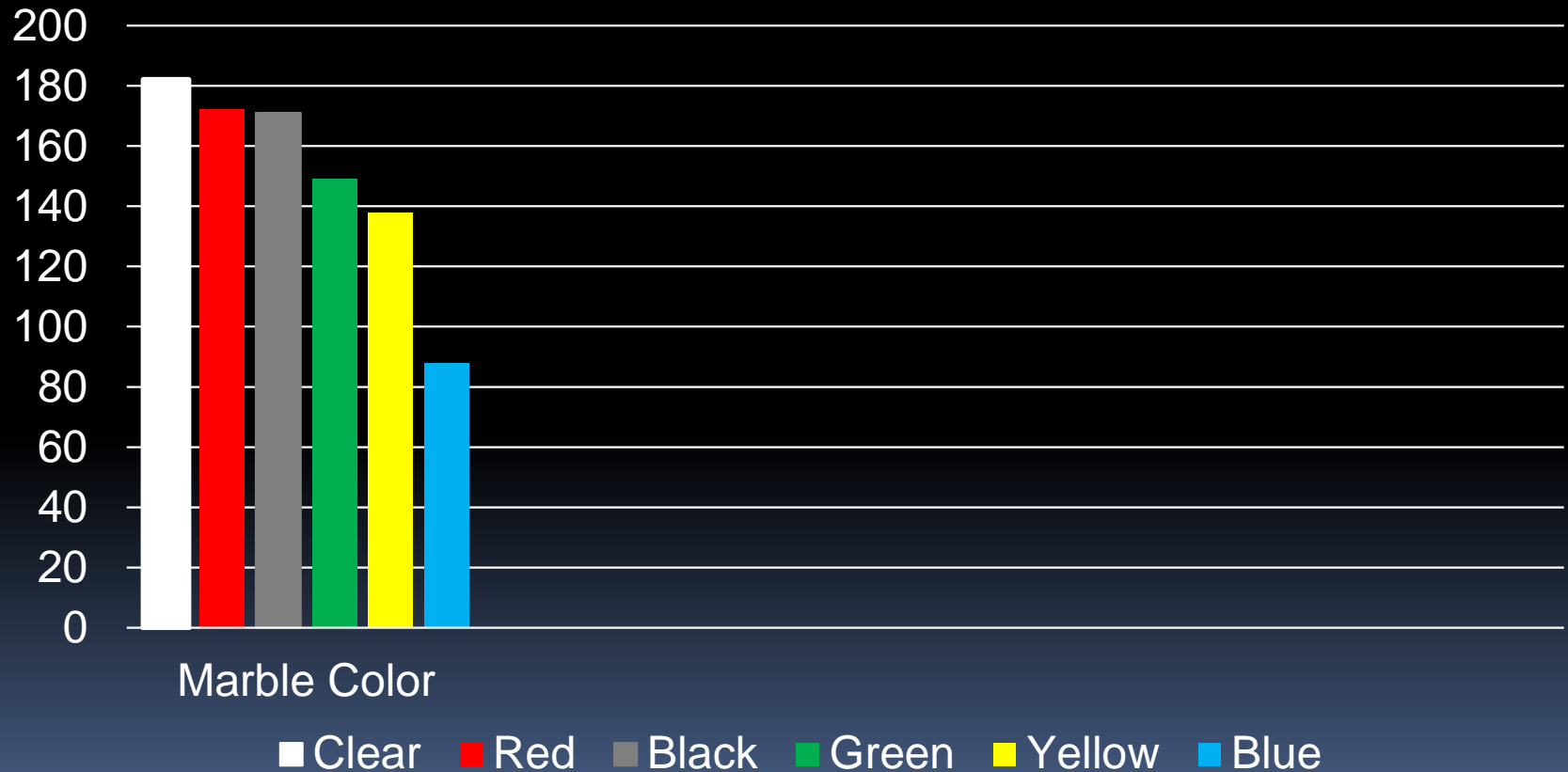
- Used young adult AB fish all from one large group mating and raised under identical conditions
- Subdivided these into small groups of 3 female and 2 male fish for study purposes
- Used marbles of 6 different colors:
 - Clear, black, red, green, blue, and yellow
- Set up all possible combinations of two colors
 - 15 sets of different pairs of colors
- Exposed fish to each color combination


Sample Color Preference Tank



Overall Color Preference

Number of fish preferring each color





Did fish breed better over a particular color?

- Set up group breedings of 5 fish per tank (3 females, 2 males)
- Tanks held either clear, red, or blue marbles
- Collected and counted eggs produced
- Cultured eggs and counted hatched fry

Overall Results

- Average eggs produced per group (3 females, 2 males):
 - RED: **388**
 - CLEAR: **338**
 - BLUE: **331**
- Percentage of eggs that hatched per group:
 - RED: 70% (**271 fry**)
 - CLEAR: **77%** (**260 fry**)
 - BLUE: 60% (**198 fry**)