



**Wisconsin Area
Killifish Organization
announces its'**

49th WAKO Anniversary, 37th Annual

Egg-Laying Toothcarp Jamboree

Weekend of **Oct. 28-29, 2017**

GrandStay Hotel & Suites– Airport Milwaukee

(Formerly called The Day's Inn, same location as last year)

6331 S. 13th Street, Milwaukee, WI

Join us for a weekend of Killifish display with Judging, Raffles, Live Foods,

Seminars, Sales, Hospitality and a huge Sunday Auction.

There is no fee and we welcome the public.

We are proud to announce that this year's featured guest speaker is Dr. Rebecca Fuller and her talk on Saturday Oct. 28 at 2PM is entitled "The Evolution of Color Patterns and Color Vision in Bluefin Killifish".

Read below about Dr. Fuller and a summary of her talk.



Becky Fuller- Bio

Becky Fuller is an associate professor at the University of Illinois. She obtained her undergraduate degree at the University of Nebraska, her M.S. at Michigan State University, and her Ph.D. at Florida State University. While she grew up swimming and boating in Nebraska, her love of fishes began when she studied pipefish as part of her Fulbright studies in Sweden in 1994. Since then, she has worked on darters, killifish, mollies, guppies, fathead minnows, and largemouth bass. Her research focuses on questions pertaining to color pattern/color vision, visually based behaviors, speciation, and phenotypic plasticity in

fishes. At UI, Becky teaches Ichthyology and Evolution. She has served on the editorial boards of the American Society of Naturalists, Evolution, and Current Zoology.



Talk - synopsis

Bluefin killifish harbor fascinating variation in coloration. While the first three-quarters of the dorsal fin is blue on most males, the rear dorsal fin and the anal fin can be yellow, red, orange, blue, or a combination of these. All populations harbor multiple color morphs, but the relative abundance of these color morphs varies depending on the lighting environment. Bluefin killifish populations can be found in many different

lighting environments ranging from crystal clear springs to tannin-stained swamps. Males with solid blue anal fins are much more common in tannin-stained swamps. This presents an intriguing pattern because tannin-stained water filters out the UV and blue wavelengths. In addition, bluefin killifish have amazingly good color vision with five different types of cone cells (UV, violet, blue, green, and red). The relative abundance of the cone cells also differs with the lighting conditions where animals in swamps have fewer UV and violet cone cells but animals in springs have more UV and violet cone cells. Hence, blue males are found in swamp waters where UV/blue wavelengths do not transmit well and where the visual systems of these animals would make them less sensitive to these wavelengths. In this talk, I will discuss these patterns and try to solve the solution to this conundrum.



Lab photo of a male with a solid blue anal fin

Swamp water and spring water.



Bluefin Killifish

Lucania goodei

