

By Elizabeth A. Marchio

My metamorphosis

I grew up in the 1980s and 1990s, in a lower-middle-class suburban neighborhood on the outskirts of Columbus. Our home didn't have air conditioning or cable television, so there was little reason to ever be inside. At 10 years old, I was allowed to roam the neighborhood unsupervised. I bicycled everywhere, climbed trees to catch tree frogs, and searched for aquatic life in the local creeks, among other clothes-ruining endeavors. One formative experience occurred at a housing development a mile from my home, when I came across a pool of water in the massive tire tracks of a dump truck. It was 2 feet deep and muddy. I peered into the pool, holding my small, green net in one hand and a bucket in the other, searching for movement. I spotted my quarry in the warm, shallow edges: dime-sized black spots zooming to the depths as my shadow passed. Tadpoles!

I stalked through the pool, my shoes squeaking and sliding in the mud. After much splashing and several failed attempts, I caught one—but this was not the leopard frog tadpole I expected. It had a remarkable red tail. I couldn't believe it! I had something I had never seen before!

After collecting a couple of dozen of them in my greatly excited state, I hung the bucket on my handlebars and sloshed home. I kept them in the garage, with my zoo of neighborhood creatures I had gathered. Two weeks later, the bucket clamored with metamorphosed froglets, which I identified by a field book as Cope's gray tree frogs (*Hyla chrysocelis*). When they started scaling the sides of the bucket, I realized it was time to return them to the collection site. I pedaled out to their natal pool to find it had been bulldozed. I released them in my backyard instead. My path into science started here.

Many years later, during a 5-year college hiatus, I worked for almost every aquarium store in the Columbus area. I joined the local aquarium club—the Columbus Area Fish Enthusiasts—and kept fish from all over the world. While working at the first aquarium store, I met my husband, Dan, and during our premarried life we propagated fish, plants, and coral and sold them over the Internet. We became self-taught experts in ornamental fish and aquarium keeping.

As I progressed from novice to advanced aquarist, I yearned for more. With the help of two inspirational mentors, Meg Daly and John Wenzel, I went back to school at Ohio State University (where they both worked), finished my Bachelor of Science degree in zoology, and was accepted to



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Southeastern Louisiana University as a master's degree student, studying the phylogeography and taxonomy of fish.

I began to see my aquarium experience as a common life history element among higher level ichthyologists. This science-oriented leisure activity has a habit of turning fish into a lifelong passion.

That passion landed both Dan and me in fish-related Ph.D. programs at Texas A&M University. During my first year, as I counted fish bones in a developmental study of *Gambusia* species, I came to realize that my passion isn't just for fish; it's also for people interested in fish—and for those poor millennials who never had the opportunity to go outside and chase tadpoles. Will my generation be the last to have such experiences and, through them, come to love the natural world,

natural history, and conservation?

Today, I'm a social scientist studying how science-related leisure activities, such as playing outdoors and keeping aquariums, can mold people into ichthyologists, natural scientists, and scientifically literate citizens. As I look back and consider how I got here from the creek and the mud, I realize that I never left. I entered science on the tail of a tadpole. My passion led to my own metamorphosis, and now I'm studying the metamorphoses of others. ■

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