

# HOW I GOT TO WHERE I AM TODAY

## Fred (Fritz) Rohde

Wilmington, North Carolina

After listening to Dr. Bob Jenkins (Roanoke College, retired) speak at our 2011 NANFA Convention in Roanoke, Virginia, about how he got started, I had the brilliant idea that this could be a series in *American Currents*. I know a lot of ichthyologists and senior fishery biologists, particularly in the Southeast, so I thought it would be a piece of cake. Alas, it has not turned out that way. While I did get Drs. Henry Robison and Don Orth to share their stories, others (including NANFA members) have ignored my requests. For some, I waited too long and some candidates have had serious illnesses or have passed away. My AC co-editor, Konrad, has bugged me to write about myself, but I didn't think I would have anything particularly interesting to share, contrary to my favorite saying: "I'm a legend in my own mind." I've decided to listen to Konrad, though.

I was born many, many years ago in a state that people have trouble remembering. No, it's not Ohio or Idaho, but IOWA! My parents decided to saddle me with the name Fred, but since there were already two Freds in the family (grandfather and dad), thankfully they nicknamed me Fritz, which I was told is the German equivalent of Fred. This caused confusion in later years when I started publishing under Fred C. Rohde but sometimes just used Fritz Rohde. One colleague thought that there were two of us: a Fred writing about freshwater fishes and a Fritz working with saltwater fishes. But I digress.

Iowa, back then, was a great place to grow up. My parents were educators, and as Dad moved up the educational ladder, we moved every few years from one small town to another—and I mean small (200–500 people). Both my grandfather and dad were avid fishermen—grandfather for bullheads *Ameiurus* spp. from the Iowa River and Dad for Walleye *Sander vitreus* in Canada every summer. My earliest memory of studying little native fishes is from junior high school. My buddy and I tore up chunks of sod and dammed up a tiny creek to make a small pool. We then "tested" the reactions of the fishes by tossing M-80 fireworks into the pool. Belly up! My first collection technique!

Like many NANFA members, I got involved with tropical fishes. At one point in high school I had over 20 aquariums in my bedroom. Fortunately, my parents tolerated all of this. I knew that I wanted to do something with fishes as a career but really had no idea what. Since I was breeding tropical fishes, I thought I might work in a state or federal fish hatchery. My first actual collection of a native fish occurred around this time when we went to my uncle's cottage at Long Lake in Minnesota. There was a seine in the garage, so my brother and I went to a small creek nearby, where we caught Iowa Darter *Etheostoma exile*. I don't how we came up with the ID, but we did.

My high school was only 15 miles from Ames, home of Iowa State University, which at the time had a program called Fisheries and Wildlife Biology (FWB). Perfect match. Most of the people in the curriculum (only one woman in my time there) were in it because they loved to hunt and fish. My two closest friends were birdwatchers, and I was the little fish nerd. FWB was in

the Agricultural College, and there was a requirement that you had to spend one summer working at a job related to your field. At the end of my sophomore year, I landed a summer internship with the US Fish and Wildlife Service's North Central Reservoir Investigations, near Yankton, South Dakota. I was a member of a three-man crew that would sample the Missouri River reservoirs with nets (gill, fyke, and hoop), seines, and otter trawls. One highlight was collecting small Paddlefish *Polyodon spathula* and sending them to an aquarium in Denmark. Those three months prepared me well for my Fisheries Management course, which was taught by Dr. Ken Carlander. I was having some personal issues around this time, so I transferred briefly to the University of Minnesota, near where my parents had moved. It was a good semester. Dr. James Underhill taught Ichthyology and Peter Moyle (future author of *Inland Fishes of California*) was my lab instructor. The highlight of the lab was being given a half-gallon jar of preserved fishes and told to sort and identify them. About a year later, I worked for six months at the National Fish Hatchery in Valley City, North Dakota. The hatchery primarily focused on raising Walleye, but while I was there, we were the first to raise Muskellunge *Esox masquinongy*. I did a small experiment to see if I could raise them on pellet food, but they preferred eating each other. I missed Iowa, so I headed back to Ames to wrap up my undergraduate degree. Iowa State had hired a new ichthyologist, Dr. Bruce Menzel, who had recently graduated from Cornell University, where he had studied under Dr. Edward Raney. I was a little older than most of the students in FWB, and the only really fish-crazy guy, so Bruce and I really hit it off. This was lucky, since I probably wouldn't be where I am today without his help.

I finally graduated in the summer of 1971 but was having a difficult time finding a fishery biologist position. All of the federal jobs were going to Vietnam veterans, so for a time I washed glassware in the Iowa State Chemistry Department. However, Bruce's advisor at Cornell, Dr. Raney, had started a consulting company, Ichthyological Associates, in response to the demand for environmental impact studies for the many nuclear power plants being built, particularly in



Iowa Darter, my first native. (Photo by Konrad Schmidt)





Carolina Pygmy Sunfish *Elassoma boehlkei* from Juniper Creek, the type locality. (Photo by Fritz Rohde)

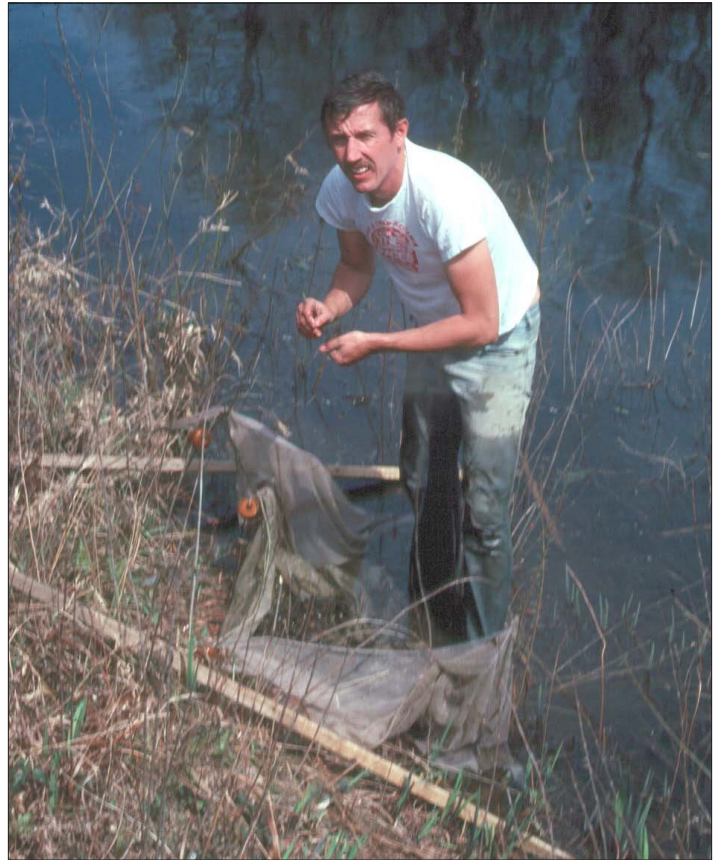
the mid-Atlantic region. Bruce put in a good word for me, and I was offered a job working on the Salem Nuclear Power Plant study, on the Delaware River in New Jersey south of Philadelphia. While the plant was being built on Artificial Island in New Jersey, our lab was located near Middletown, Delaware. What a fantastic learning experience this was! Many of the employees were recent graduates from Cornell, a nice mixture of BS, MS, and PhDs. For me, it was more like going to graduate school than working. It was here that I met my long-time friend, the late Dr. Rudy Arndt. We spent countless weekends surveying the streams of Delaware with our colleague, Dr. Johnson Wang, discovering species previously unknown from Delaware. This is when the research and publishing bug bit me. Rudy and Johnson encouraged me to work up the data on the two species of nonparasitic lampreys, as well as the sculpin life history study (then called *Cottus bairdi*, now *C. caeruleomentum*). While I enjoyed the work and friendships, I knew I needed a master's degree if I wanted to advance in my career, so after three years I said goodbye and headed south.

I landed in Morehead City, North Carolina, working for Dr. Frank Schwartz at the University of North Carolina Institute of Marine Sciences (IMS) on another nuclear power plant environmental impact study. He had also agreed to take me on as a graduate student. We had a good group of people—some grad students, others just working on the study. The power plant was being built on the lower Cape Fear River near Southport, and we spent many long days sampling fishes with gill nets and otter trawls. When I had the opportunity, I would explore the swamps around Southport for all the cool fishes that resided there. This is when I discovered the Carolina Pygmy Sunfish *Elassoma boehlkei*. On weekends we also documented the fishes in the nearby Croatan National Forest. I actually did my graduate program backwards. While working at the Institute, I did my research on the systematics of the American Brook Lamprey *Lethenteron appendix*, and after three years of working on the Cape Fear River, I moved to Chapel Hill to finish up the coursework at UNC and write my thesis.

After six years of field work, eight peer-reviewed publications, and a master's degree, I was ready to move up the fisheries ladder (yep, "Legend in My Own Mind"), but I guess the fisheries world wasn't ready for me yet, so a little hiatus ensued. I taught for two years at a small boarding school in northeast Georgia and then worked in the environmental section of a large engineering firm in Boston for two more, all the while trying to get back to North Carolina.

Rescued! Two friends I had worked with at the IMS lab helped me get a technician position with the North Carolina Division of

See "Rohde," page 25.



Top: Fritz, circa 1985, collecting *Elassoma boehlkei* at a tributary to Juniper Creek, NC. (Photo by Rudy Arndt) Bottom: Fritz at Juniper Creek in 2017. (Photo by Brenda Benson)



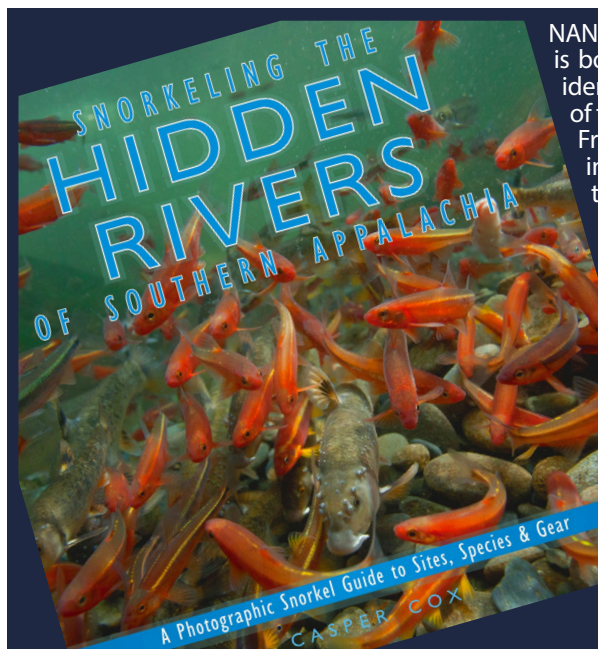
("Rohde," continued from page 23)

Marine Fisheries, based in Wilmington. I started by developing a survey program for the snapper-grouper commercial fishery. Being in the right place and with some expansion, I quickly moved up to second in charge for that district. All that time I continued to do my freshwater sampling on rare fishes of North Carolina and South Carolina, with the help of Rudy and his students from Stockton State University in New Jersey. With the tacit support of my supervisor, I co-authored two books on fishes of the area.

As someone who had never lived longer than four years in any one place, I had now lived for 25 years in Wilmington. Time for a change! I was 60 and had 25 years with the state, so I could retire with full benefits. But what to do? I didn't want to be a consultant, since I had spent so much time arguing with them. This is where contacts and friends again came in. I was lamenting my situation to a USFWS colleague at the airport in Baltimore after a meeting, when he told me the perfect job had just been advertised: work-

ing on passage of diadromous fishes at hydropower projects and dams in the Southeast with the National Marine Fisheries Service in Beaufort, NC. He was right, and I've been doing it for the past 13 years. I still have my house in Wilmington, but I rent an apartment in Morehead City, where I started out back in 1974. Full circle.

So, what is the takeaway from all this rambling? If you're currently in college, volunteer and get some experience or find appropriate summer work. Make contacts and make friends in your field. Get lucky or make your own luck. Be in the right place at the right time like I was. I never considered my work to be 9-5, five days a week. I had a mediocre undergraduate career, did well in courses I liked and the opposite in those I didn't. I've often been asked why I didn't get my PhD, and I respond that I really didn't like school and, at the time, a Master's was sufficient. All in all, 50 years after leaving Iowa State, I think I've done well.



NANFA's very own Snorkelmeister, Casper Cox, has written a snorkeling guide that is both useful (with maps and information about locations, access, biodiversity, identification, safety and more) and beautiful (with dozens of color photos by some of the best underwater photographers in the world). Written to complement the Freshwaters Illustrated film "Hidden Rivers," the book is a distillation of Casper's interests, experiences and skills, as well as a love letter to his favorite waters and their inhabitants.

75+ pages, lay-flat spiral binding, 3rd printing. \$30 each

NANFA receives a donation for each copy sold through <http://www.nanfa.org/cart.shtml#guide>



Hellbenders, aka Devil Dogs or Snot Otters, are also found in the Hiwassee River. The clean water, large flat stones and an abundance of crayfish provides an excellent watery world for them to live in. If you were to spend a day here you may well see one, especially in the early dawn or dusk hours as they are generally nocturnal hunters. They breathe through the folds of skin running down their sides and remain in the water year round. Some people are afraid of them but you have nothing to fear. They are not venomous as some unknowing people claim. Consider yourself very fortunate to see a Hellbender in one of the few remaining rivers they still thrive in. They are North America's largest salamander reaching lengths of 24 inches or more.

David Herasimtschuk was honored with an international first place award in London for this stunning photo. By the way, the Northern Water Snake got away, a bit too much for this Devil Dog.

to a stream named Spring Creek located on the north side of the arm compared to the cold Hiwassee. Though the creek is much rife runs for easy snorkeling. In early spring River Clubs with and here, just as in the shallower runs of the Hiwassee.



The Hiwassee River is only 30 minutes from the Conasauga River, via US Highway 411 north. A convenient location is the Hiwassee Picnic Site and it's just a few miles from 411, along TN 30 east toward Reliance. The picnic site offers tables, an access ramp, a restroom and a shallow gravel bar to wade out from. Be careful here as the water can dramatically and dangerously rise during power generations upriver. While in Reliance, visit the historic Webb Brothers general store and post office. On the other side of the river, at the bridge, is a fly fishing store and deli as well. Free camping is available along Spring Creek and paid camping with facilities at Gee Creek Campground. A visitor center is nearby. The Hiwassee River Picnic Site.

#### Site 1 Fishes of the Conasauga River



**Bristle Darters** are the most common darter in the Smoky Mountains. I consider them handsome with their many pronouncements of bronze. From shiny brass to muted patinas, they wear their metallic scales proudly. The Latin name for the Bristle Darter is *Percina palmarum*, which means "The Prize." They seem to enjoy feeding in the carpet-like moss covering the rocks. Rubbing your hand gently over the river weed gently dislodges micro edibles that these handsome darters will promptly feed upon.

**Greenbreast Darters** are at their most beautiful in the early spring. During the spawning season the males are out and about parading themselves to entice the more bland colored, gravid females, (being those filled with eggs), into their selected nesting sites. Usually this species tends to live and hide beneath the stones located in or



**Spotted Darters**, during the spring spawning season, only the males get the vertical bars of iridescent blue. During most of the year their bodies are a light tan color blending into the sandy substrate they live on, generally found in the calmer flowing areas.

There are many, many other species of fish found in the Conasauga River. Typically on any given day you will see 20 to 30 different fish species at the snorkel hole, and even more as you learn when and where to look. Snorkel the pools and bouldered rapids further downstream and return during other seasons to see new sights. Explore! Below is one of the beautiful crayfish, marked with vermilion over soft



#### Looking Below the Surface

Snorkeling is a wonderful way to experience another aspect of our world. Not only will you see things that most never will, it is a full sensory experience. Your body and senses are fully oriented, you are soon one with the watery world, floating freely in its space. Your vision is magnified by an optical enhancement making everything appear larger. Aquatic creatures will come near you, as curious of you as you of them, soon accepting your presence. Unlike on the surface world, where one generally has to view creatures from afar or by the use of binoculars, in the world below the water's surface you can gently approach many aquatic species within feet and even inches for a prolonged period of close observation.



#### Aquatic Diversity

Fishes come in all types of shapes and sizes with their bodies adorned by marked patterns, gills, reds, blues, greens and colorful flowing fins. Fishes vary from long, tooling gear patrolling the ab- bacivertices to little snubnosed fish darting along the gravelled bottom. Schools of shrewy about by you, shimmering in the sunlight's rays while a Redeye Bass watches, lurking in the shadows of log jams. A new world of aquatic life awaits, beckoning your visit from the Earth's surface. Eaten the flow and lean for the sounds of redhorse suction popping microscopic meals from the life- slabs of broken bedrock. In the cracks and crevices you'll find another egg, filled with new life, another generation of foraging fishes taking their place in the aquatic food web. Schools of am- stonoresters graze on slippery zones covered with algae, shaving off patches with their lower lip- sharp as our fingernails. They are feeding, moving as a herd of aquatic cattle, grazing on the al- Returns in the spring and some of these sleek stone grazers will have morphed into armor-plated rolling stones and pushing deep branches into the clear gravel for the egg-filled females. After a- her eggs, dominant males will fertilize the eggs with a cover of newly recruited males. This is a world mostly unseen, yet eager to be witnessed by you. With a mask of tempered glass face free, released from gravity's pull, drifting through their watery world with a quiet ease. No anchor. Floating in the void of space, but no, you are here in a medium of living water, and be- acquainted, exploring new mysteries.

Shiners and Sunfish. Trout and Reddies. Darters and Dace. Bullheads and Hog Suckers. Drum, Preliminary Bass and their prey. Lampreys and Minnows. Whiskered Catfish, along with their red- darters. Sometimes come the surface, and a- a Devilfish to the shallow water, the large