



LATERAL LINES

VOLUME 12, NO. 3 JULY, 1996

THE NEWSLETTER OF THE IOWA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

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PRESIDENT'S CORNER

Summer is in full swing and things have been very hectic. Therefore, I will make this short and sweet for both our benefit. It's hard to believe how fast time goes by, but this will likely be my last presidents corner -- that is, if I can hold Boland back long enough to let me do this last one! This is a very important "Lateral Line" issue because it contains the ballots for our annual election of officers. Mike Steuck has recruited some excellent candidates who have graciously agreed to run for office. Please take the time to fill in the ballot and get it mailed back. Mark Cornish puts in a tremendous amount of effort getting these newsletters put together and sent out -- the least we can do is take a minute fill in the boxes and send the ballot back. Last year only about 50% were sent back.

As many of you already know, this years annual business meeting will be held in conjunction with the Midwest Fish & Wildlife Conference in Omaha. Consequently, there will be no technical paper session, but it will be a golden opportunity and low cost way for anyone interested in attending the Midwest Conference! (details for this are still being worked out). I wanted to also thank those Iowa chapter members who contributed to AFS 2000 -- Iowa was one of the top states in the Nation for meeting our contribution goal.

That's all for now. I hope everyone has a great summer and catches lots of fish! Please remember to get your ballots mailed back to Mike as soon as possible. 

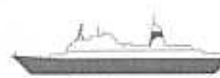
Gary

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Round Goby Invasion



The round goby (*Neogobius melanostomus*) is the latest potential nuisance invader to the Mississippi River Basin's ichthyofauna. Like the zebra mussel, the round goby is now becoming established in the Great Lakes and may soon find its way into the Mississippi River Basin through the Chicago Ship and Sanitary Canal and down the Illinois River to the rest of the Basin. Its biology was described at a February 21-22 conference in Chicago organized by the Illinois Natural History Survey and Illinois-Indiana Sea Grant.

Round Gobies were first found in North America in the St. Clair River, just south of Lake Huron, in 1990, along with the tubenose goby (*Proterohinus marmoratus*). Both species are native to the Black and Caspian seas. Tubenose gobies are "endangered" in Russia, but the Russian application of that definition is unknown. Both species have thrived in the St. Clair River and in Lake St. Clair downstream, where Michigan Dept. of Natural Resource trawl surveys catch them in large numbers.

The round goby has established two additional centers of distribution, in which it is abundant and spreading. These are Calumet Harbor on southern Lake Michigan, and the Grand River, a tributary to the central basin of Lake Erie. In all three locations, round gobies are caught in large numbers by anglers, sufficient to make angling for perch and walleye difficult (tubenose gobies are not being caught by anglers). Round gobies are said to be good tasting, but bony. They are a major nuisance for anglers in Lake St. Clair, but are a good fish for kids, because they are so easy to catch. The largest specimens in the Great Lakes have been about 180 mm (7 inches), but they get larger in their native range.

Round gobies have also been collected in Lake Superior (two specimens in Duluth Harbor in 1995) and Lake Huron (one specimen taken at Goderich, Ontario by an angler and photographed in 1994). A sighting in eastern Lake Ontario was made in 1995 by a qualified scientist, but no specimen was collected, so the sighting is treated as unconfirmed. So far, no round gobies have been found on the Mississippi River basin side of the Chicago Ship and Sanitary Canal. However, Illinois plans to look for them in 1996.

Round gobies have a fascinating, and not completely understood, life history. Females mature at one year of age, as small as 58 mm, and spawn every 20 days, up to six times, during the spring. Total fecundity is about 5,000 eggs. The eggs are cone-shaped and adhesive, clinging to rocks and other structure. Males guard the nests, and turn dark black when spawning. Males are said to die after spawning, but this may not always be the case. Males can live to be 5-6 years old. One hypothesis suggested to explain data on sex ratios and maturity is that females turn into males a year or two after spawning! Round gobies are benthic throughout their life, even when newly hatched.

As they grow, round goby diets switch from small benthos (chironomids and crustaceans) to mollusks. They eat large numbers of zebra mussels, about 70-80/day. Their pharyngeal teeth are ideal for crushing shells. They are selective for small zebra mussels, less than 9 mm in length. Round gobies 100 mm long can eat zebra mussels up to 15 mm long. Freshwater sponges were found in 1/3 of goby stomachs in one study: sponges are extremely difficult to identify in stomach samples, because they look like partially digested mush. Round gobies eat some fish, and are cannibalistic. Many fish eat round gobies, especially smallmouth bass.

Male and female round gobies can generally be externally distinguished by their genital papillae. Round gobies have a distinctive black spot on their anterior dorsal fin, but about 20% of the Lake Erie specimens lack the spot. This appears to be unique in the species. Round gobies are difficult or impossible to age by scales, but Ohio State biologists think it can be done if one looks at many scales from a specimen. Otoliths may be better: University of Windsor biologists are attempting to validate that technique.

Impacts on populations of mottled sculpins (*Cottus bairdi*) are already apparent. There is concern that the lake subspecies of mottled sculpin may be driven to extinction. Other species that may be affected include logperch and lake sturgeon. There is concern about predation on lake trout eggs and fry, but ongoing research by the Illinois Natural History Survey indicates that the mottled sculpin may be a more effective predator on lake trout than the goby. If round gobies colonize the Mississippi River Basin, there is concern about their impacts on darters, several of which are listed on the Federal List of Threatened and Endangered Wildlife.

Round gobies are behaviorally aggressive in defending optimal space. They are "smart" enough to turn over rocks to look for prey. They are larger than most competing species, feed in total darkness by sensing prey with their ultra sensitive lateral line system, and they tolerate poor water quality. All of these factors give them competitive advantages over native species.

Last summer, Minnesota Sea Grant recommended in writing to the Aquatic Nuisance Species (ANS) Task Force that the round goby be declared an aquatic nuisance as defined by law, and that a control program be developed. The ANS Task Force responded that more information is needed, and there is a clear process that must be followed.

For More Information Contact: Tom Busiahn, USFWS Ashland Fishery Resources Office, Ashland, WI (715) 682-6185

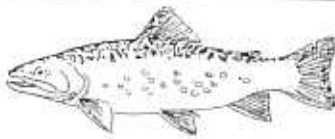
Condensed from River Crossings, May-June 1996

Killing Two Birds with One Stone

Chapter Business Meeting to Melt with *Midwest*

The next Iowa Chapter business meeting is scheduled to match the *58th Midwest Fish & Wildlife Conference* in Omaha on the 8-11th of December. Our business meeting will be held across the river in Council Bluffs but rest assured that it will **NOT** be at the Best Western Crossroads of the Bluffs. Tom Boland wants Chapter members to know that he would rather hold the meeting in a road ditch in the middle of I-80 than return to the hotel from hell. Probable impeachment looms for Tom should he go back on his word!

Papers will not be presented this year nor we will meet with another Chapter. According to Boland, our meeting will melt around the schedule for the *Midwest* which will allow Iowa Chapter members to attend both. More information will follow in the next newsletter.



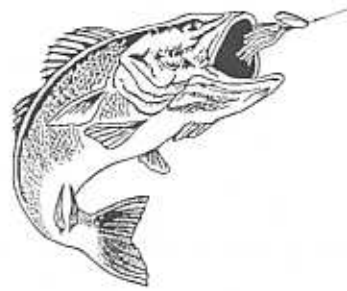
Brook Trout

Pocket Reference Sales Brisk

The Iowa Chapter has almost sold out of *Fisheries Scientist's Pocket References*. The inventory is depleted to four thanks to the sale of 10 copies to the Georgia Department of Natural Resources and several to our members. This useful guide generated a whopping \$42.61 in gross revenue over the past three months. At the business meeting in December we need to think about either reprinting or going out of the *Pocket Reference* business. In the mean time, if you want one of the last rare "first edition" copies, just send a check for \$3.75 made out to the **Iowa Chapter AFS** to:

Mark Cornish
Fairport Fish Hatchery
3390 Highway 22
Muscatine, IA 52761

Hurry, quantities are limited!!!!



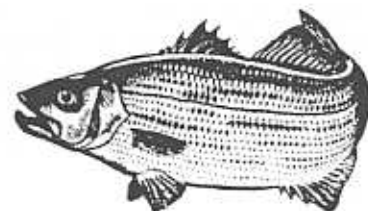
Largemouth Bass

Treasurers Report

As of the end of June, the Iowa Chapter had \$1164.55 in a NOW account at the State Bank in Spirit Lake and \$2500.00 in a 6-month CD which matures in August. Expenditures for this past year have included:

\$400.00	Kenneth D. Carlander Fund book publication costs
\$400.00	Iowans for Better Fisheries executive advisory board memberships for 1995 & 1996
\$300.00	Iowa REAP Alliance board memberships in 1995 & 1996
\$250.00	American Fisheries Society AFS 2000
\$100.00	Iowa Environmental Council 1996 sustainer membership
\$100.00	Iowa Women in Natural Resources scholarship program

Our Chapter has received numerous letters of appreciation from these organizations for our money. The Iowa Chapter appreciates the time and effort that Dick McWilliams and Mart Konrad put into representing our Chapter with several of these organizations..



White Bass

Ken Snyder

The little plains town of Lytton, nestled in the heart of northwest Iowa, may seem an unlikely place to spawn a fish farmer, but that is where Ken Snyder's roots lay. Growing up on the farm prepared Ken for the daily grind of aquaculture which he has done for the past 22 years with the Iowa Department of Natural Resources at the Fairport Fish Hatchery near Muscatine. After graduating high school at Lytton, he attended Iowa Central Community College in Fort Dodge before "seeing the light" and transferring to Iowa State where he graduated with a B.S. degree in Fisheries & Wildlife Biology in 1974. After college he worked briefly for the DNR's wildlife division before moving to Fairport.

Ken has been married for 17 years to Judy (Kerschenske) Snyder. Life is never dull at the Snyder house where Ken, Judy, Emily (13), Paul (11) and Anna (3) share their home with two Labradors, Myrtle and Ziggy, a lizard, turtle, frog, five fish and a kitten.

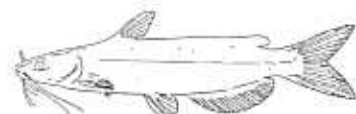
Ken has been a member of AFS parent society and Iowa Chapter since 1986 and has served on the nominating committee, best paper committee, assisted with business meeting details such as the white elephant and raffle, and been a member of the fish culture section.

Special projects that Ken has worked on at the Fairport Fish Hatchery include; cage-confined spawning of bass, intensive plankton rearing for spring inoculation of ponds, a study of potassium chloride toxicity of zebra mussels, and he's currently assisting Iowa State with a multi-year pond fertility study. Though the DNR has invested little money in rebuilding the Fairport Hatchery, Ken has done a pretty good job of keeping the 88 year old hatchery from turning into dust through extensive maintenance and repair. This was recognized in his receiving of the DNR fish culture *Employee of the Year* award in 1994.

Ken's interests begin with fish but they end with people. He's very active in church where he has served on the nominating committee and the Deacon board and is currently serving as a youth leader, on the board of Trustees and as the church moderator. If that weren't enough, on weekends he volunteers at the church's construction site as they build their new facility. Ken assists with his son's boy scout troop where he helps with fish & wildlife merit badges, eagle projects, and on camp outs. He is also a troop committee member and on the board of review.

Years of persistence paid off for Ken in his bowhunting last year. He bagged an 11 point non-typical buck that scored 165 and 5/8 which is proudly hung in his office. The beauty of this rack lies in the symmetrical 5-inch drop tines that cascade earthward just beyond the ears. This fall he'll be back in the tree stand looking for something just a little bit bigger. Ken also likes to turkey hunt. His children tease him about being the only turkey in the woods. When Ken goes fishing you can find him on the Mississippi river back-trolling wing dams for walleye and sauger with a worm rig. Last year this technique even landed Ken an eel!

When he's not in the field, Ken enjoys working with wood. One of his favorite projects was a toboggan for his children's Christmas present. Bending ash runners proved to be a learning experience, but he has it mastered now. As a family the Snyders like to go camping, fishing and canoeing. They enjoy family vacations, with the latest being to Annapolis, Maryland where his nephew graduated from the Naval Academy and was married in the same weekend. The Snyder's favorite destinations are Yellowstone and the Grand Tetons.



Nutrient Management in Iowa Hatcheries

Chuck Mischke is conducting a trophogenic census of two Iowa Department of Natural Resources (IDNR) fish hatcheries at Mt. Ayr and Fairport. This census will monitor: water quality, zooplankton-phytoplankton dynamics, and fish production. In the summers of 1996 and 1997, he will sample hatchery ponds once per week in May and June, and every other week from June through October. IDNR personnel will duplicate the sampling during this period. At the end of the sampling seasons this data will be combined and analyzed for any correlation between nutrient ratios and fish production.

The second part of the project will take place in the winters of 1996 and 1997. The data obtained from the hatchery ponds will be used to set up microcosms in the laboratory using soil and water from one of the hatcheries. Nutrients in the microcosms will then be compared at various levels to determine the best fertilization practices for optimum zooplankton production. This information will be used to enhance fertilization practices for the IDNR culture ponds. Chuck is a Ph.D. student working under Joe Morris at Iowa State University.

Missouri River Fishery Research

Mark Pegg is working on a study of the benthic fish community along the Missouri River. The overall objective of this project is to determine baseline benthic fish population dynamics and habitat use. Specifically, Pegg is examining several aspects of growth and condition of 12 benthic fish taxa. This includes comparing growth and condition patterns among the three major divisions of the river (headwater, inter-reservoir, channelized) and comparing growth rates at different life stages and different feeding strategies (e.g. piscivore vs. omnivore).

Another area of his research involved looking at historical flow data to model the effects of various control management practices (e.g. impoundment and channelization) on the river's hydrology and temperature regime over the past 100 years. Pegg is developing a model to predict discharge and temperature variability. This model will be used to estimate the effects that hydrological and temperature variability have on the growth and condition of several benthic fish species. Mark is a Ph.D. student working under Clay Pierce at Iowa State University.



Would you like to become an Iowa Chapter AFS Member?

To join, fill out the information below and send a \$5.00 check

(payable to the Iowa Chapter AFS) to:

Mark Cornish, Sec/Treas
Fairport Fish Hatchery
3390 Highway 22
Muscatine, IA 52761

Name: _____
Street: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

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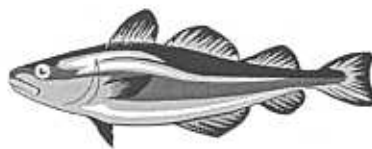
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THE IOWA CHAPTER AFS O-FISH-AL ELECTION BALLOT



PRESIDENT-ELECT (Vote for One)



Mark Flammang

I was raised in Merrill in northwest Iowa and graduated from LeMars Community High School in 1987. I attended Northwest Missouri State University Majoring in Wildlife Ecology and Conservation with a minor in biology. I graduated Magna Cum Laude in 1991 and immediately attended graduate school at South Dakota State University starting in 1992. I served as a research assistant and completed my degree in Wildlife and Fisheries Sciences (Fish Option) in February, 1994. I returned to Iowa and was employed by the Iowa Dept. of Natural Resources until November 1994 at which time I accepted a District Fisheries Management Biologist Position with the Texas Parks and Wildlife Department in Marshall, Texas. I returned to Iowa as the District Fisheries Management Biologist for the Iowa Dept. of Natural Resources at Rathbun in November 1996. I reside in Albia with my wife Heidi. 🐟

Joe Morris

Like many other farm kids, I grew up fishing, hunting and trapping around the farmstead located near Logan. In 1979 I graduated from Iowa State University with a B.S. degree in Fisheries and Wildlife Biology. I then moved down to Texas A&M University and worked as a research technician for a project investigating the use of grass carp in a reservoir. I graduated with a M.S. Degree in Fisheries Biology in 1982 and worked as a hatchery manager for a fish farm outside of Austin, Texas until 1986. I then enrolled at Mississippi State University and worked under Jess Muncy, former unit leader for the Iowa Fisheries Cooperative Unit. Since 1988 when I received my Ph.D. in Fisheries Biology, I have been the extension fisheries/aquaculture specialist at Iowa State University. I am also the Associate Director of the North Central Regional Aquaculture Center as well as an Associate Professor. My current graduate students work on water quality problems and aquaculture. My own interests are related to plankton dynamics in aquatic systems. 🐟



SECRETARY/TREASURER (Vote for One)



Scott Gritters

I was born and raised on a farm in Pella, Iowa and obtained a degree in Fisheries and Wildlife Biology from Iowa State in 1987. I've had one year stints working with fish management on Missouri's Ozark lakes and streams and with endangered fishes in Utah. In my DNR career, I worked at Lake View, Bellevue, Lake Odessa, and Decorah. Presently, I am a fisheries biologist I at the Mississippi Monitoring Station in charge of data analysis for long term ecological trends on the Mississippi River. The projects I am currently working on include forming an interagency "task force" to improve the water quality in the Maquoketa River, writing a paper with three herpetologists dealing with the status of turtles in the Mississippi River and assisting with building the DNR fisheries Home page on the World Wide Web. I have been a member of AFS since 1987 and am also a member of the Walleye Technical, Rivers and Streams and the Salmonid Technical Committees. Outside DNR life, I am on several committee's in Pheasants Forever and play on five baseball and softball teams during the summer. I am also a member in Ducks Unlimited, Trout Unlimited, Iowans for Better Fisheries and the Iowa High School Athletic Association. Fishing and hunting are squeezed in whenever possible. 🐟

Gene Jones

I was born and raised in Mechanicsville, Iowa. I graduated from Iowa State University with a degree in Fisheries and Wildlife Biology in 1991. I began working for the Iowa Dept. of Natural Resources in 1990 as a Conservation Aid for fish research in Bellevue. I also worked for Fish Management at the Rathbun and MacBride stations. I was Fisheries Biologist for Chariton Valley Resource Conservation and Development working mainly on intensive and extensive culture of walleye before obtaining my current position with the Iowa Dept. of Natural Resources as Fisheries Technician 2 at the Lake MacBride Management station. Besides spending most of my time fishing, hunting, trapping and camping, I have been a member of AFS since 1992 and the Walleye Technical Committee since 1994. I have been active in Pheasants Forever serving as committee member and secretary, and in Ducks Unlimited as committee member. 🐟

Chris Larson

I was born and raised in Cedar Falls, Iowa. I graduated from Iowa State University in 1985 with a degree in Fish and Wildlife Biology. I am married and have two children, Jacob 12 and Jason 11. I started with the Conservation Commission at Boone working in the Fish Management section as a summer fisheries aid in 1985. I began full time employment (permanent-part time) as a creel clerk with the Clear Lake Fish Management team in the spring of 1986. In February of 1988 I was promoted to my current position as a Fisheries Technician 2 with the research section at Cold Springs working with Kay R. Hill on small impoundment investigations. I have been an Iowa AFS chapter member since 1987 and a parent society member since 1991. My past involvement with the Iowa chapter includes; one year as chair of the resolutions committee, two years on the raffle committee, one year on the auditing committee and current member of the walleye technical committee. I received the Iowa chapter AFS Best Paper award in 1991 for a presentation on Electrofishing Mortality. I've served on local community boards including past president and habitat chair for the Cass County Pheasants Forever Chapter. 🐟

It's Election Time

The Iowa Chapter is holding its annual election of officers and we have a fine slate of candidates. Joe Morris and Mark Flammang are running for President Elect with Chris Larson, Gene Jones, and Scott Gritters running for Secretary/Treasurer.

On the reverse of this page you will find a ballot and a brief biography of each candidate. Please mark your selection, fold and tape the ballot, and drop it in the mail.

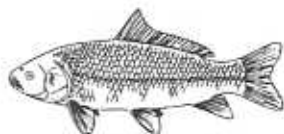
Hurry, the deadline is July 26, 1996!

Fold Here

Stamp

Mike Steuck
Iowa DNR
RR 2 Box 269A
Manchester, IA 52057

Fold Here



Iowa's Natural Wonders

Match the Lake Size to the Natural Lake

	Lake		Average
1	West Okoboji	A.	258
2	Clear Lake	B.	4,169
3	Five Island	C.	1,170
4	Little Wall	D.	2,360
5	East Okoboji	E.	998
6	Spirit Lake	F.	36
7	Tuttle Lake	G.	1,835
8	Upper Gar	H.	3,097
9	Lost Island	I.	3,684
10	Storm Lake	J.	3,847

Answers: 1 - J, 2 - I, 3 - E, 4 - A, 5 - G, 6 - B,
7 - D, 8 - F, 9 - H, 10 - C

1 - 3 correct - puddle potentate; 4 - 6 river rat;
7 - 8 reservoir runner; 8 - 9 loon-head;
10 Joe "the fish god" Larscheid



Brain Teasers

Ancestral Angst

Match the Common Name to the Family

Common Name	Family
1 Lake Sturgeon	A. <i>Lepisosteidae</i>
2 Paddlefish	B. <i>Anguillidae</i>
3 Warmouth	C. <i>Percidae</i>
4 Longnose Gar	D. <i>Polyodontidae</i>
5 Sauger	E. <i>Percichthyidae</i>
6 White Bass	F. <i>Centrarchidae</i>
7 American Eel	G. <i>Cyprinidae</i>
8 Blue Catfish	H. <i>Acipenseridae</i>
9 Fathead Minnow	I. <i>Ictaluridae</i>
10 Slimy Sculpin	J. <i>Cottidae</i>

Answers: 1 - H, 2 - D, 3 - F, 4 - A, 5 - E, 6 - C, 7 - B, 8 - I, 9 - G, 10 - J

1 correct - 1st day at work; 2-3 summer helper; 4-5 permanent part-time; 6-7 technician; 8-9 biologist; 10 chief of fisheries

Fishing Facts

- *The least experienced angler will always catch the largest fish.
- *The more expensive the boat, the less fish in the livewell.
- *When the wind's from the east ... the fishing is the same as when the wind's from the west.
- *All 7 pound bass caught on practice day turn into 3 pounders on the day of the tournament.
- *Canned corn catches more trout than a Royal Coachman ever will.
- *The costlier the rod, the sooner the car door slams on it.
- *There is a direct proportion for the number of fish which die in the stocking truck to the number of photographers at the lake where the fish are to be stocked.



Meetings of Interest



July 14-18, 1996 **International Congress on the Biology of Fishes.** San Francisco State University, San Francisco, California. Sponsored by the AFS Physiology Section. Contact Don MacKinlay, Fisheries and Oceans, 555 W. Hastings St., Vancouver, BC V6B 5G3, 604/666-3520

July 28-Aug. 2, 1996 **Second World Fisheries Conference.** Brisbane Convention and Exhibition Centre, Brisbane Australia. Contact Congress Secretariat, P.O. Box 1280, Milton Brisbane, QLD 4064, Australia; 011/07/369 -0477

Aug. 3-7, 1996 **Promoting Watershed Stewardship Volunteer Monitoring Conference.** Madison, Wisconsin. Contact Celeste Moen, Wisconsin Department of Natural Resources, P.O. Box 7921, Madison, WI 53707

Aug. 7-9, 1996 **Annual Meeting of the AFS Fish Health Section.** Madison, Wisconsin. Contact Terry Ott, La Crosse Fish Health Center, 555 Lester Avenue, Onalaska, WI 54650, 608/783-8443

Aug. 13-16, 1996 **"The Delta: Connecting Points of View for Sustainable Natural resources" Conference.** Cook Convention Center, Memphis, Tennessee. Contact National Association of Conservation Districts, Delta Conference, 509 Capital Court NE, Washington DC 20002; 202/547-NACD

Aug. 25-29, 1996 **The 126th Annual Meeting of the AFS. Sustainable Fisheries: Economics, Ecology, and Ethics.** Hyatt Regency Hotel, Dearborn, Michigan. Contact Paul Brouha, AFS, 5410 Grosvenor Lane, Ste. 110, Bethesda, MD 20814-2199, 301/897-8616

Sept. 10-12, **UMRCC Fish Technical Section Meeting.** Lake Itasca, Minnesota. Contact Jon Duyvejanck, U.S. Fish & Wildlife Service, Rock Island Field Office, 4469 48th Ave. Ct. Rock Island, IL 61201, 309/793-5800

Dec 8-11, 1996 **Annual Meeting of the AFS North Central Division.** Omaha, Nebraska. Contact Jim Diana, School of Natural Resources, University of Michigan, Ann Arbor, MI 48109, 313/763-5834

The American Fisheries Society supports the conservation of North America's fisheries and aquatic ecosystems by promoting professional excellence in fisheries science, management, and education.



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