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Alaska Chapter Annual Meeting

Carol Ann Woody

Continuing Education

Microprobe Applications in Fisheries:
 Ken Severin and Randy Brown (UAF)

This course will cover how to prep samples for microprobe work, the theory of electron microprobe analysis, and the kinds of data that you can get. A laboratory session to demonstrate the various prep and analysis techniques will also be part of the course.

Bootstrap Data Analysis: Joel Reynolds

This 2 day course will provide a basic introduction to the ideas and applications of the bootstrap and resampling-based data analysis. Topics will include variance estimation, confidence intervals and hypothesis tests. Examples will include fisheries ecology and genetic topics. Limitations of the technique will be discussed.

What You Want to Know About Genetics but Are Afraid to ASK: Carol Kerkvliet and Jeff Olsen

Have you ever gotten confused at a genetics talk? Ever wonder who

Continued on page 3

Pearls of Alaska's Rural Economy

*Jackie Timothy
 and Tom Atkinson*

Oysters have strengthened the Alaskan economy since intrepid farmers began culturing them and other bivalves in our bays and coves. Aquatic farms are local, ecosystem-based, self-sustained development that can help fill gaps in Alaska's economy. Small, growing slowly like pearls, these farms provide a counterpoint to the huge resource extraction industries, fraught with precipitous boom and bust cycles, that have historically dominated our State's economy. Though national and international business corporations have long steered Alaska's marketplace, local owners run most Alaskan aquatic farms, helping to provide income and economic stability in many rural, coastal communities.

Aquatic farms currently occupy over 263 acres of Alaska coastline, and cultivate mostly oysters, mussels, and littleneck clams. Of the 52 aquatic farms now permitted, approximately two-thirds are in Southcentral Alaska (mostly in Kachemak Bay and Prince William Sound), and one-third are in Southeast.

This innovative industry's need for clean, uncontaminated seawater to ensure a quality product makes it, by definition, an environmentally-sensitive and rural endeavor. Besides maintaining a healthy natural environment, aquatic farmers (and the agencies that regulate them) consider quality-of-life issues as they factor local public interest into farm development decision making.

Alaska's fledgling mariculture industry grew, culminating in the 1988 Aquatic Farm Act, which, among other things, legalized sea vegetable farming and established additional regulation. The industry is managed by Department of Natural Resources and the Department of Fish and Game, and applicants must obtain aquatic farm site lease and aquatic farm operations permits before starting a farm. Over 179 applications have been submitted during previous years, but only 52 farms are currently approved and remain viable.

Worldwide demand for quality seafood is increasing, and Alaska, boasting more than 44,000 miles of coastline and renowned for clean waters, has great potential as a seafood supplier. Although the economic impact of aquatic farming is small compared to salmon fisheries and ocean ranching programs, oyster, mussel, scallop, clam and sea vegetable farms help diversify the State's seafood industry and stabilize our rural coastal economies. ☺



Oyster farmers monitoring growth of oysters from a lantern net. Photo credit: The Shellfish Market

The President's Column

Bill Bechtol

I recently read a review of a book by Peter Huber titled *Hard Green*. Huber examined a variety of faux pas by environmental extremists with particular emphasis placed on issues from the sixties and early seventies, a time when the desire for major social change often got out in front of reason and available information.



The book's author, Peter Huber, devoted much of his book to cataloging many of the "doom and gloom" scenarios that failed to materialize. For example, overpopulation did not cause worldwide famine by 1975, humanity's excesses did not bring a new ice age, and a domino effect of nuclear accidents did not plague the world following the Three Mile Island accident. Suffice to say that humanity has not been snuffed out by a cataclysmic environmental collapse, at least not yet.

This is not to say that all environmental issues have been resolved and we have created an "earth-friendly" co-existence with the planet during the latter portion of the twentieth century. On the contrary, we need only look at salmon stocks at risk along the west coast to recognize that problems still exist. At a time when we know more about the aquatic environment, and are learning things faster than ever before, the world and the nation has seen a dramatic increase in the number of fisheries resources defined as at risk, particularly in the marine environment. Certainly, some of this increase has been brought about by a greater awareness of the resources that are available in our environment, but there is no denying that some dramatic stock declines have occurred. We have sometimes identified causal factors for the demise of various fish stocks, but are unclear on the optimal means to effect a recovery of the resource, or whether a recovery can occur without a major transition in environmental conditions. As an example, many crustacean populations along the northern Gulf of Alaska, notably pink shrimp and red king crab, collapsed during or following what is now termed a regime shift. Although a change in ocean temperature is thought to be the basis for this shift, high harvest rates at a time when environmental conditions were poor for recruitment likely contributed to these resource collapses. Basically, fisheries management was conducted like business as usual, but the underlying environmental parameters had changed. Despite a fishing prohibition to

all user groups for the last 15-20 years, these crustacean resources have failed to rebuild. Concurrent with the shrimp and crab declines, we observed increased abundances of potential crustacean predators such as Pacific cod and pollock. Some of the public have argued for increased fishing pressure to forcibly reduce these gadid predators. However, while we can implement some controls over the patterns and intensity of human use of the resources, our knowledge of ecosystem links has generally not developed to the point that we can accurately predict whether such efforts at ecosystem manipulation will have the "desired" effect of increasing crustacean populations. There is also evidence suggesting that, on a global basis, man's efforts to continually fish the most abundant resource at a rate that is ultimately found to be sustainable, has resulted in fishing that now occurs at several trophic levels lower than several decades ago. This must be similar to the saying "eating oneself out of house and home."

So, in the case of the northern Gulf of Alaska crustaceans, our goal should not be to try and effect an ecological change that will favor particular resources, but to mesh, to the extent practicable, with the existing environmental conditions and the resources those conditions provide. We must also recognize that such a goal will always be a moving target as links are continually rebuilt among ecosystem(s) components, and as technological developments change the ways in which we interact with the natural resources. Because of the dynamic complexity of our ecosystems, it is unlikely that we will ever be able to see stock abundance levels that exactly replicate bygone times. However, stock assessments have improved and management strategies have become more conservative in recent years as researchers and managers have attempted to develop a "lighter footprint" on the resources among which we knowingly walk.

But, no individual is an island, and our greatest potential for resource solutions is through shared knowledge and expertise that allows us to improve our research and management strategies while, hopefully, avoiding some of the pitfalls encountered by others. I am always amazed at the incredible and diverse pool of knowledge that exists within the American Fisheries Society and particularly within the Alaska Chapter. As individuals, and as a chapter of a professional society, we are often asked to participate in a decision process through our vote, letters, phone calls, emails, financial contributions, and, most of all, our expertise. Within our professional society, this may involve providing scientific data to allow policy makers, either a political body or your peers, a more informed basis on which to make decisions. I wonder how many of the doomsday predictions in the book *Hard Green* failed to materialize either directly or indirectly because an improvement in the available knowledge yielded a strategy or policy change. Through the sharing of your expertise, you can effect change.

Remember that "The optimist believes we are living in the best of all possible worlds; the pessimist knows this to be true." Are you the optimist or the pessimist and what are you willing to do to improve your knowledge, as well as that of your fellow researchers, scientists, and policy makers? ☹

ONCORHYNCHUS

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Editor

John Thedinga
Auke Bay Laboratory
11305 Glacier Hwy, Juneau 99801-8626
(w) (907) 789-6025, Fax 789-6094
John.Thedinga@noaa.gov

Production

Connie Taylor / Fathom Graphics
P.O. Box 200448
Anchorage 99520-0448
Phone/Fax (907) 272-3305
FathomPub@aol.com

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Alaska Chapter's Internet Home Page Address

<http://www.alaska.net/~fishak>

Annual Meeting, from page 1

Hardy is and why his equilibrium is off, and who cares anyway? Or reading the session program and attending a talk with locus in the title, only to find there was nothing related to insects in the talk? Did you think F_{ST} stood for Fast Sexy Things? Then this session is for you. More details later!

Sessions and Chairs

If you are interested in presenting or assisting with the following topics please contact the appropriate chair. "Fishing Effects on the Seafloor" B Gordon Kruse and Jon Heifetz, gordon_kruse@fishgame.state.ak.us

Native Alaskan Salmonids B Jack Piccolo (907) 586-8811 ext 236, ftjip1@uaf.edu

Mathematical Modeling and Fisheries B Peggy Merritt (907) 459-7926

Alaska's Subsistence Fisheries B Tom Kron (907)267-2166 Human Nature, Human Impacts: Is Alaska Any Different?

Dave Cannon, (907)543-3151

Yukon Fisheries, Randy Brown, email; [Randy J Brown/R7/FWS/DOI@FWS/DOI](mailto:Randy.J.Brown@R7/FWS/DOI@FWS/DOI)

If you have other ideas for sessions, continuing ed diversions etc. please contact Carol Ann Woody, carol_woody@usgs.gov

Western Groundfish Conference

Travel Grant Recipients Announced

Student recipients have been announced for grants to defer costs associated with travel and participation in the Western Groundfish Conference in Sitka, Alaska, April 24-28, 2000. Grant funding is provided by the Western Division of the American Fisheries Society and includes a 1-year membership in the American Fisheries Society. Erica J. Burton, with the Moss Landing Marine Laboratories, will receive full travel funding including airfare and lodging. Ms. Burton will give an oral presentation titled "Age and growth of the giant grenadier (Family Macouridae: *Albatrossia pectoralis*) with age estimate validation using ²¹⁰Pb:²²⁶Ra disequilibria in otolith cores." In addition, partial funding is being made available to Rebecca F. Reuter. Ms. Reuter, also of Moss Landing Marine Laboratories, is the lead author of a poster by herself and Nancy Roberson titled "Spatial analysis of size composition, age, and growth of dusky rockfish, *Sebastes ciliatus*, in the Gulf of Alaska". Ms. Reuter also co-authored an oral presentation being given by Sandra Lowe titled "Larval and juvenile Atka mackerel (*Pleurogrammus monopterygius*) distribution in Alaskan waters: A retrospective study."

The Western Groundfish Conference is a biennial meeting uniquely focused on groundfish issues facing researchers and managers along the West Coast of North America. The conference is not affiliated with any specific organization, but is supported by the efforts of individuals from a variety of government, academic, industry, and public sector organizations. Additional information on the April 2000 conference in Sitka is available at the following website: <http://www.cf.adfg.state.ak.us/geninfo/announce/grndfish/11wgfcon.htm>

Transactions Catch-Up Fund

Bill Bechtol

During the January teleconference, the Alaska Chapter AFS Executive Committee voted to make a one-time financial contribution to facilitate reduction of the backlog in the Society's journal Transactions. Transactions has been experiencing a 5-6 month delay in publication timing and is the last of the Society's journals with a substantial delay. A recent letter from Sally Kendall, AFS Journals Manager, estimated total Society costs for reducing this delay to be about \$20,000. Recognizing the high quality of information made available to the scientific community through publication of Transactions, the Alaska Chapter Executive Committee voted to contribute \$1 on behalf of each Chapter member, for a total of \$420. This represents 1/10 of the annual Chapter dues collected from the membership and was an action that we felt the membership would wholeheartedly support. Chapter members interested in making further personal contributions to this process are encouraged to contact Ms. Kendall at AFS headquarters in Bethesda, Maryland.

Opportunities for Employers or Job Seekers

AFS members seeking to recruit positions for fisheries related employment may advertise those positions free through the AFS Jobs Bulletin. If you are interested in advertising a position, e-mail a description of the position to jmachado@fisheries.org (150 words or less) using the headings: position title, agency/location, responsibilities, qualifications, closing date, & contact. If no closing date is listed, the job will be posted for 1 month only. Please contact Jackie Machado at (301) 897-8616 ext. 200 for more information. Job seekers may review employment opportunities online at <http://www.fisheries.org/jobs.html>. If you find employment through the AFS Jobs Bulletin, please contact Beth Tyler, 301/897-8616, ext. 220; btyler@fisheries.org

John E. Skinner Memorial Fund Award

The John E. Skinner Memorial Fund was established in memory of John Skinner, former Chapter and Western Division American Fisheries Society president. The fund provides monetary travel awards for deserving graduate students or exceptional undergraduate students to attend the AFS Annual Meeting. Any student who is active in fisheries and related aquatic disciplines is eligible to apply. Recipients are chosen by the AFS Education Section. Selection is based on academic qualifications, professional services and promise, and reasons for wanting to attend the meeting. Travel support not to exceed \$500 per award will be made available to successful applicants. Contact the Committee Chair, Christopher Guy for an application or download in Adobe Acrobat (<http://www.fisheries.org/2000SkinnerApplicationForm.PDF>), Word (<http://www.fisheries.org/2000SkinnerApplicationForm.doc>) or WordPerfect format (<http://www.fisheries.org/2000SkinnerAwardApplication.wpd>).

The deadline to apply for this funding is 15 May. Contact: Christopher Guy, Chair Skinner Award Committee, KS Coop Fish & Wldf Res Unit, Kansas State University, 205 Leasure Hall, Manhattan, KS 66506. (785) 532-6635, Fax: (785) 532-7159, chrisgy@ksu.edu

Improving Fishery Programs Through Cultural Diversity and Local Involvement

Doug Molyneaux and Carol Kerkvliet

One need only attend an annual meeting of the Alaska Chapter of AFS to see the striking absence of Native Alaskans in our profession. This seems ironic considering the prominent role salmon and other fish species play in the Native Alaskan culture. The reasons for the lack of Native representation are many, but the result has been mistrust and local opposition to state and federal management activities. Valuable knowledge from local long-time residents often goes untapped. It is in everyone's best interest to remedy this situation and involve Natives and other local rural residents in fisheries management activities. To change the status quo, people in our profession must encourage and promote broader inclusion. With the onset of federal management of Alaska's subsistence fisheries, involvement of Natives and local rural residents is becoming more of a requirement than an option. There are many ways to enhance and encourage effective Native and local involvement. The following are a few successful local out-reach programs in Western Alaska.

Age-Sex-Length Sampling of the Subsistence Salmon Harvest

For years, State biologists have spent countless hours plucking scales from chinook salmon caught during the Kuskokwim River subsistence gillnet fishery in order to characterize the age composition of the harvest. Each year a technician would visit fish camps to collect scale samples. Typically the technician would need to rip scales from fish hung on drying racks since fish in the round were rarely available. Once the scales were aged, their usefulness was limited because biologists lacked the corresponding sex, length, and mesh size data.

The Alaska Department of Fish and Game (ADF&G) recruited and trained local families to collect fish samples to improve the quality and usefulness of the harvest information. ADF&G provided sampling kits that consisted of forceps, numbered gum cards, meter stick, logbook, pencils, and a clipboard. On the front of the clipboard was a laminated illustration of the sampling procedure for reference. Families that returned scale samples to ADF&G received a payment of \$1.00 per fish. Payment was contingent on the quality of the scale samples and the completeness of the accompanying data. Monitoring the program took more time than was expected; but the quality and completeness of the data was better than the old system. Fish and Game successfully used a similar approach for collecting tissue samples of salmon for genetic stock identification. In 2000, a subsistence catch-sampling program is scheduled to be coordinated through Orutsararmuit Native Council in Bethel.

Cooperative Salmon Management and Research Projects

Fishery biologists in the Yukon-Kuskokwim region developed cooperative salmon escapement monitoring projects with Native groups and other local organizations. In 1996, ADF&G staff worked with Kuskokwim Native Association (KNA) to develop a weir on the George River. Both groups split the project cost by using several funding sources and providing technicians to work the weirs. The success of the George River weir project led to the development of a second weir in 1998 on the Tatlawiksuk River. This achievement is due to the proactive cooperative involvement of ADF&G and KNA staff, good communications between the two groups, and their common goal focus. Cooperative projects take more coordination than the traditional approach but they often allow project development in areas that previously received strong local opposition.

Student Internship Programs and Science Camps

Raising public awareness of the George and Tatlawiksuk River weir projects was a challenge which KNA addressed by developing a Student Internship Program. Throughout the field season, KNA recruited local students to work one week at one of the local weirs. Students participated in nearly all aspects of the project operations while under the mentorship of ADF&G and KNA fishery technicians. Each intern received a modest stipend for their efforts. During their residency they participated in discussions about the roles the weir project played in escapement monitoring and salmon management. In 1999, fourteen students participated in this program. Carl Morgan (KNA's Executive Board President and State Representative for District 36) stated that initially they had to solicit student interns, but now they're getting letters from students who want to participate in the program. Furthermore, he said, "this program is giving students good experiences and getting them into Biology". Influenced by the internship program, some village councils even wrote letters of support citing the George and Tatlawiksuk River weir projects as examples of the type of work that needs to be done to improve management of local salmon stocks.

The U.S. Fish and Wildlife Service (USFWS) has seen similar successes through local involvement for their projects. Ken Harper of the USFWS states that by using local hires and by conducting a science camp for St. Mary's high school students, they gained community understanding and support for their Adreafsky weir project on the Yukon River. Since these programs have only been in place for a few years, it is premature to speculate as to their long-term success and sustainability. The programs have yet to generate a new fishery biologist, but the seeds have been sown. Youth who have participated in the programs are now contemplating job opportunities and career choices previously never considered. At least one participant has enrolled in a college program in natural resource management. Perhaps these efforts will eventually improve the representation of Native Alaskans in our profession and at annual chapter meetings. We are optimistic that involvement of rural Native Alaska youth in fisheries projects will give us better science, build trust, and strengthen relationships between state/federal agencies and Native groups. We believe this is a positive direction and encourage other groups to follow suit.

Continued bottom of next page

Session on Native Salmonids of Alaska at Chapter Meeting

I am considering chairing a session on native salmonids of Alaska at the annual Alaska Chapter meeting in fall 2000. Restoration of native salmonids is receiving a lot of attention (and \$\$\$!) worldwide. I thought Alaskan biologists might take a proactive approach, since this is one of the few places left that maintains healthy wild populations of native salmonids. Subject matter for the session could be diverse, including population status and genetics, identification of unique stocks, management and restoration, etc. I will try to get funds to bring someone from down south to give us some perspective on what the future could bring. I've had some interest already, and there is a good chance that the session will go. I'd like to get commitments from several speakers ASAP. Please contact me if you are interested. Jack Piccolo (907) 586-8811 ext 236, ftjip1@uaf.edu.

Atlantic Salmon Watch Program

Andy Thomson, email ASWP@pac.dfo-mpo.gc.ca, a scientist at Nanaimo, British Columbia, has been coordinating the Atlantic Salmon Watch program to compile data on catches and sightings of escaped Atlantic salmon throughout the Pacific Northwest. Although the threat of Atlantic salmon to Pacific salmon stocks has yet to be determined, spawning populations were discovered at two North Vancouver Islands last year. If you find an Atlantic salmon, you are asked to keep the fish and report the capture by calling the ASWP toll-free at 1-800-811-6010. You will be asked where and when you caught the fish and if you wish to donate the fish for research purposes. Donation, while not mandatory, provides valuable samples for scientific study. For donation, the whole fish, including entrails, should be frozen or kept on ice.

More information on this program is available at <http://www.pac.dfo-mpo.gc.ca/sci/aqua/pages/atlsalm.htm>.

Unified Federal Policy for Ensuring a Watershed Approach to Federal Land and Resource Management

The President's *Clean Water Action Plan* announces the intention of the Departments of Agriculture and the Interior to develop a unified Federal policy on watershed management in consultation with other Federal agencies, States, Tribes, and interested stakeholders (Federal Register/ Vol.65, No. 35/ Tuesday, February 22, 2000/ Notices).

This policy would provide a framework for a watershed approach to Federal land and resource management activities. The proposed policy is the collaborative effort of several Federal agencies and is offered for public review and comment by the Departments of Agriculture and the Interior.

This proposed policy is intended only for Federal lands and resources that are managed by Federal departments and agencies that sign the final policy. The policy is intended to improve the effectiveness and efficiency of efforts to restore watersheds and improve water quality. The policy emphasizes:

- Assessing the function and conditions of watersheds;

- Incorporating watershed goals in planning;
- Enhancing pollution prevention and meeting our Clean Water Act responsibility;
- Identifying priority watersheds to focus budgetary and other resources;
- Monitoring and restoring watersheds; and
- Expanding collaboration with others.

The proposed policy is posted at www.cleanwater.gov/ufp. You can also obtain copies by calling the USDA Forest Service's Content Analysis Enterprise Team at 801-517-1037. Comments must be received by April 24, 2000. Comments on the proposal can be sent to USDA-forest Service, Contents Analysis Enterprise Team, Attn: UFP, Building 2, Suite 295, 5500 Amelia Earhart Drive, Salt Lake City, UT 84116. They can also be faxed (801-517-1021) or sent electronically (cleanwater/wo_caet_slc@fs.fed.us). For more information contact Eric Janes or Karen Solari at (801) 517-1037.

For further inquiries of these outreach projects contact Doug Molyneaux /ADF&G (doug_molyneaux@fishgame.state.ak.us, 267-2397), Angie Morgan / KNA (lizande@arctic.net, 675-4384), or Ken Harper / USFWS (ken_harper@fws.gov, 262-9863).

If you have ideas, suggestions, or experiences with local outreach program please let us know via the *Oncorhynchus* newsletter or through one of the Cultural Diversity Committee members: Chair, Kate Wedemeyer (kate.wedemeyer@elmendorf.af.mil, 552-2436), David Wiswar (David_Wiswar@fws.gov, 456-0453), Jim Reynolds (ffjbr@uaf.edu), Doug Molyneaux, or Carol Kerkvliet (carol_kerkvliet@fishgame.state.ak.us, 267-2275).

This year AFS is offering The Chapter Cultural Diversity Travel Award for travel to the chapter meeting in Fairbanks. The award is available to Alaska Natives or other minorities new in the fisheries field e.g. fisheries technicians or beginning biologists. We encourage chapter members to identify potential applicants and help them apply. For more information contact Kate Wedemeyer or see the Alaska Chapter Web Site.

Oncorhynchus

Allen Bingham
P.O. Box 221804
Anchorage, AK 99522-1804

FIRST CLASS

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2000 Alaska Chapter Officers

President Bill Bechtol, ADF&G/CFMD, 3298 Douglas Place, Homer 99603-8027, Phone: 235-8191, Fax: 235-2448, 235-6713 (h), billb@fishgame.state.ak.us

President-Elect Carol Ann Woody, USGS/ Alaska Science Center, 1011 East Tudor Rd., Anchorage 99703, Phone: 786-3314, Fax: 786-3636, 248-4776 (h), carol_woody@usgs.gov

Vice President David Wiswar, USFWS/FRO, 101 12th Ave., Box 17, Fairbanks 99701-6291, Phone: 456-0453, Fax: 456-0454, 457-2344 (h), david_wiswar@fws.gov

Treasurer Sue Walker, USFWS, 3000 Vintage Blvd., Suite 201, Juneau 99801, Phone: 586-7240, Fax: 586-7154, 790-2602 (h), susan_walker@fws.gov or eviesmom@aol.com

Secretary Lee Ann Gardner, P. O. Box 672302, Chugiak 99567, Phone/Fax: 688-1400, rwjconsult@corecom.net.

Past President Cindy Hartmann, PO Box 20686, Juneau 99802-0686, Phone: 586-7585, Fax: 586-7012, 789-3259 (h), cindy.hartmann@noaa.gov

Student Unit President UAF, Lisa Mostella, 728 Chena Ridge Road, Fairbanks, 99709. Phone: 474-7160.

Feel free to contact the Executive Committee members.

2000 AFS Membership Application

Print or type applicant's name in full

Address

City State Zip Code

Nation Membership year*

Please provide phone numbers for directory and Society use only:

Home Work

Fax

Employed by:
 federal gov't. state/prov. gov't. industry academia self

Alaska Dues: \$10.00 Alaska Student Dues: \$5.00

Membership Dues (includes *Fisheries* and Membership Directory)

Regular: \$76.00 (Canadian \$83.50, other than U.S. \$87.50)

Student: \$38.00 (Canadian \$41.50, other than U.S. \$43.50)

Retired: (age 65 or over): \$37.50 (Canadian \$41.50, other than U.S. \$43.50)

Life: \$1,737.00 (includes *Fisheries* and one other journal of choice)

¹ Prices are for AFS members only ² Membership not required for subscription
* New members accepted Jan. 1-Aug.31 are credited to full membership for that year. (Back issues of Journals are sent.) Members accepted Sept. 1-Dec. 31 credited to full membership as of next Jan. 1, unless requested otherwise. Membership on calendar year only.

Kindly make checks payable to American Fisheries Society in U.S. Currency or Equivalent.

Please mail to Allen Bingham P.O. Box 221804 Anchorage, AK 99522-1804

Professional recruiting others (PROCLUB)

If applicant is a student as defined below, the teacher endorsing him signs here.**

Name of institution where student is enrolled

Date

Journal Subscriptions (Optional)

Transactions of the AFS¹ N.A. Journal of Fisheries Management

\$38.00 Paper in U.S. \$43.00 Paper other than U.S.

\$15.00 E-Pub via WWW/Internet

Progressive Fish-Culturist² Journal of Aquatic Animal Health¹

\$33.00 Paper in U.S. \$38.00 Paper other than U.S.

\$20.00 E-Pub via WWW/Internet

** Bona fide students of fisheries subjects are eligible for Student membership (limited to 6 years). Persons employed full-time not eligible. Teacher endorsement required (see above).

NOTE: Retired membership for Active members upon retiring at age 65. Sustaining membership for commercial firms, conservation clubs, or others desiring to support the Society. Library Subscriptions include bimonthly *Transactions*, quarterly *North American Journal of Fisheries Management*, *Journal of Aquatic Animal Health*, quarterly *The Progressive Fish-Culturist*, bimonthly *Fisheries*, and Membership Directory.