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# The Tributary

Annual Meeting Edition

A Newsletter of the Western Division, American Fisheries Society

Volume 23, No. 3, September 1998

## PRESIDENT'S CORNER

Pete Bisson

### This One's For You

This is my last President's Corner for the Western Division and I've given a lot of thought about what to write. At first I figured I'd do the usual sermon about how we ought to be saying to ourselves: "*Ask not what your Division can do for you, but what you can do for your Division,*" or something to that effect. I gave up on the idea very quickly. You've already heard it. *A million times.*

The answer to my question about what to write came as I was putting together the Western Division's annual report to the AFS Governing Board. In preparation for writing the report I contacted chapter presidents and asked for a summary of each chapter's significant activities. Most of them responded with a report. Looking at the wide variety of activities each chapter has undertaken and thinking about the hard work it took to make these activities happen reminded me that, as a division, we have the hardest working bunch of fishery professionals in AFS. We don't get paid as much as physicians or attorneys. We don't even get paid as much as dentists. But I'll bet we work every bit as hard, and I'll bet we enjoy our work as much as those in any other profession. So I decided to devote my last essay to saying that when you finally hang up your hip boots, your seine, and your laptop for the last time, you'll leave the fisheries profession a better place than when you found it.

*Continued on page 2*

## Secretary-Treasurer Needed

The Western Division Executive Committee is seeking a volunteer to fill the recently vacated position of Secretary-Treasurer. The position involves serving the balance of a two year term which will end at the WDAFS annual meeting in the summer of 1999. The new Secretary-Treasurer will become a full voting member of the Division's Executive Committee. The by-laws state that "The Secretary-Treasurer shall serve for a period of two years and shall be eligible for re-election for a maximum of two consecutive terms and shall be ineligible for re-election for a period of one year after expiration of a second term". The duties of the Secretary-Treasurer are:

1. Keep the official records of the Division, conduct its correspondence, and collect and be custodian for any fees or assessments authorized by the bylaws or funds allotted to the Division by the Society.
2. Disburse funds as authorized by either the membership or Executive Committee.
3. Submit a report on receipts and disbursements at the Division's annual meeting.
4. Perform other duties requested by the Society's Executive Director.
5. Submit the minutes of the annual meeting to the Society's Executive Director and the Division Executive Committee within 30 days following the meeting.

Anyone interested in volunteering for this important position should contact Pete Bisson, Bob Bilby, or Ken Hashagen as soon as possible.

## AFS Executive Director Paul Brouha Resigns

The AFS Governing Board "accepted with regret" Paul Brouha's resignation at the annual AFS meeting in Hartford. Paul had served on the AFS staff for 12 years, including seven years as AFS Executive Director. Bob Kendall has been appointed interim Executive Director by the Governing Board, and the incoming Special Management Committee will undertake a search for a new Executive Director. Paul received the President's Fishery Conservation Award at this year's meeting and was praised by members at the business meeting. Comments or questions may be directed to AFS President Bob Carline.

## INSIDE HIGHLIGHTS

Post Card Ballot - vote today!

Vice President Candidate Biographies

Nominating Representative Candidate Biographies

Annual Meeting Agenda

## Presidents Corner

Continued from page 1

Why is it important to give ourselves a little credit from time to time? For one thing, your job hasn't gotten easier -- it's gotten much harder. You have to do more with less. You have tons of paperwork with which to keep up. You've got shrinking budgets. You've got more accountability. You've got, according to the Nature Conservancy's 1997 species report card, 68% of the freshwater mussels, 51% of the crayfishes, 41% of the amphibians, and 39% of the freshwater fishes of the U.S. either presumed extinct or at risk of extinction (by comparison, 33% of the flowering plants, 26% of the conifers, 18% of the reptiles, 17% of the mammals, and 15% of the bird species are at risk). In other words, you've got a lot to do and some of North America's most important natural resources are on the line.

To make matters worse, you've got to deal with management and the public that uses the words stakeholder

and consensus building and doesn't seem to realize that evenings and weekends have traditionally been reserved for you and your families. And then there's the information superhighway. It used to be tough enough to keep up with what was in print; now we're faced with that plus a burgeoning amount of technical information on the internet. We've all heard the fairy tale about computers replacing paper, right? I ran out of filing cabinet space years ago. Now it just piles up on the floor of my office.

Which makes me think that it's pretty amazing that you can find the time to do anything for a professional society. But most of you do, and you do it remarkably well. The fact that members run for office, take the time to give papers at AFS meetings, serve on committees, and participate in workshops and special projects is a strong statement about their commitment to the fishery profession. Sure, we'd all like to do more, but society ought to be grateful we aren't doing less. So take a moment to give yourself a pat on the back. You've earned it.

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## Vice President Candidates

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### Donald D. MacDonald

Candidate Statement for WDAFS Vice-president

In preparing this biographical sketch, I have two main goals in mind. The first is to provide you with a brief overview of my background, primarily to give you a sense of who I am. The second is to provide you with my view of the future priorities for the Western Division, which should provide you with a basis for determining if I can adequately represent your interests on the Executive Committee of the Division and, subsequently, on the Governing Board of the Society.

I am the Canadian Director of the Sustainable Fisheries Foundation (SFF) and the principal of MacDonald Environmental Sciences Ltd. (MESL). My work with the SFF has been focused primarily on fostering the development and implementation of a Sustainable Fisheries Strategy for west coast salmon and steelhead populations. This exciting project has provided me with opportunities to develop strong linkages with a number of subunits of the Society and many other organizations that have an interest in anadromous fisheries resources. In addition, it has resulted in the development of a shared vision for the future and a series of recommended strategies for achieving sustainable fisheries in the future. The SFF was honoured with the President's Fisheries Conservation Award (AFS) for its work on this project. With MESL, my work is primarily focused on ecosystem management and environmental assessment, with a focus on aquatic and riparian systems.

### Bill Bradshaw

Candidate Statement for WDAFS Vice-president

I was introduced to fish and fishing early in life when I learned to catch trout from the potholes reservoirs in eastern Washington, and later, salmon from the waters of the west coast. Fishing is still important to me and I fish when I can. My formal education includes a B.S. in Marine Biology from The Evergreen State College and a M.S. in Fisheries Science from Louisiana State University. I've held positions with State, Federal, Private and Tribal organizations including the Washington Department of Fisheries, Washington Department of Game, U.S. Fish and Wildlife Service, Fisheries Research Services, Louisiana State University, and the Confederated Salish and Kootenai Tribes. I began working for the Wyoming Game and Fish Department as a state-wide instream flow biologist in 1987 and transferred to Sheridan as a Regional Fisheries Biologist for northeast Wyoming in 1993.

I'm a member of the Fisheries Management Section, have been most active in AFS since 1987, and many of my contributions to fisheries resources and the profession through AFS have been at the Chapter level. I've served the Colorado/Wyoming Chapter as Newsletter Editor, Membership Committee chair, Environmental Concerns Committee chair, Secretary-Treasurer, vice-president, President, and Past-President; represented the Chapter at the Wyoming Governor's Natural Resources Conference, secured Chapter representation on Wyoming's Resource Advisory Council, and developed Chapter responses to grazing reform

Continued on page 3

Continued on page 3

**Donald D. MacDonald** (continued from page 2)

I have been a member of AFS for more than 10 years. Over that period, I have served in a number of capacities, including newsletter editor for NPIC, president of CARS, national raffle chair, and on several standing committees. I believe that the Western Division has the potential to be the most effective Division in the Society. We certainly have the highest membership, we have the most committed members, and we have outstanding Chapters. To realize our potential, I believe that we need to develop stronger linkages with our Chapters, play leadership roles in resolving key fisheries management issues, develop partnerships with other organizations with similar interests, and better support student involvement in the Division. Importantly, we also need to strengthen our current financial position. If elected to the Division ExCom, I will pursue these goals and attempt to faithfully represent your interests as members.

### October 27-28, 1998- Workshop: Management Implications of Co-Occurring Native and Non-native Fishes in the Pacific Northwest.

The Oregon Department of Fish and Wildlife (ODFW) and the National Marine Fisheries Service (NMFS) are sponsoring a workshop on the effects of non-native fishes on native anadromous and resident fishes. The objectives of the workshop are problem definition, identification of appropriate management strategies, and establishment of a basis for subsequent policy making by the Oregon Fish and Wildlife Commission and NMFS.

We are interested in presentations in the following areas:

- ◆ History of introductions and the current status and distribution of non-native fishes in Oregon, California, Washington and Idaho.
- ◆ Case studies of the interactions, impacts and/or management of non-native and native fishes.
- ◆ Case studies of successful management of non-native and native fish species together.
- ◆ Examples of measures taken to eliminate or reduce ecological impacts by non-native fish species and the resulting outcomes.
- ◆ Importance and value of recreational fisheries for non-native fish species.

Please submit abstracts via email to lance.kruzic@noaa.gov in Word Perfect (version 6.1 or earlier), Word (version 97 or earlier) or ASCII formats; or send a copy on 3.5" computer disk to Lance Kruzic, NMFS, 525 NE Oregon St. Suite 500, Portland, OR, 97232. Abstracts should be received by September 18, 1998. For more information see <http://www.nwr.noaa.gov/nnatconf/>

**Bill Bradshaw** (continued from page 2)

legislation and the Teaming With Wildlife initiative for Colorado and Wyoming legislators. I served as Activities Committee chair for the 1992 WDAFS meeting, and participated in the 1996 WDAFS meeting point-counterpoint session exploring the question "Whom do we serve". The last experience turned out to be memorably serendipitous and I'll treasure it to my grave.

My involvement with AFS at the Chapter and Western Division levels routinely reinforces the obvious diversity of expertise, interests, experiences, opinions, and positions among members of our organization. Effectively tapping into this variety is the key to AFS success at every level. This was a priority for me with the Colorado/Wyoming Chapter, and would remain so as a Western Division officer.

I firmly believe that AFS is a sound, vital organization with important roles for addressing issues facing fish, fisheries, and fisheries professionals. Our abilities to communicate among ourselves as members with widely divergent backgrounds and interests, and to convey our collective knowledge and expertise to influence decisions and policy, will largely determine to what extent we advance AFS goals through the Western Division. To facilitate this end, I envision focusing simply on several areas if elected:

- 1) Maintain the highest possible standards for the annual meeting and workshops, and improve on past successes where possible. This is our premier communications event.
- 2) Maintain effective dialogue with individual Chapters so their interests can be represented through the AFS organization.
- 3) Facilitate communication with decision and policy makers regarding important fisheries issues and encourage Chapter and member participation in this important endeavor.

## Nominating Representative Candidates

**Paul B. Holden**

Candidate Statement for AFS Nominating Representative

My education includes a B.S. in Biology and Conservation from Wisconsin State University-Stevens Point in 1966, a M.S. in Fishery Biology from Utah State University in 1968, and a PhD from Utah State in 1974. After a 2 year stint with the USFWS in Alaska working as a biologist on the Trans-Alaska Pipeline, I started BIO/WEST, Inc., an environmental

Continued on page 4

**Frank Rahel**

Candidate Statement for AFS Nominating Representative

After completing my graduate work at the University of Wisconsin-Madison, I worked for two years with the Cooperative Research Unit at the Ohio State University. Since 1985, I have been on the faculty at the University of Wyoming where I teach fisheries management, ichthyology, and conservation biology courses and conduct

Continued on page 4

**Paul B. Holden** (continued from page 3)

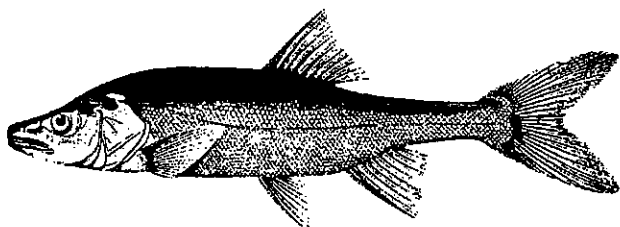
consulting company, in 1976. My work at BIO/WEST has involved a wide range of fishery and management activities, including endangered fish studies on Colorado River, Virgin River, and Snake River species; instream flow studies on western trout streams and eastern Atlantic salmon streams; ski area EIS management in Colorado, New Hampshire, and Washington; and running a business with 30 or more employees. I have been active in the AFS since 1968, including the Bonneville Chapter and am a past-Chairman of the Desert Fishes Council. I have served on Recovery Teams for Colorado River large river fishes, Virgin River fishes, and the June sucker. My current research includes a long term study of endangered fish in the lower Virgin River of Nevada, and a study of razorback sucker in Lake Mead

## Western Division Annual Business Meeting

Thursday October 1, 12:00 NOON

Chart Room

Anchorage Hilton Hotel

**Frank Rahel** (continued from page 3)

research on fish-habitat relations. My students and I are currently involved in examining brook trout-cutthroat trout interactions with a goal of understanding how the competitive balance between these species is influenced by environmental conditions. We also have used GIS to explore how large-scale habitat factors influence trout biomass in Rocky Mountain streams and how climate warming might cause the distribution of salmonids to shrink and fragment in the western U.S.. Recently we began a study of seasonal migrations and summer habitat limitations for Bonneville cutthroat trout in the Bear River drainage of Wyoming. In addition to teaching and research activities, I am co-advisor for the University of Wyoming Student Chapter of the American Fisheries Society.

I am a life member of the American Fisheries Society, and have been a member of the Colorado-Wyoming Chapter of AFS since 1985. I served the CO-WY Chapter as program chair, secretary-treasurer, vice-president, and president. I also have been active in the Education Section of AFS, chairing the nominating committee and the Skinner Award committee for student travel to the annual meeting of AFS. I served as the western representative to the Education Section and contributed to a survey of awards and grants for AFS student members that appeared in the August 1998 issue of Fisheries. My latest contribution to AFS is as co-author for a chapter in the revised edition of *Inland Fisheries Management in North America*, which is widely used as a textbook for fisheries management courses. My students and I have presented numerous research papers at state, division, and national meetings of AFS over the past 20 years.

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## AGENDA

### 1998 Meeting; Western Division American Fisheries Society

#### Wednesday Afternoon (9/30)

#### Mass Marking Application Peter Hagen, Chair

##### 1:30 Introduction to Mass Marking Applications

Peter T. Hagen, Alaska Dept. Fish and Game, Juneau AK

##### 1:50 Mass Marking For Selective Fisheries: Current Status and Development of an Automated Marking System

H. Lee Blankenship, Washington Department of Fish and Wildlife, Olympia, WA

##### 2:10 Using Mass-Marking to Manage Hatchery-Produced Pacific Salmon

Kit Rawson, Tulalip Tribes, Natural Resources, Marysville, WA

##### 2:30 Thermal Marking of Otoliths: the Technology is Walking...

Kristen M. Munk, Alaska Dept. Fish and Game, Juneau AK

##### 2:50 Development and Use of a Streamside Water Heating System for Inducing Marks on the Otoliths of Pink Salmon

Donald Mortensen, Alex Wertheimer and Sidney Taylor, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, AK

#### Break

##### 3:30 Application of Otolith Thermal Marking as an Evaluation Tool in Large Scale Production Salmon Enhancement Programs

Diana L. Tersteeg, Rick Focht, Douglas Island Pink & Chum, Inc., Juneau, Alaska 99801

##### 3:50 Incidence of Thermally Marked Pink, Chum, and Sockeye Salmon in the Coastal Waters of the North Pacific Ocean and Eastern Bering Sea

Edward V. Farley, Jr., H. Richard Carlson, Richard E. Haight, and John H. Helle, National Marine Fisheries Service Auke Bay Lab, Juneau AK and Kristen Munk, Alaska Dept. of Fish and Game, Juneau, AK

##### 4:10 Using thermal mark information to manage U.S. and Canadian fisheries harvesting transboundary river sockeye stocks

Kathleen Jensen, Alaska Dept. Fish and Game, Douglas Alaska

##### 4:30 Coded Wire Tagging and Otolith Thermal Marking as Tools for Fisheries Management in Prince William Sound

Tim Joyce, David Evans, and Kristen Munk. Alaska Dept. of Fish and Game, AK

**4:50** *The Use of Agreement Measures and Latent Class Models to Assess the Reliability of Thermally-marked Otolith Classifications*  
Jim Blick and Pete Hagen, Alaska Department of Fish and Game, Juneau, Alaska

### Wednesday Afternoon (9/30)

#### Contributed Paper Session: Fish Ecology and Management

**1:30** *Otolith Microchemistry: Revealing Patterns of Anadromy in Migratory Fish*

Randy J. Brown, Alaska Cooperative Fish and Wildlife Research Unit, University of Alaska Fairbanks, Fairbanks, Alaska 99775, and US Fish and Wildlife Service, Fairbanks Fishery Resource Office, 101 12th Avenue, Box 17 Room 222, Fairbanks, Alaska 99701; 907/456-0295; Fax 907/456-0454; randy\_j\_brown@fws.gov

**1:50** *Distribution of Fishes on the Olympic Peninsula, Washington*  
Paul Mongillo, Washington Department of Fish and Wildlife, Olympia, WA 98105

**2:10** *Effects of Hydropower Peaking on White Sturgeon Eggs and Larvae in the Columbia River*

Timothy Donald Counihan, United States Geological Survey, Biological Resources Division, Western Fisheries Research Center, Columbia River Research Laboratory, 5501A Cook-Underwood Road, Cook, WA 98605-9701; 509-538-2299 ext.281; FAX 509-538-2843; tim\_counihan@usgs.gov

**2:30** *Habitat Use of White Sturgeon in an Impounded and an Unimpounded Reach of the Columbia River*

Darren G. Gallion, U.S. Geological Survey, Biological Resources Division, Columbia River Research Lab, 5501A Cook-Underwood Road, Cook, Washington 98605; 509/538-2299; FAX 509/538-2843; darren\_gallion@usgs.gov. Michael J. Parsley, U.S. Geological Survey, Biological Resources Division, Columbia River Research Lab, 5501A Cook-Underwood Road, Cook, Washington 98605; 509/538-2299; FAX 509/538-2843; michael\_parsley@usgs.gov

**2:50** *Return of a Lost Legacy: Takotna River Salmon*

Gene Avey, Takotna Community School and Training Center, General Delivery, Takotna, AK 99675; (907) 298-2115, 298-2316 (FAX), Larry DuBois, Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, 333 Raspberry Road, Anchorage, AK 99518; (907) 267-2386, 267-2442 (FAX); larryd@fishgame.state.ak.us. David Fox, Takotna Community School and Training Center, General Delivery, Takotna, AK 99675; (907) 298-2115, 298-2316 (FAX), Douglas B. Molyneaux, Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, 333 Raspberry Road, Anchorage, AK 99518; (907) 267-2397, 267-2442 (FAX); dougm@fishgame.state.ak.us

#### Break

**3:30** *Private Landowners Are the Key in Ecosystem Management: The Western Montana Experience*

Don Peters, Montana Fish, Wildlife and Parks, Missoula MT

**3:50** *Collaborative Processes Used for Watershed-Scale Fisheries Management in the United States*

Scott A. Mullner, Wyoming Cooperative Fish and Wildlife Research Unit; Department of Zoology and Physiology; University of Wyoming; Laramie, Wyoming 82071-3166. 307/766-2322; FAX 307/766-5400; fishguy@uwyo.edu

Wayne A. Hubert, Wyoming Cooperative Fish and Wildlife Research Unit; Department of Zoology and Physiology; University of Wyoming; Laramie, Wyoming 82071-3166. 307/766-5415; FAX 307/766-5400; whubert@uwyo.edu

Thomas A. Wesche, Department of Rangeland Ecology and Watershed Management; University of Wyoming; Laramie, Wyoming 82071-3067. 307/766-6109; FAX 307/766-3379; fishsed@uwyo.edu

**4:10** *Tucannon River Restoration: Application of Ecological Restoration Principles?*

Mark A. Shaw, Bonneville Power Administration, P.O. Box 3621, Portland, OR 97208-3621, (503) 230-5239, Email:mashaw@bpa.gov

**4:30** *Negotiating with an IDIOT!*

Dennis R. Lassuy, U.S. Fish and Wildlife Service, 911 NE 11th Avenue, Portland, OR, 97232; 503/231-6112; FAX 502-872-2821; denny\_lassuy@fws.gov

### Wednesday Afternoon (9/30) and Thursday Morning and Afternoon (10/1)

#### WDAFS SPECIAL SYMPOSIUM

#### Influence of Spawning Anadromous Fishes on Freshwater and Terrestrial Ecosystems Hal Michael and Mark Wipfli, organizers

#### Session 1 Tom Kline, chair

**1:30** *Evaluating the Importance of Salmon-derived Nutrients to Sockeye Salmon Nursery Lake Ecosystems: A Long-term Perspective from Paleolimnological and Stable Isotope Data*  
Bruce Finney and Jon Sweetman, Institute of Marine Science, University of Alaska

Fairbanks, AK 99775 USA, David Barto, Alaska Dept. of Fish and Game, Douglas, AK 99824 USA

**1:50** *An Estimation of Historic and Current Levels of Salmon Production in the Northeast Pacific Ecosystem: Evidence of a Nutrient Deficit.*

Edward S. Gresh and P.K. Schoonmaker, Interrain Pacific, 1200 NW Front Ave., Suite 490, Portland, OR 97209 USA

J. Lichatowich, Alder Creek Consulting, 182 Dory Rd, Sequim, WA 98382 USA

**2:10** *Trends in Marine-derived Nutrient Sources to South Coastal British Columbia Streams: Impending Implications to Salmonid Production*  
Slaney, P.A. and G.A. Larkin, British Columbia Ministry of Environment, Lands and Parks. Watershed Restoration Program, 2204 Main Mall, University of British Columbia, Vancouver, BC, Canada.

**2:30** *The Role of Phosphorous From Salmon Carcasses in Fish Productivity of The Kuril Lake*

L.V. Milovskaya and S.A. Sinyakov; Kamchatka Research Institute of Fisheries and Oceanography (KamchatNIRO), 18 Naberednaya, Petropavlovsk-Kamchatsku, 683602, Russia

**2:50** *Salmon Carcasses: the Key to Upstream Transport of Marine Nutrients onto Land Ecosystems--a Literature Survey and Global Implications*

Takeshi Murota, Dept. of Economics, Doshisha University, Kyoto 602-8580, Japan

#### Break

**3:30** *Fishes and the Forest: Ecological Links Between Ocean,*

*Freshwater, and Terrestrial Systems*

Mary F. Willson and Scott M. Gende, Forestry Sciences Laboratory, 2770 Sherwood Lane, Juneau AK 99801 USA

**3:50 Establishing Spawner Escapement Goals to Maintain Stream Ecosystem Productivity**

Robert Bilby, Brian Fransen, Jason Walter, Weyerhaeuser Co., WTC 1A5, Tacoma, WA 98477 USA

Jeff Cederholm, and Warren Scarlett, Washington Dept. of Natural Resources, Box 47014, Olympia, WA 98504 USA

**4:10 Managing Salmon Escapements to Sustain Stream-Riparian Foodweb Productivity in Alaska**

Mark S. Wipfli, John Hudson,, and John Caouette, Pacific Northwest Research Station, USDA Forest Service, 2770 Sherwood Lane, Juneau, AK 99801 USA; Dominic T. Chaloner, Dept. of Entomology, Michigan State University, E. Lansing, MI 48824 USA

**Thursday Morning (10/2)****Session 2 Mark Wipfli, chair****8:00 Spawning-Related Changes in Stream Bed Morphology:**

*Potential Feedback between Spawner Abundance and Bed Scour*  
John M. Buffington and David R. Montgomery, Dept. of Geological Sciences, University of Washington, Seattle, WA 98195  
dave@bigdirt.geology.washington.edu

**8:20 Assessment of the Role of Salmon-Derived Nutrients in Alaskan Sockeye Salmon Nursery Lakes Using the 15N/14N Content of Smolts**

Tom Kline, Prince William Sound Science Center, Cordova, AK;  
[tkline@grizzly.pwssc.gen.ak.us](mailto:tkline@grizzly.pwssc.gen.ak.us)

Dana Schmidt, Alaska Department of Fish and Game, Soldotna, AK; Now at RL&L Environmental Services, Castlegar, B.C, Jefferey Koenings, Alaska Department of Fish and Game and Juneau, AK; Ole Mathisen, University of Alaska Fairbanks, School of Fisheries and Ocean Science, Juneau, AK; John Goering, University of Alaska Fairbanks, School of Fisheries and Ocean Science, Fairbanks, AK; Patrick Parker, University of Texas at Austin Marine Science Institute, Port Aransas, TX; Patrick Poe, University of Alaska Fairbanks, School of Fisheries and Ocean Science, Juneau, AK; Now at BPA

**8:40 Sockeye Salmon Carcasses as a Nutrient Source in Undisturbed Spawning Streams 1050 km from the Ocean**

N.T. Johnston, K.L. Mathias, S. Fuchs, Fisheries Branch, 2204 Main Mall, University of British Columbia, Vancouver, B.C., V6T 1Z4, Canada; TJOHNSTO@ubc.env.gov.bc.ca ; P.J. Tschaplinski, Research Branch, BC Ministry of Forests, 712 Yates Street, Victoria, B.C., V8W 3E7, Canada; J.S. Macdonald, Canada Department of Fisheries and Oceans, c/o Department of Resources and Environmental Sciences, Simon Fraser University, Burnaby, B.C., V5A 1S6, Canada

**9:00 Aquatic and Terrestrial Invertebrates Colonizing Salmon Carcasses in Southeastern Alaska**

D.T. Chaloner, Dept. of Entomology, Michigan State University, 243 Natural Science Building, East Lansing, MI 48824. M.S.

Wipfli Pacific Northwest Research Station, USDA Forest Service, 2770 Sherwood Lane, Juneau, AK 99801; dchalone/r10@fs.fed.us

**9:20 Response of the Caddisfly, *Ecclisomyia conspersa* (Trichoptera-Limnephilidae) to the Availability of Coho Salmon Carcasses**

Jason K. Walter, Weyerhaeuser Company, WTC 1A5, P.O. Box 2999, Tacoma, WA, 98477-2999; 253 / 924-6795;

[walterj@wdni.com](mailto:walterj@wdni.com); Robert E. Bilby, Weyerhaeuser Company, WTC

1A5, P.O. Box 2999, Tacoma, WA, 98477-2999; 253 / 924-6557; Brian R. Fransen (Weyerhaeuser Company, WTC 1A5, P.O. Box 2999, Tacoma, WA, 98477-2999; 253 / 924-6333

**Session 3 Jeff Cederholm, Chair****9:40 Significance of Salmon Fisheries to Terrestrial Ecosystems: Background and Perspective**

Atuhiro Sibatani, Kyoto Seika University, Kyoto 606-8588, Japan

**Break****10:20 Retention and Fate of Coho Salmon Carcasses in Spawning Streams**

C. J. Cederholm, Washington Dept. of Natural Resources, Olympia WA 98504-7014 USA

**10:40 A World Revolving Around Salmon: an Interaction Between Carnivore Ecology and Nutrient Dynamics of Terrestrial Vegetation**

Merav Ben-David, Institute of Arctic Biology, University of Alaska, Fairbanks, AK USA

**11:00 Importance of Salmon to Historic and Current Brown Bear Populations**

G.V. Hilderbrand and C. T. Robbins, Department of Natural Resource Sciences and Zoology, Washington State University, Pullman, WA 99164 USA; C.C. Schwartz, Interagency Grizzly Bear Study Team, Forestry Sciences Laboratory, Montana State University, Bozeman, MT 59717 USA; T.A. Hanley, Pacific Northwest Research Station, US Forest Service, 2700 Sherwood Lane, Suite 2A, Juneau, AK 99801 USA; C. Servheen, US Fish and Wildlife Service, University Hall, University of Montana, Missoula, MT 59812 USA

**11:20 Patterns of Sockeye Salmon Consumption by Brown Bears, and Nutrient Transfer to the Riparian Zone of a Small Alaskan Stream**

Thomas P. Quinn, School of Fisheries, University of Washington, Seattle, WA 98915 USA; James M. Helfield, College of Forest Resources, University of Washington, Seattle, WA 98915 USA

**11:40 Salmon and Bears: Considering Other Species in Fisheries Productivity Assessments**

Carol Ann Woody, USGS-Biological Resources Division, Alaska Biological Science Center, 1011 E. Tudor Rd, Anchorage, Alaska 99503

**Lunch****1:30 Arrival and Disappearance of Chum Salmon in Kennedy Creek, Mason County, Washington, Fall 1997**

C. J. Cederholm, Washington Dept. of Natural Resources, Olympia, WA 98504-7014 USA

W. Leonard, Washington Dept. of Ecology, Olympia, WA USA; J. Jauquet, The Evergreen State College, Olympia, WA

**1:50 The Ecological Effects of Salmon Carcasses on South-Central Alaska Streams**

Robert Piokowski, Alaska Dept. of Fish and Game, Juneau, AK

**Session 4 Charlie Corrarino, chair****2:10 The Oregon Story—an Overview**

Charlie Corrarino, Oregon Dept. of Fish and Wildlife, Fish Division, P.O. Box 59, Portland, OR 97207

**2:30 Nutrient Enrichment Using Coho Carcasses in a West Cascade Mountain Stream**

Jeff Uebel, Fisheries Biologist, Zigzag Ranger District, Mt. Hood

National Forest, 70220 East Highway 26, Zigzag, OR 97049

**2:50** *The Use of Hatchery Salmonid Carcasses in Two Oregon Coastal Streams to Improve Stream Productivity, Practical Considerations.*

John L. Casteel, Oregon Department of Fish & Wildlife, 4909 3rd Street, Tillamook, OR 97141 USA

**Break**

**3:30** *Stream Nutrient Enhancement With Hatchery Diverted Salmonid Carcasses: A Step in Wild Stock Restoration*

Stephen Evans, Washington Dept. of Fish and Wildlife, 600 Capital Way North, Olympia, WA 98501-1091 USA

**3:50** *Where Do We Go from Here? A Discussion of Ecologically Based Salmon Spawner Escapement Goals and the Fishery*

John H. Michael Jr., Washington Dept. of Fish and Wildlife, 600 Capitol Way N, Olympia, WA 98501-1091; C. Jeff Cederholm, Washington Dept. of Natural Resources, 111 Washington Street SE Olympia, WA 98504-7014; Robert E. Bilby, Weyerhaeuser Company, Technology Center, 32901 Weyerhaeuser Way S, Federal Way, WA, 98003 USA

**Thursday Morning (10/1)**

**Recent Developments in Modeling Salmon Populations: How Will They Help Managers?**

Eric Knudsen, chair

**8:00** *Modeling in the Public Domain: A New Paradigm for Fishery Management*

James G. Norris, Columbia Basin Research, University of Washington, Box 358218, Seattle, WA 98195

**8:20** *State-space models for pre-season planning and in-season management of salmon*

Ken Newman and Allan Hicks, Division of Statistics, University of Idaho, Moscow, ID 83844-1104

**8:40** *Incorporating ecology into a stock selective harvest model*

Jim Anderson and Jim Norris, School of Fisheries, University of Washington, Seattle, WA

**9:00** *Forecasting marine survival of Puget Sound coho salmon using climate indices*

William Pinnix, University of Washington, School of Fisheries, Box 357980, Seattle, WA 98195-7980, USA, pinnix@fish.washington.edu

**9:20** *Managing Salmon Populations with Trends in Abundance: Varying Escapement Objectives for No Net Decline in Future Population Size*

Phillip R. Mundy, Fisheries and Aquatic Sciences, 1015 Sher Lane, Lake Oswego, OR 97034-1744, mundy@teleport.com

**9:40** *Simulating Pacific Salmon Populations Using a Spatially-Explicit IBM: Can It Improve Fisheries Management?*

Rand, P.S. Department of Zoology, North Carolina State University, Raleigh, NC; S.G. Hinch, M.C. Healey, Research, Westwater Institute for Resources and Environment, University of British Columbia, Vancouver, B.C.; N.F. Hughes Department of Biological Sciences, Simon Fraser University, Burnaby, B.C.

**Break**

**10:20** Risk assessments of harvest management regimes: Modeling the managers as well as the fish

Peter W. Lawson, National Marine Fisheries Service, 2030 S Marine Science Drive, Newport, OR 97365

**10:40** *A Decision Support System for Watershed Management*

Ian V. Williams, Michael Foreman, J.S. Macdonald and Tom J. Brown, Fisheries and Oceans Canada) Nanimo, B.C.

Mike McAllister, David Hawkins, and Scott Akenhead, Facet Decision Systems, Vancouver, B.C.

**11:00** *Fish TV: A Technique to Estimate Salmon Escapement*

Douglas R. Hatch, and Matthew Schwartzberg, Columbia River Inter-Tribal Fish Commission, 729 NE Oregon, Suite 200, Portland, OR 97232

**11:20** *Inferring Population Persistence Based on Time Series Data: Lessons Learned from Synthetic Data on Redd Counts*

Danny C. Lee, USDA Forest Service, Rocky Mountain Research Station, 316 E. Myrtle Street, Boise, ID 83702, dlee/mrs\_boise@fs.fed.us

**Thursday Morning (Oct. 1)**

**Contributed Paper Session: Marine Fisheries**

**8:00** *Effects of Submarine Mine Tailings Disposal on Ovigerous Tanner Crabs and*

*Juvenile Yellowfin Sole: Laboratory Studies*

Scott W. Johnson and Robert P. Stone, Auke Bay Laboratory, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, 11305 Glacier Hwy., Juneau, AK 99801-8626, 907-789-6063; FAX: 907-789-6094; e-mail: scott.johnson@noaa.gov

**8:20** *Some Aspects of the Biology and Population Dynamics of Goatfish (*Upeneus spp.*) in Terengganu Waters, South China Sea*

Priyanto Rahardjo, Research Institute for Marine Fisheries, Komplek Pelabuhan Perikanan Samudera, Jl. Muara Baru Ujung, Jakarta; Modh. Zaki Mohd. Said, Universiti Pertanian Malaysia, Faculty of Fisheries and Marine Science, Serdang, Selangor Darul Ehsan, Malaysia

**8:40** *Seasonal Variability in Pacific Herring (*Clupea pallasii*) and Walleye Pollock (*Theragra chalcogramma*) Spatial Distributions in Prince William Sound, Alaska*

Kevin D. E. Stokesbury, University of Alaska-Fairbanks, Institute of Marine Science, Fairbanks AK; Jay Kirsch, Prince William Sound Science Center, Cordova AK; Evelyn D. Brown, University of Alaska-Fairbanks, Institute of Marine Science, Fairbanks AK; Gary L. Thomas, Prince William Sound Science Center, Cordova AK; Brenda L. Norcross, University of Alaska-Fairbanks, Institute of Marine Science, Fairbanks AK

**9:00** *Low Levels of Genetic Diversity Exist in Highly Exploited Populations of Alaskan Tanner Crabs (*Chionoecetes bairdi*) and Alaskan and Atlantic Snow Crabs (*C. opilio*)*

S.E. Merkouris and L.W. Seeb, ADF&G Genetics Laboratory, Anchorage, AK; M.C. Murphy, ADF&G Chief Fisheries Science Office, Juneau, AK

**9:20** *Genetic description of red king crab *Paralithodes camtschaticus* using microsatellite markers*

C. M. Kerkvliet, S. Merkouris, L.W. Seeb, Alaska Dept. of Fish and Game, Anchorage, Alaska; P.C. Jensen, P. Bentzen, School of Fisheries University of Washington, Seattle, Washington

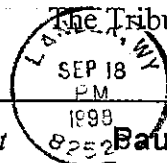
**9:40** *The Performance of Tropical Shrimp Production and Export of Indonesia*

Riyanto Basuki, Budi Iskandar, and Priyanto Raharjo, Research Institute for Marine Fisheries, Jl. Muara Baru Ujung, Jakarta

**BREAK**

**10:20** *Alaskan Littleneck Clam Enhancement*

Kenneth M. Brooks, Pacific Rim Aquatic Sciences, 644 Old Eaglemount Road, Port Townsend, WA 98368; 360/732-4464; FAX 360/732-4464; [brooks@olympus.net](mailto:brooks@olympus.net)



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