

FELLOWSHIPS FOR THE FUTURE

Opportunities for Career Enhancement and Academic Growth

Fellowships and internships provide prime opportunities for graduate students to expand their research horizons and enhance their careers. Washington Sea Grant Program has an exceptionally rich history of helping individuals become fellows and interns and, in the process, has helped shape the future of ocean science and marine policy, both nationally and internationally.



Introduction: Fellowships and Internships

“No matter what you do from here on out, whether you become President of the United States or leave the field entirely and decide to go become a bricklayer, this experience will be of value to you.”

Dan Ashe, Science Advisor to the Director, US Fish & Wildlife Service, and former Dean John A. Knauss Marine Policy Fellow

This publication describes five unique fellowship and internship programs created by the National Sea Grant College Program, the National Oceanic and Atmospheric Administration (NOAA) and Washington Sea Grant Program (WSGP). By participating in these programs, some students and recent graduates will gain invaluable first-hand experience in industrial design and marine product development or in the challenges faced by managers of our nation's coasts. Others might study population dynamics of endangered or threatened fish and mammals at sea, or learn to communicate more effectively about the latest breakthroughs in deep sea exploration. Still others will spend a year in Washington D.C., working with legislators and federal agency staff on issues that directly affect ocean resources and the environment. In all but one of these programs, the greatest number of national fellows began as WSGP nominees.

“The high quality of students attending Washington's universities and colleges is certainly a contributing factor,” says WSGP Director Louie Echols. When competing for National Sea Grant and NOAA fellowships, applicants must be “the best of the best,” Echols explains. The state's graduate programs are top-ranked, and they attract superior students.

There are other explanations for WSGP's high rate of success. “Potential fellows receive much more attention and support from us than they might get at other schools,” says Andrea Copping, Associate Director of WSGP.

Echols agrees. “Nurturing promising students and preparing them for fellowships is an important part of our jobs,” he says. WSGP staff advertise fellowship and internship programs widely, recruit advisors for those programs that require them and, if necessary, help identify suitable projects for prospective fellows.

“We spend a lot of time with candidates, so we can get to know them as well as possible,” Echols says. “By closely interacting with students before they apply for fellowships, I can write detailed, personalized recommendation letters for them when that time comes.” WSGP also benefits from its success rate with these programs. “Our visibility and reputation are certainly enhanced by the relationships we forge with faculty and students,” says Copping.

There's an even bigger benefit, though. “We're encouraging a new generation of marine scientists, policymakers and educators, who will use their experiences and knowledge to more effectively manage and protect our country's marine resources,” Echols concludes.

Washington Sea Grant Program Graduate Fellows and Interns — Where Are They Now?

Knauss Fellows

Daniel Ashe, Science Advisor to the Director, US Fish & Wildlife Service, Dept. of the Interior. 1982 Knauss Fellow, HMM&F (House Merchant Marine & Fisheries), Full Committee.

Xan Augerot, Director of Conservation Programs, The Wild Salmon Center. 1986 Knauss Fellow, Senate Commerce.

Seema Balwani, NOAA/NOS/NCCOS/CCMA/BioGeo. 2002 Knauss Fellow, Senator Akaka (HI).

Darrell Brown, Chief, Coastal Management Branch, EPA. 1980 Knauss Fellow, HMM&F.

James Buizer, Assistant Director, NOAA/Office of Global Programs. 1984 Knauss Fellow, NOAA/OAR/International.

Christine Dawson, 1979 Knauss Fellow, Senate Commerce Committee.

Gina Deferrari, Living Planet Campaign Coordinator, World Wildlife Fund. 1981 Knauss Fellow, HMM&F, Full Committee.

Antonia Fairbanks, Office of Polar Programs, National Science Foundation. 2001 Knauss Fellow, NSF Office of Polar Programs.

Bridget Ferriss, Washington, D.C. 2003 Knauss Fellow, Senate Commerce Committee, minority staff.

John C. Field, National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz Laboratory. 1998 Knauss Fellow, House Resource Minority Committee.

Jean Flemma, Champagne-Urbana, IL. 1990 Knauss Fellow, HMM&F, Fisheries Subcommittee.

Laura Geselbracht, Director, Community Relations, S. FL, The Nature Conservancy. 1987 Knauss Fellow, NOAA/OAD.

Erica Goldman, Science Writer, Maryland Sea Grant College Program. 2003 Knauss Fellow, Committee on Resources, minority staff.

Wendy Graham, Deceased, 1998. 1989 Knauss Fellow, House Science & Technology.

Dean John A. Knauss Marine Policy Fellowship: Shaping the Future of Ocean and Coastal Policies

The Dean John A. Knauss Marine Policy Fellowship allows graduate students in marine affairs to study national policy and its multifaceted relationship with marine resources.

“It’s clearly a two-way street,” says Alton Straub, a 1994 Knauss Fellow who worked in the office of Senator John Glenn. “The program is a true bargain for federal agencies and Congress, as well as for fellows.”

Since the National Sea Grant College Program established the Knauss Fellowship in 1979, nearly 500 students have traveled to Washington, D.C., to work for a year on a congressional staff or with an executive agency, studying, implementing and even creating marine policy. Washington Sea Grant Program has nominated more than 50 successful applicants over the past 35 years — more than any other Sea Grant program in the nation. Most WSGP-nominated fellows are from the University of Washington (UW) School of Marine Affairs; however, others have come from fisheries, biology, oceanography, public affairs and law schools.

“The Knauss Fellowship is a vehicle for applying academic lessons to a real-world setting,” says Gary Shigenaka, a 1986 Knauss Fellow now with NOAA. “I had experience doing field work associated with research programs, but I had little understanding of the political process.”

“I look back and think that the Knauss Fellowship program was a stroke of genius on the part of Sea Grant,” says Darrell Brown, who assisted the House Merchant Marine and Fisheries Committee as a Knauss Fellow in 1982. “It gives the agencies and Congress a fresh perspective, some of the

latest thinking coming out of academia.”

Potential fellows are nominated by one of the 30 Sea Grant programs and then undergo a review and interview process conducted by a National Sea Grant committee. They also participate in a week of final interviews with potential employers in Washington D.C., after which they are matched with available positions in Congress or administrative agencies.

Congressional fellows typically follow marine-related policy in Congress, and often get opportunities to draft key pieces of legislation. Past WSGP-nominated fellows have assisted Congress on reauthorization of the federal Endangered Species and Marine Mammal Protection acts. Executive fellows work for agencies such as the Environmental Protection Agency or National Science Foundation, usually assisting in implementation of management and conservation laws.

“That year gave me the opportunity to learn what it was all about in Washington,” says Jean Flemma, a 1990 Knauss Fellow who became staff on the House Resources Committee immediately after completing her fellowship. “It was a pretty direct connection,” she says. “People who come to Washington with no Hill experience don’t get committee jobs.”

“I just wanted to learn about policymaking,” says Allen Stayman, a 1979 Knauss Fellow who now leads the minority staff of the Senate Energy and Natural Resources Committee. “The results have been beyond my wildest dreams,” he says.

“The exposure to such a broad range of marine environmental issues has made me far more knowledgeable and aware of the nation’s issues and assets.

My perspective has broadened so that I now see marine science in a larger context, including politics, industry, financial battles, environmental advocates and much more.”

*Bridget Ferriss, 2003
Knauss Fellow*

Daniel Grosse, TerrAqua Environmental Science and Policy, LLC. 1989 Knauss Fellow, Office of Naval Oceanography.

Doug Helton, Branch Program Chief, HAZMAT, NOAA/NOS. 1991 Knauss Fellow, NOAA/NOS.

Jennifer Hernandez, 2004 Knauss Fellow, Representative Frank Pallone’s office.

Keren Holtz, Deceased, 1997. 1989 Knauss Fellow, NOS Marine & Estuarine Management Division.

Brenda Hood, Budget & Program Manager, Facilities and Organization, Washington Office of Superintendent of Public Instruction. 1993 Knauss Fellow, Senator John Kerry’s office.

David Jansen, Committee on Resources, minority staff, Subcommittee on Fisheries Conservation, Wildlife and Oceans. 1992 Knauss Fellow, Senator John Kerry’s office.

Coalter Lathrop, Boundary Consultant/Cartographer, Sovereign Geographic, Inc. 1996 Knauss Fellow, National Marine Fisheries Service Office of Science and Technology.

Frank Lockhart, NOAA/National Marine Fisheries Service, Legislative Affairs. 1993 Knauss Fellow, HMM&F, Full Committee.

Theresa Marsh, Santa Cruz, CA. 1997 Knauss Fellow, National Marine Fisheries Service Office of Protected Resources, Biodiversity Team.

Catherine Marzin, International Relations Specialist, NOAA/NESDIS/International Affairs. 1996 Knauss Fellow, Office of the Oceanographer of the Navy.

Brian McLachlan, Arlington VA. 1999 Knauss Fellow, Senator Judd Gregg’s office.

Kevin McManus, Director, Toxic Reduction & Control, Massachusetts Water Resources Authority. 1983 Knauss Fellow, NMFS.

Glenn Merrill, Chief Resource Analyst, Alaska Natural Resources Authority, Aleutians East Borough. 1996 Knauss Fellow, Senate Subcommittee on Oceans and Fisheries.

Jennifer Murphy, Heinz Center. 2000 Knauss Fellow, House Committee on Resources, majority staff.

Corey Niles, 2004 Knauss Fellow, Senator Maria Cantwell’s office.

Chris Pallister, Anchorage, AK. 1995 Knauss Fellow, Senator Frank Murkowski’s office.

Sea Grant/NOAA Fisheries Graduate Fellowship Program: Training the Next Generation of Ocean Scientists

“These fellowships allow for close working relationships with government scientists and managers who often are on the front line in dealing with fisheries management issues.”

James Murphy, 2004 NMFS Marine Resource Economics Fellow

The Graduate Fellowship Program in population dynamics and marine resource economics was established by NOAA's National Marine Fisheries Service (NMFS) and National Sea Grant Office in 1999.

As many as six new Sea Grant/NOAA Fisheries fellowships are awarded each year to Ph.D. students at universities and colleges nationwide. All fellows develop close ties with NMFS, whose facilities in Washington state include the Alaska Fisheries Science Center, Northwest Fisheries Science Center and the National Marine Mammal Laboratory.

“It’s a wonderful opportunity to work on a project that is well beyond the scope of anything I’d be able to do as a graduate student,” says Leif Anderson, a 2004 Marine Economics Fellow currently studying the economics of recreational groundfish fisheries in Washington and Oregon.

“Thanks to this program, I’m able to do research that I’m interested in, rather than a project that a professor already wrote a grant for,” says Eric Ward, recipient of a 2003 NMFS Population Dynamics Fellowship. For his project, the UW doctoral candidate is fine-tuning a mathematical model to help resource managers make decisions about marine mammal populations in the north Pacific Ocean. Although designed with marine mammals in mind, these tools can be applied to any number of species, from birds to fish to terrestrial mammals, according to Ward. Ward is currently conducting research at the Alaska Fisheries Science Center in Seattle.

All fellows are required to work closely with a mentor from NOAA Fisheries, who provides data for the fellow’s thesis, serves on the fellow’s committee and hosts an annual summer internship at the NOAA Fisheries center or laboratory where the fellow is placed. Population Dynamics fellows may spend as many as 20 of these summer days at sea, conducting scientific surveys or experiments and learning about sampling techniques, fishery biology, commercial fishing and regional issues in fisheries management.

The program is designed to introduce talented students to careers in the areas of population dynamics and marine economics. As “known commodities,” there’s a strong likelihood that, eventually, these fellows will be offered jobs at NMFS. The program also fosters close ties between NMFS and academic scientists at non-government research institutions.

“The internship aspect of the fellowship is an excellent way to meet NMFS scientists and see what it is like working for a government agency,” says Ian Stewart, who received a Population Dynamics fellowship in 2001. In February 2004, Stewart took a job as research biologist with the NOAA Fisheries Northwest Fisheries Science Center. “I hadn’t planned to work for NMFS, but that was because I didn’t know that much about the agency,” Stewart says. “I was pleasantly surprised by the breadth of research and quality of the science — which is why I now work here!”

Washington Sea Grant Program Graduate Fellows and Interns — Where Are They Now?

Knauss Fellows continued

Michelle Pico, National Fish & Wildlife Foundation, Manager, National Whale Conservation Fund. 2000 Knauss Fellow, Senator Judd Gregg’s office.

James H. Rendall, Deceased 1980. 1979 Knauss Fellow, NOAA/NMFS.

Vernon Ross, NSF, Budget Operations and Systems. 1988 Knauss Fellow, NSF.

Monique Trainor Rutledge, Easton, CT. 1983 Knauss Fellow, NOAA/OMPA.

Gary Shigenaka, Marine Biologist, Hazardous Materials Response Branch. 1986 Knauss Fellow, NOAA/OAD.

Kate Smukler, Northeast Regional Coordinator, NOAA National MPA Center, Boston. 2002 Knauss Fellow, NOAA National MPA Center.

Allen Stayman, US Dept. of State, Office of Compact Negotiations. 1979 Knauss Fellow, Senator Lowell Weicker’s office.

Alton Straub, Park Ranger, National Park Service, Fort Vancouver National Historic Site. 1994 Knauss Fellow, Senator John Glenn’s office.

Erik Stromberg, Executive Director, North Carolina State Ports Authority. 1982 Knauss Fellow, Corp. Glenn Anderson’s office.

Deborah Trefts, Maine. 1985 Knauss Fellow, HMM&F, Full Committee.

Paul J. Vincent, Plymouth, MN. 1981 Knauss Fellow, Senate Commerce Committee.

Jennifer Waddell, NOAA/NOS/NCCOS/CCMA/BioGeo. 2002 Knauss Fellow, NOAA/NOA/NCCOS/CCMA/BioGeo.

Susan O’Malley Wade, Aspen Institute, Program for Energy, the Environment & the Economy. 1983 Knauss Fellow, HMM&F, Full Committee.

Eli Weissman, Ocean Governance Program Manager, Center for Marine Conservation. 1998 Knauss Fellow, Congressman Frank Pallone’s office.

Sea Grant Industry Fellowship Program: Partnerships in Research and Development Projects

The Sea Grant Industry Fellows program strengthens relationships between top scientists and engineers in industry and academia. Each Industry Fellow partners with a company whose scientific interests closely match their own. Each must be enrolled in master's or Ph.D. program and work with a graduate thesis advisor and a second advisor from the cooperating industry on a research project of mutual interest.

“The fellowship offers a unique way to find and develop scientists devoted to issues important to both industry and Sea Grant,” says Laura Beer, a WSGP-nominated Industry Fellow, currently studying at the University of Arizona and working with Nereus Pharmaceuticals, Inc., a biotechnology firm in California.

Once an industry partner has been found, the prospective fellow can submit a proposal through any of the 30 Sea Grant programs for as much as half of the funding for up to two years. The industry partner will then fund the remainder. As many as seven fellows are funded each year. WSGP has had four successful applicants in the past eight years, the most of any other Sea Grant program.

The Industry Fellows program further solidifies connections among Sea Grant programs and leading research industries, such as biotechnology, instrumentation or fishery-related technologies. One of the program's primary goals is to provide a more solid understanding — including the essential real-world job

experience — to marine science students with interests in technology-oriented work, while introducing them to future job prospects.

“The fellowship also provides funding for travel to professional meetings to present my research,” says Beer. “I'm really looking forward to that.”

“The Industry fellowship gave me the freedom to explore,” says Tim Chinowsky, who participated in the program in 1997. Chinowsky worked in the laboratory of UW Professor Clement Furlong, adapting the surface plasmon biosensor — a miniaturized device that detects and measures pollutants and biological processes on a molecular scale — for use in the marine environment. Partners in that project included the technology giant Texas Instruments, which now markets the biosensor as the Spreeta™ system.

Today, Chinowsky serves as a research assistant professor at the UW's Electrical Engineering Department, putting his past experience and strong academic background to good use. Among his recent projects is the design and testing of a hand-held device to measure the presence of agents of chemical and biological warfare.

“Instead of a small stipend for housing and meals, [the fellowship] provided financial backing for the actual research,” Chinowsky says. “That made an enormous difference to a project like mine.”

“These types of arrangements are critically important for students and granting institutions as competition for funding increases on all levels and fellowships become increasingly scarce.”

*Laura Beer, 2004
Industry Fellow*

Matthew Wells, Preston, Gates & Ellis. 1987 Knauss Fellow, Senator Lowell Weicker's office.

Dolores Wesson, Consultant, San Diego, CA. 1988 Knauss Fellow, HMM&F, Full Committee.

Sean Willard, NOAA/OAR. 2000 Knauss Fellow, NOAA Office of Global Programs.

Kate Wing, Ocean Policy Analyst, Natural Resources Defense Council, San Francisco, CA. 1997 Knauss Fellow, Senate Subcommittee on Oceans, Fisheries, and Wildlife.

Kevin Wood, University of Washington, Joint Institute for the Study of the Atmosphere & Ocean (JISAO). 2003 Knauss Fellow, NOAA/OAR/Arctic Research Office.

NOAA Fisheries - Sea Grant Fellows

Leif Anderson, 2004-2007 NMFS - Sea Grant Graduate Fellowship in Marine Resource Economics: The Economic Value of Marine Recreational Fishing on the West Coast.

Melissa Ann Haltuch, 2002-2005 NMFS-Sea Grant Fisheries Fellowship in Population Dynamics: Discrete-Choice Modeling of Bering Sea and Gulf of Alaska Fisheries

Alan Haynie, NOAA/NMFS/AFSC. 2002-2005 NMFS-Sea Grant Fisheries Fellowship in Population Dynamics: Incorporation of Model Selection and Decision Analysis into Population Dynamics Modeling and Assessment.

James T. Murphy, 2004-2007 NMFS - Sea Grant Graduate Fellowship in Population Dynamics: A Spatially-explicit, Multi-species Assessment of Walleye Pollock in the Eastern Bering Sea.

Ian Stewart, NOAA/NMFS/NWFS Fisheries Resource Analysis & Monitoring Division. 2001-2004 NMFS Joint Graduate Fellowship Program in Population Dynamics & Marine Resource Economics: Mixed-Species Flatfish in the West Coast Groundfish Fishery.

Eric Ward, 2002-2005 NMFS-Sea Grant Fisheries Fellowship in Population Dynamics: Modeling Human, Climate, and Habitat Impacts on the Pacific Northwest Groundfish Fishery.

Communications Internship: Launching Careers While Learning To Reach New Audiences

“The Communications staff helped me build a portfolio and get a head start on my writing career. I wrote several stories for their quarterly newsletter. One of those pieces was later re-cast and distributed to the national news media.”

*Jeff Wolfe, 2003–2004
Communications Intern*

Aspiring science writers can launch their careers at Washington Sea Grant Program, where staff can help Communications interns earn credentials and gain entry-level positions in the field.

The internships are offered in collaboration with the Science and Technology News Writing Program of the UW’s Department of Technical Communication. Potential interns are drawn from students of this year-long science writing pathway.

To build their portfolios, interns are encouraged to write feature-length articles and shorter news pieces for Sea Star, WSGP’s quarterly information journal. They may also contribute to a variety of Sea Grant Communications projects geared for general audiences.

“I have a background in science, but I had no experience writing about it for a general audience,” says intern Melissa Phillips. “Communications staff have helped me learn to write in a style that appeals to readers. They’ve also helped me to get writing assignments for other publications.”

Communications staff coach interns about the best ways to land freelance writing assignments for regional and national magazines. Previous interns have published their work on the Web site of ABC News, Horizon Airlines in-flight magazine and The Sciences, the former magazine of the New York Academy of Sciences. The formula for success has paid off for several former interns, who have landed internships at Discover and Science magazines and, in one case, secured a full-time position with another Sea Grant program.

“Career-wise, I wanted to place myself at the intersection of science writing, science policy and academic research,” says Erica Goldman, a former Communications intern and Knauss Fellow, now employed as a science writer at Maryland Sea Grant.

Although the issues surrounding the management of Chesapeake Bay are very different from those of Washington’s Puget Sound, the skills that Goldman is now applying are identical to the ones she first mastered as a WSGP Communications intern.

Washington Sea Grant Program Graduate Fellows and Interns — Where Are They Now?

Industry Fellows

Laura Beer, University of Arizona, Dept. of Pharmacy. 2004-2006 Industry Fellow, Nereus Pharmaceuticals, Inc.

Tim Chinowsky, Research Assistant Professor, Electrical Engineering, University of Washington. 1997-2001 Industry Fellow, Texas Instruments.

Sayre Hodgson, Salmon Recovery Research Biologist, Nisqually Indian Tribe Natural Resources Department. 1998-2000 Industry Fellow, Pacific Sea Food Processors Association.

Justin Rhodes, Ohio State University. 1996-1999 Industry Fellow, Weyerhaeuser.

Communications Interns

Laura Carsten, Discover magazine intern; Ph.D. Candidate in biology program at Arizona State University; 2000-2001 Communications Intern.

James Charley, 2002 Communications Intern.

Erica B. Goldman, Science magazine intern; science writer for the Maryland Sea Grant Program; 1999-2000 Communications Intern.

Melany Grogan, 2003 Communications Intern.

Nathan Moore, Ph.D. Candidate in chemical engineering at University of California-Davis; 2002-2003 Communications Intern.

Melissa Lee Phillips, 2003-2004 Communications Intern.

Margaret Trost, Medical student, University of Wisconsin Madison; 2003 Communications Intern.

NOAA Coastal Management Fellowship: On-the-Job Training for Students of Coastal Affairs

NOAA's Coastal Management Fellowship program matches postgraduate students with state coastal zone management programs around the country. In a mutually beneficial arrangement, each fellow receives on-the-job training in coastal management and policy and, in return, the coastal resource program gets technical assistance from students well-versed in the latest advances in coastal resource science and policy.

Available state jobs may differ from one year to the next, and fellows come from a wide variety of fields, including environmental studies, marine science, geology, public affairs and natural resource management. Many program participants from the UW graduate with a Master of Marine Affairs degree. The most important attribute of a potential fellow is an interest in state-level coastal issues.

Host state programs and fellows are selected independently of each other and then matched up through a mutual interview process. For two years, Coastal Management fellows work on state-level issues pertaining to federal shoreline policies and regulations. All Coastal Management fellows meet in Charleston, South Carolina, each winter to discuss the experiences and challenges they have encountered over the year. Fellows are encouraged to attend an optional summer conference as well.

Most fellows accept jobs with state government after their fellowship year concludes. Others take positions with the federal government, private consulting firms or non-government organizations, and some return to graduate school for an additional degree.

"This fellowship is really good for networking within one's program," says Zoë Johnson, who, as a fellow, was placed in the Maryland State Department of Natural Resources from 1998 to 2000. Four years later, Johnson works at the same desk, as a Maryland state employee, concentrating on issues regarding coastal hazards and disaster planning.

Former Coastal Management Fellow Ian Zelo now works for NOAA's Office of Response and Restoration in Seattle, assisting the Abandoned Vessel Project in its efforts to address oil spill and hazardous waste concerns.

"I have my job now because my work with the Florida Department of Community Affairs was so diverse," says Zelo. "The Coastal Management Fellows program is a great deal," he adds. "They're really focused on getting you out into the world."

"During my fellowship years, I got to meet many times with several years' worth of fellows. I also met coastal management professionals from all over the country. It was great."

Ian Zelo, 2000 Coastal Management Fellow

Desiree Willis, 2003
Communications Intern.

Jeff Wolfe, Graduate student,
University of Washington
Technical Communication
program; 2003-2004
Communications Intern.

Coastal Management Fellows

Bridget Callahan, Fisheries
Consultant, Charleston, SC,
1997 Coastal Management
Fellow, Kachemak Bay, National
Estuarine Research Reserve,
Homer Alaska.

Tali Engoltz, New Jersey
Coastal Management Program.
2002 Coastal Management
Fellow, Louisiana Department of
Natural Resources.

Teresa Fleener, Ladson, SC.
1999 Coastal Management
Fellow, South Carolina Office
of Ocean & Coastal Resource
Management.

Zoe Johnson, Natural
Resources Planner, Coastal Zone
Management Division, Maryland
Dept. of Natural Resources.
1998 Coastal Management
Fellow, Maryland Coastal Zone
Management.

Ian Zelo, NOAA, Seattle, WA.
2000 Coastal Management
Fellow, Florida Coastal Zone
Management.



Sea Grant Washington

Knowledge for Use in the Marine Environment



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