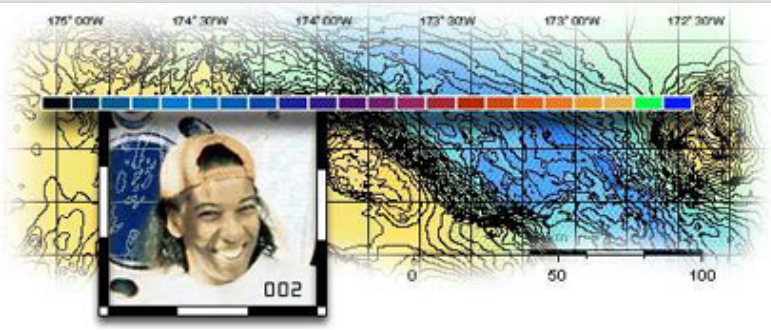
Women OCEANOGRAPHERS.ORG



Dawn Wright

Dawn Wright (a.k.a. Deepsea Dawn) has immersed herself in two disciplines. She is a geologist who studies the structures along the mid-ocean ridges--the volcanic mountain ranges and sites of seafloor spreading that snake along the bottom of the oceans thousands of meters deep. These mid-ocean ridges are the sites of hydrothermal vents and the unique ecosystems that the vents support. She is also a geographer who specializes in the software oceanographers of all disciplines use to map and analyze the seafloor.

Dawn points out features on a map of the seafloor.

When in geologist mode, Dawn focuses on cracks (called fissures) that form on the seafloor along these seafloor-spreading centers. These fissures, which range in width from a few inches to several feet, act as passageways beneath the seafloor for magma (molten rock) rising from the mantle and for seawater. Hydrothermal vents are created when seawater percolates down through the cracks in the ocean crust, is heated by magma, then rises back though the cracks to the surface. Therefore fissures provide important clues to the nature of volcanic eruptions and to the birth and death of hydrothermal vents.

To learn more about this seafloor "plumbing system", Dawn has studied photos, videos, and sonar images of the seafloor taken by remotely operated vehicles such as ARGO II. She has also descended to the seafloor in the research submarine ALVIN to observe and photograph these fissures firsthand. She is especially interested in the origin of these fissures. One possibility is that the spreading of the tectonic plates stretches the seafloor and opens up

Dawn Wrig

Professor, Department of Geosciences
Oregon State University

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More Remark

Melanie Holland
Faculty Research Associate, Microbial Ecology

Melanie Holland studies the microbes that thrive in scalding temperatures surrounding hydrothermal vents. These amazing organisms not only reveal important information about the vent communities, they may also provide insights into the origin of life on Earth and the possible existence of life on other planets.

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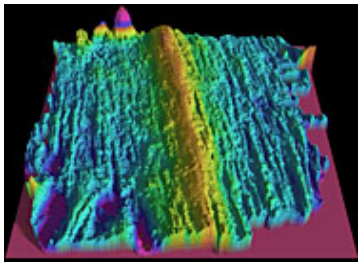
Lauren Mullineaux
Senior Scientist, Marine Biology

Lauren Mullineaux's research group studies a side of benthic organisms (animals that live on the seafloor) that until

spreading of the tectonic plates stretches the seafloor and opens up cracks. Other cracks might form when magma forces its way up through the crust.



Three-dimensional view of the East Pacific Rise spreading center. Colors represent water depths. Blues are deep and yellow/reds are shallow.

When in geographer mode, Dawn devotes her expertise to developing better ways of displaying, analyzing, and interpreting information she and other oceanographers collect from the seafloor. She is one of the leading authorities on geographic information systems (GIS). At the most basic level, GIS and similar programs convert data into maps. Yet within these maps, oceanographers can incorporate a wide variety of data. Not only might a GIS map display geological features such as fissures or vents, it might also show variations in water temperature and chemistry, changes in currents, and the distribution of different organisms. Oceanographers can also use GIS to manipulate and analyze a number of data sets simultaneously. A biologist might analyze the relationship between the distribution of organisms and water temperature. Dawn is using GIS to plot the positions of fissures to analyze how their distribution relates to the presence of hydrothermal vents and their associated biological communities.

Dawn visits Ahu Tongariki during a research expedition that stops at Easter Island.

Although GIS has been used in a wide variety of fields from landscape ecology to archaeology to climatology, it has only recently been adapted for oceanography. Oceanographers study the ocean in three dimensions since they must take depth into account. GIS, however, still has difficulty handling the 3-dimensional data that oceanographers often collect. Dawn writes software that processes these types of oceanographic data and eases transition of these datasets into GIS.

Recently Dawn edited a book called *Marine and Coastal Geographical Systems*. She has also written for the magazine *GeoInfo Systems,* was chosen as a U.S. Fellow to the International Young Scholar's Summer Institute in Geographic Information in Berlin, Germany, in 1996, and was profiled on Black Entertainment

Television's website. Currently she teaches three courses in GIS.

the seafloor) that until recently has received little attention.

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Jo Griffith
Principal Illustrator, Scientific and Oceanographic Data

Technical illustrator Jo Griffith hasn't picked up a pen in over five years. Instead she uses a variety of computer programs to create graphs, maps, and illustrations for researchers.

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Emily Klein
Professor of Geology, Geochemistry

Emily collects rocks from the deep seafloor. The chemicals that make up the rocks provide clues to how the oceanic crust is built.

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Wen-lu Zhu
Associate Scientist, Geology and Geophysics

Wen-lu Zhu studies the properties of rocks found deep in the ocean crust by recreating those conditions in the laboratory.

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Interview

What were some of the things that interested you as a child? How did you become interested in science?

I grew up in the Hawaiian Islands, which had a lot to do with my interest in oceanography. I remember having very, very good teachers who always encouraged us to read a lot. I really got interested in reading books about the sea. I started out reading *Twenty Thousand Leagues Under the Sea*, *Mutiny on the Bounty*, *Treasure Island*, anything that had to do with sea adventures. I imagined myself as a pirate or adventurer. Then I thought, why not consider doing something like this for real.

Another big factor was my mother. She was very encouraging. To this day she is always encouraging me in everything that I do.

TV was also a big influence. You see bumper stickers all the time telling you to kill your television, and I see their point. But I'm really thankful for "The Wonderful World of Disney", National Geographic specials, and Jacques Cousteau. My generation grew up with Jacques Cousteau whether we were interested in oceanography or not. There were so many of his specials that were on TV Sunday nights. That had a tremendous impact on me.

How did you go about pursuing your career?

By the time I was eight, I had pretty much decided to become an oceanographer. I wasn't sure what kind of an oceanographer I was going to become. I wasn't sure whether I was going to become a scientist, an underwater photographer, or what. By high school, I had read up on what oceanographers do. I was really interested in geology. I really liked rocks and volcanoes, so I decided to put myself on the path to geological oceanography.

In college, most people interested in oceanography major in one of the basic sciences, then study oceanography in graduate school. I went off to a small Christian liberal arts college in Illinois and majored in geology.

What did you do after college?

I went to Texas A&M University for my master's degree in geological oceanography. People with a master's degree can do a

Dawn Wrig

Professor, Department of Geosciences
Oregon State University

More about

More Remark

Melanie Holland
Faculty Research Associate, Microbial Ecology

Melanie Holland studies the microbes that thrive in scalding temperatures surrounding hydrothermal vents. These amazing organisms not only reveal important information about the vent communities, they may also provide insights into the origin of life on Earth and the possible existence of life on other planets.

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Lauren Mullineaux
Senior Scientist, Marine Biology

Lauren Mullineaux's research group studies a side of benthic organisms (animals that live on

the seafloor) that until

geological oceanography. People with a master's degree can do a lot in oceanography. They can be technicians. They can be consulting scientists on a lot of projects. But if you want to do your own science projects and oversee oceanographic expeditions--be the master or mistress of your own destiny -- you really need a Ph.D.

So I decided to pursue a Ph.D. But first I wanted to take a break and get some more experience. So I worked for three years on a scientific ocean-drilling project as a marine technician. It was a great way to learn more about how ocean science works, how people on a ship interact, and the culture of science. By the time I finished working with the Ocean Drilling Program, I was able to think about which Ph.D. program I wanted to enter. I ended up at University of California, Santa Barbara. I was actually in the geography program there and came out with a joint degree in geography and marine geology. That's where I developed an interest in GIS (Geographical Information Systems) and in combining GIS with oceanographic work.

How did you get your current position at Oregon State?

I think I was at the right place at the right time. I was still working on my Ph.D. dissertation, and I got a call from Oregon State inviting me to interview for a job. Apparently they had seen my name and my thesis topic on a list in a newsletter. It was a list of either women students or minority students who were doing various things in geography.

I had to cancel the first interview because I was in a mountain biking accident. I was so banged up I couldn't make the interview. That turned out to be even better for me because the students thought that that was so cool. To make a long story short, I was able to get a position here right out of graduate school. I've been here for about five years. Things have worked out extremely well since they have a wonderful combination of oceanographic studies and geography. They also have a lot going on in terms of computer science, forestry, and a lot of really neat interdisciplinary collaborations.

What is the most surprising thing about your job?

Overall, I don't really sense that I'm being discriminated against or held back because I'm a woman or a woman of color. I'm just moving ahead to achieve and do the best that I can like anybody else in my profession.

When you are at sea on an oceanographic research vessel, there's a lot of physical work. For instance if you are trying to deploy equipment over the side it takes quite a bit of upper body strength. There have been times when a man would come by and take something out of my hand or won't have confidence that I can do the job that I have been assigned to do. There can be two reasons for that. One, the person might just be concerned for my

the seafloor) that until recently has received little attention.

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Wen-lu Zhu studies the properties of rocks found deep in the ocean crust by recreating those conditions in the laboratory.

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safety. The other side of the coin is that the person just doesn't think that I can do the job or that women do not belong at sea. That has happened to me at sea a couple of times. I think for at least most of the women I have worked with who have faced the same sorts of situations, we just keep doing our jobs the best that we can do. Ninety-nine percent of the time, at least in my experience, we have been able to pull our weight and do extremely well at sea.

What continues to inspire you about your job?

There are lots of things. I am inspired by my colleagues. When I read about the advances my colleagues are making in science, when someone discovers a new hydrothermal vent, finds a new way to calculate something, or makes a new discovery of a volcano, that's really exciting. It spurs me on to keep striving with my own research. I am particularly inspired by my colleagues who are women. We do see quite a few women in science compared to ten years ago, twenty years ago, and so forth, but it's still somewhat of a novelty seeing women achieving in certain areas. When one of us does well, I really like to see that.

I'm also inspired by my students and by the pleasure of having had several very good graduate students who have gone on to do very good work and who now have great careers.

What are some of the other things you like to do?

I think that young people might get the impression that scientists are lab rats, that we are in the lab all of the time. Perhaps I am giving that impression by talking about a 60-70 hour work week. There are all kinds of wonderful things that scientists do in their spare time. I really enjoy cycling. I enjoy road and mountain biking. Here in the Pacific Northwest there is great hiking. A lot of my friends are into whitewater rafting and climbing. I haven't done a lot of those things yet, but I spend a lot of my free time on my bicycle. I also enjoy building Lego's. Toys are something that carried over from my childhood. I have a pirate ship in my office that is made out of 5,000 Lego pieces. It took me two weeks to build it. I really enjoy that for relaxation.

Do you have any advice for people considering a career in oceanography?

The trick I think is to keep that passion and excitement going. The way to maintain it is to have success, to do well in school, but also to have a balance of other interests. Keeping yourself a well-rounded person is a good recipe for success.

There is no escaping mathematics and gaining expertise with computers. Even if math isn't your strongest subject, it's a good idea to stick with it and to do as well as you can and to really get as much experience as you can on computers. That's a big part of oceanography today. For me, GIS is all about computers. Even if you are not a computer geek, you need to have some wherewithal with computers.

The last thing is to do as much personal research as you can about oceanography. With the Internet, it's so easy because you can go to so many web sites. All of the institutions that specialize in oceanography have great web sites. They're great resources. The more personal research each person does, the better.

Ashanti Pyrtle
Assistant Professor, Aquatic Science

Ashanti Pyrtle studies the fate of radioactive material that enters rivers, lakes, and oceans. She also advises minority science students on how to navigate through graduate school and prepare for a career afterwards.

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Debby Ramsey
Third Engineer, Marine Crew

As Third Engineer onboard the Research Vessel Thomas G. Thompson, Debby Ramsey helps keep all of the equipment that has moving parts running smoothly.

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Maya Tolstoy
Research Scientist, Geophysics

Marine seismologist Maya Tolstoy helps find active volcanoes on the seafloor by listening for their eruptions.

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Rose Dufour
Ship Scheduler and Clearance Officer, Ship Operations and Marine Technical Support

Rose Dufour and her job-share partner Elizabeth Brenner create the schedules for four research ships. The challenge is to keep the scientists, funding agencies, and foreign governments happy.

View full profile …

Curriculum Vitae

Dawn Jeannine Wright
Professor
Department of Geosciences
Oregon State University
Corvallis, Oregon 97331-5506

Research Interests

Geography - Geographic information systems (GIS) and spatial analysis; marine geography; geography of Cyberspace; metadata; geographic information science in higher education.

Marine Geology - Fissuring, faulting, hydrothermal, and magmatic processes at mid-ocean ridges; volcanic-tectonic cycles and hydrothermal circulation; processing and interpretation of high-resolution deep-sea video and photographic images.

Education

1994 Ph.D., Geography and Marine Geology, University of California, Santa Barbara, CA
1986 M.S., Oceanography, Texas A&M University, College Station, TX
1983 B.A., cum laude, Geology, Wheaton College, Wheaton, IL

Professional

2002-present Professor, Department of Geosciences, Oregon State University
1999-2002 Associate Professor, Department of Geosciences, Oregon State University
1995-1999 Assistant Professor, Department of Geosciences, Oregon State University
Jan 1995-Sept 1995 Post-doctoral Research Associate, NOAA-Pacific Marine Environmental Lab, Oregon State University Hatfield Marine Science Center
1990-1994 Graduate Student Researcher, Marine Science Institute and National Center for Geographic Information and Analysis, University of California, Santa Barbara (UCSB)
1986-1989 Marine Laboratory Specialist, Logistics and Technical Support, Ocean Drilling Program, Texas A&M University
1985-1986 Graduate Research Assistant, Science Operations, Ocean Drilling Program, Texas A&M University

Honors And Awards

2004 Fulbright Grant to Ireland, Senior Specialists Program in Information Technology, University College Cork, Coastal and Marine Resources Centre.
2001 Excellence in Mentoring Award, OSU College of Oceanic and Atmospheric Sciences.
1999 Biography featured in *Portraits of Great American Scientists*, edited by 1988 Nobel Laureate in Physics, Leon M. Lederman, and Judith Scheppler of the Illinois Mathematics and Science Academy, published by Prometheus Books.
1999 Woman of the Year in education; selected by *Clarity Magazine*, a Guideposts publication for women.
1999 Outstanding Professor Award, OSU University Honors College
1999 Invited presentation at TED (Technology, Entertainment, Design), a prestigious, "wildly eclectic conference of remarkable thinkers and doers."
1998 Excellence in Mentoring Award, OSU College of Oceanic and Atmospheric Sciences
1997 U.S. Fellow, RIDGE/Nordic Volcanological Institute Summer School on Active Processes at Mid-Ocean Ridges, Lake Myvatn, Iceland
1997 Listing in 20th edition of *American Men & Women of Science (AMWS)*, a biographical directory of today's leaders in physical, biological and related sciences, R.R. Bowker Publisher
1996 U.S. Fellow, International Young Scholar's Summer Institute in Geographic Information, Berlin, Germany
1995 Faculty Early Career Development Award (formerly the Presidential Young Investigator Award), National Science

Foundation

1995 UCSB Graduate Division Commencement Speaker Competition, Finalist

1993-1994 Ford Foundation Dissertation Fellowship, National Research Council

1990-1993 University of California President's Fellowship

1991 Environmental Systems Research Institute Student Assistantship

1987 Phi Kappa Phi

1983-1985 Texas A&M University Minority Merit Fellowship

1980-1984 American Geological Institute Scholarships & American Geophysical Union "Sea Scholar" Designations

1983 National Science Foundation Graduate Fellowship, Honorable Mention

1982 National Dean's List

1982 Wheaton College Alumni Association Senior Scholarship for "Outstanding Christian Character, Citizenship, Contribution to Campus Life and Grade Point Average"

1979 Robert H. Ogle Scholarship, Alpha Phi Alpha Fraternity, for "Outstanding Proficiency in Athletics Combined with Excellence in Scholarship"

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OTHER

Cycling (former collegiate and United States Cycling Federation licensed racer)

Peanuts Comic Strip Collectibles

Independent Films

Film Animation

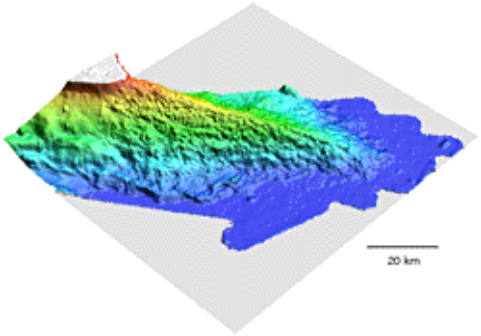
Native American Rights

Travels in Australia, Barbados, Canada, Chile, Denmark, Easter Island, Fiji, France, Germany, Guam, Honduras, Hong Kong, Japan, Kenya, Mauritius, Mexico, the Netherlands, New Zealand, Samoan islands, Singapore, Sri Lanka, Tahiti, the United Kingdom and most of the USA

Maps and Locations

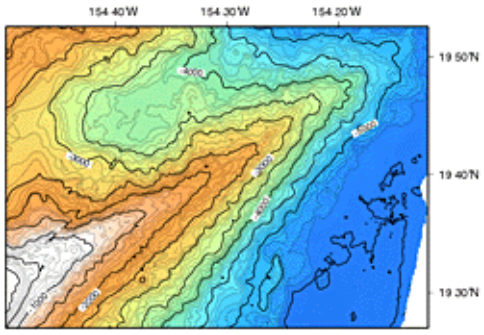
Topographic and Bathymetric Maps

Topographic maps show the elevation of Earth's surface above mean sea level. Bathymetry maps show water depth or depth of the seafloor below mean sea level. An example of a three dimensional bathymetry map is shown in the first figure. Colors represent water depths. Reds and yellows are shallow, blues are deep. The submarine ridge depicted here plunges from sea level (0 meters) to 5000 meters below sea level.



Three-dimensional map of a submarine volcanic ridge.

Some maps have contours on them. On a topographic map, contours are lines of equal elevation. On a bathymetry map, contours are lines of equal water depth. A contour map of the submarine ridge shown in three dimensions above is presented in the second figure. The contour interval is 100 meters meaning that each line represents an increment in water depth of 100 m (for example, contours of 100, 200, 300, 400 m, etc. water depth).



Contour map of the submarine volcanic ridge shown in the first figure.

The underwater ridge is located next to the Big Island of Hawaii. The location of the ridge on the surface of the Earth is specified by latitude and longitude marked on the edges of the contour map. What are latitude and longitude?

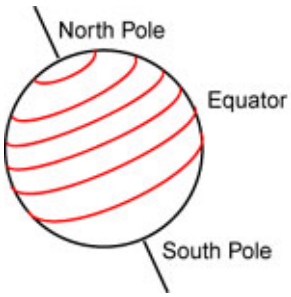
Latitude and Longitude

If the Earth were flat, rectangular coordinates (x,y) would be sufficient to describe the locations of points on its surface. However, Earth is a sphere with no sides, and a special frame of reference is needed. The poles of Earth provide this reference frame.

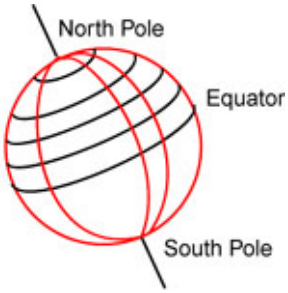
The equator is an imaginary circle around the Earth located halfway between the north and south poles. Other lines drawn parallel to the equator but shifted to the north or south are called lines of latitude. At the equator the latitude is 0°,

halfway to the pole it is 45°, and at the poles it is 90°

Lines running north/south through the poles are called lines of longitude (or meridians). Longitude is the number of degrees east or west of the prime meridian (0°) which passes through Greenwich, England.

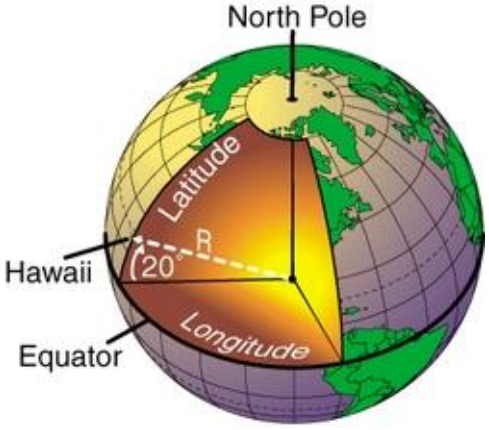


Lines of latitude



Lines of longitude

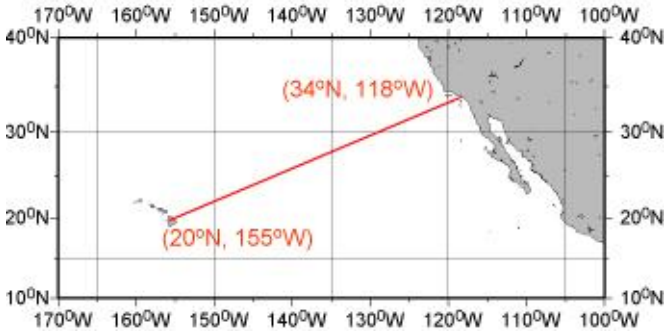
Locating Hawaii on the Earth



Cutaway globe showing the location of Hawaii on Earth

Hawaii is in the northern hemisphere and is located 20° north of the equator and 155° west of the Prime Meridian (Greenwich, England) as shown on the cutaway globe to the right.

Calculating the distance between two points on the Earth's surface



Map of the East Pacific between Hawaii and San Diego.

Above is a map of the East Pacific ocean between Hawaii and the southwestern U.S. with latitude and longitude marked on its edges. The coordinates of Hawaii (20°N, 155°W) and Los Angeles (34°N, 118°W) are labeled. A red line connects these two points.

The distance between Hawaii and Los Angeles (the red line on the map above) can be calculated from their latitudes and longitudes.

A: Hawaii (20°N, 155°W)

B: Los Angeles (34°N, 118°W)

Latitude (*phi*) and longitude (*theta*) are related to rectangular coordinates (x,y,z) by the relationship

(*x,y,z*) = (*R*sin(*theta*)cos(90° - *phi*), *R*sin(*theta*)sin(90° - *phi*), *R*cos(*theta*))

where *R* is the radius of the sphere.

Using these concepts, the distance, *D*, between Hawaii and Los Angeles can be calculated from the formula

D = *R* (0.7861)

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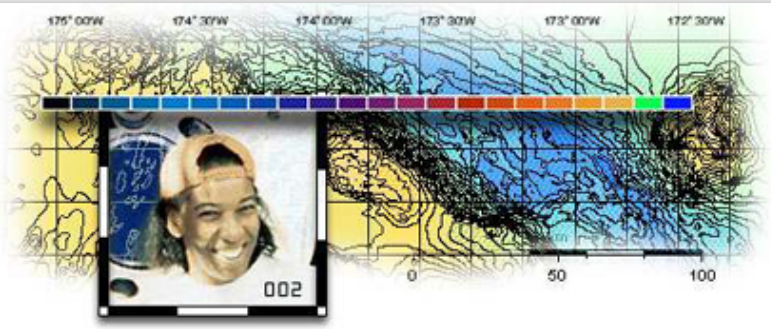


Dawn Wright

Professor, Department of Geosciences
Oregon State University

More about Dawn

Profile
Dawn's profile.
Interview
Read an interview with Dawn.
Background
Get more info on Dawn's background.
Picture Gallery
See images of Dawn at work.
Learn More
Learn more about Dawn's field
Dawn's Calendar
See Dawn's typical work week.
Related Links
Other sites related to Dawn's career.

Calendar

Monday


Dawn points out features on a map.

9:00
Workout out in campus rec center (weights and exercise bike).
10:15
Respond to emails and phone calls
11:00
Teach Honors section of an Introductory Oceanography class (lasts 50 minutes, 6 students). OSU has a special Honors College for its best undergraduate students.
12:15
Meet with graduate teaching assistants for my regular Introductory Oceanography class and my Advanced GIS class.
1:00
Teach regular Introductory Oceanography class (http://dusk.geo.orst.edu/oceans, lasts 50 minutes, 250 students).
2:00
Office hour and lunch.
3:00
Respond to emails and phone calls.
4:30
Take dog for a walk. Dawn's dog, Lydia, comes to campus with her every day and has special permission to hang out in her building.
5:00
Prepare for evening lecture.
6:00
Teach Advanced Geographic Information Systems class (http://dusk.geo.orst.edu/buffgis, lasts an hour and a half, 25 students).
7:30
Prepare lectures/activities for next classes and/or try to get research or writing done, depending on deadlines

More Remark

Melanie Holland
Faculty Research Associate, Microbial Ecology

Melanie Holland studies the microbes that thrive in scalding temperatures surrounding hydrothermal vents. These amazing organisms not only reveal important information about the vent communities, they may also provide insights into the origin of life on Earth and the possible existence of life on other planets.

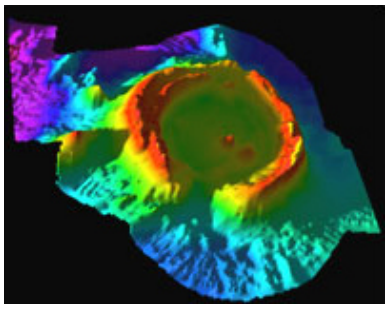
View full profile …

Lauren Mullineaux
Senior Scientist, Marine Biology

Lauren Mullineaux's research group studies a side of benthic organisms (animals that live on the seafloor) that until

research or writing done, depending on deadlines.

Tuesday



Three-dimensional view of a volcano on the seafloor.

10:00
Workout in campus rec center (weights).
11:00
Road or mountain bike ride if weather allows.
1:00
Lunch.
2:00
Respond to emails and phone calls.
4:00
Attend Geography seminar - held every Tuesday at 4 p.m. (our department also holds Geology seminars every Thursday at 4 p.m.).
5:00
Try to get research or writing done, depending on deadlines.

Wednesday

Dawn on the beach with her dog Lydia.

Rest day from gym workout out in campus rec center.

9:30
Respond to emails and phone calls.
11:00
Teach Honors section of an Introductory Oceanography class (lasts 50 minutes, 6 students).
12:00
Respond to emails and lunch.
1:00
Teach regular Introductory Oceanography class (lasts 50 minutes, 250 students).
2:00
Office hour.
3:00
Attend Geoscience faculty or committee meeting. Scientists in the department meet to talk about departmental issues every month on Wednesdays for a faculty meeting, or on other Wednesdays for various committee meetings (depending on the need).
5:00
Take dog for a walk.
5:30
Prepare for evening lecture.
6:00
Teach Advanced Geographic Information Systems class, discussion sessions outside on the grass if weather allows (lasts an hour and a half, 25 students).
7:30

the seafloor) that until recently has received little attention.

View full profile …

Jo Griffith
Principal Illustrator, Scientific and Oceanographic Data

Technical illustrator Jo Griffith hasn't picked up a pen in over five years. Instead she uses a variety of computer programs to create graphs, maps, and illustrations for researchers.

View full profile …

Emily Klein
Professor of Geology, Geochemistry

Emily collects rocks from the deep seafloor. The chemicals that make up the rocks provide clues to how the oceanic crust is built.

View full profile …

Wen-lu Zhu
Associate Scientist, Geology and Geophysics

Wen-lu Zhu studies the properties of rocks found deep in the ocean crust by recreating those conditions in the laboratory.

View full profile …

Prepare lectures/activities for next classes and/or try to get research or writing done, depending on deadlines.

Thursday

Marine and Coastal GIS poster outside Dawn's office.

10:00
Workout in campus rec center (weights).
11:00
Teach Honors Oceanography lab (lasts 2 hours).
1:00 - 2:00
Lunch. Respond to emails and phone calls.

4:00
Work on web sites and logistics for an upcoming national conference of the University Consortium for Geographic Information Science (UCGIS, http://www.ucgis.org). Dawn is the local arrangements chair for the conference and serves as a delegate, communications chair, and education committee member for the UCGIS.

5:00
Meeting in Dawn's lab, Davey Jones Locker, with all her graduate students to track their progress and address any of their questions or concerns. Cookies and/or chips and salsa.

6:00
Respond to emails, try to get research or writing done.

Friday

Dawn on her bicycle.

9:00
Workout out in campus rec center (weights and exercise bike).
10:15
Respond to emails and phone calls.
11:00
Teach Honors section of an Introductory Oceanography class (lasts 50 minutes, 6 students).
12:00
Respond to emails.

1:00
Teach regular Introductory Oceanography class.

2:00
Lunch and take dog for walk.

3:00
Work on research proposals in progress so Dawn can go on more expeditions and do more neat research.

4:00
Attend a staff meeting for Virtual Oregon, a new project that Dawn is leading to establish a data center at Oregon State for natural resources and environmental data of Oregon (including oceanographic data off the Oregon coast).

8:00
Attend a movie or community discussion group in Corvallis.

Ashanti Pyrtle
Assistant Professor, Aquatic Science

Ashanti Pyrtle studies the fate of radioactive material that enters rivers, lakes, and oceans. She also advises minority science students on how to navigate through graduate school and prepare for a career afterwards.

View full profile …

Debby Ramsey
Third Engineer, Marine Crew

As Third Engineer onboard the Research Vessel Thomas G. Thompson, Debby Ramsey helps keep all of the equipment that has moving parts running smoothly.

View full profile …

Maya Tolstoy
Research Scientist, Geophysics

Marine seismologist Maya Tolstoy helps find active volcanoes on the seafloor by listening for their eruptions.

View full profile …

Rose Dufour
Ship Scheduler and Clearance Officer, Ship Operations and Marine Technical Support

Rose Dufour and her job-share partner Elizabeth Brenner create the schedules for four research ships. The challenge is to keep the scientists, funding agencies, and foreign governments happy.

View full profile …

Dawn enjoys watching independent films and discussing them afterwards with a group at the Logos House Christian Student Center, or participating in discussions about challenges to women and minorities as part of the community lecture series called "Beyond Black History Month".

Claudia Benitez-Nelson
Assistant Professor, Chemical Oceanography

Claudia Benitez-Nelson uses radioactive isotopes to study the complex world of nutrient cycling in the oceans.

View full profile …

Kathryn Kelly
Professor (Affiliate), Physical Oceanography

Kathryn Kelly studies how changing ocean currents affect the climate. And she does all of her research from the comfort of her office.

View full profile …

Amy Bower
Associate Scientist, Physical Oceanography

Amy studies the interactions between ocean currents and climate. These interactions are very complex.

View full profile …

Kathryn Gillis
Professor, Earth and Ocean Sciences

Kathryn Gillis dives to rifts in the seafloor that are as deep as six kilometers to learn about the processes taking place within the ocean crust.

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Margaret Leinen
Assistant Director

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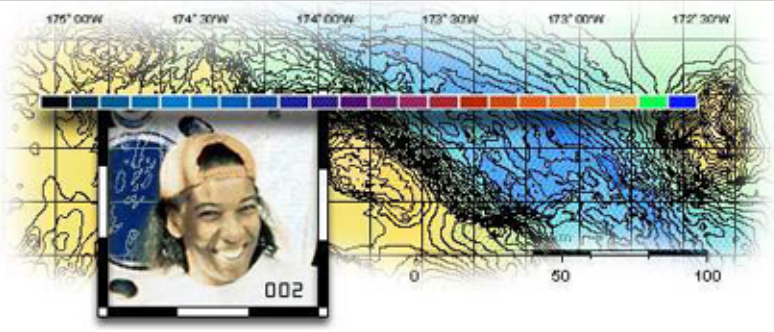

Related Links

Dawn's homepage
http://dusk.geo.orst.edu/index.html

Oregon State University Home Page
http://osu.orst.edu/

Geographic Information Systems - What is it?
http://www.esri.com/getting_started/about-gis.html

Ocean Drilling Program
http://www-odp.tamu.edu/

Deep submergence vehicles
http://www.whoi.edu/marops/vehicles/index.html

Dawn Wright

Professor, Department of Geosciences
Oregon State University

More about

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Dawn's profile.
Interview
Read an interview with Dawn.
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Get more info on Dawn's background.
Picture Gallery
See images of Dawn at work.
Learn More
Learn more about Dawn's field
Dawn's Calendar
See Dawn's typical work week.
Related Links
Other sites related to Dawn's career.

More Remark

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Faculty Research Associate, Microbial Ecology

Melanie Holland studies the microbes that thrive in scalding temperatures surrounding hydrothermal vents. These amazing organisms not only reveal important information about the vent communities, they may also provide insights into the origin of life on Earth and the possible existence of life on other planets.

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Lauren Mullineaux's research group studies a side of benthic organisms (animals that live on

Women OCEANOGRAPHERS.ORG

About Us

Our goal was to design a Web site that can engage the public and school children in the day-to-day science of women marine scientists. Through this project, we hope to encourage young women to pursue careers in science and to remove the mystery that surrounds being a scientist. Over the course of a year we will highlight twelve women, underscoring the different career paths in science and the diversity of the women who choose science as a career.

The expertise of the women on our Web site covers many of the subdisciplines within marine science. The women have backgrounds in chemistry, biology, physics, engineering, mathematics, geology, or geophysics. They are at different stages in their careers and are following different career paths including research, teaching, research assistants, administration, or a combination of these at universities, research institutions, government laboratories, and companies across the country. While many of these women have earned doctorates, others have gone directly into marine science from a bachelors degree, working, for example, as programmers, graphic illustrators, and data analysts.

As the new millennium gets started we believe it is appropriate to step back and assess what women scientists across the country and across the world are accomplishing today, and how they are no longer considered 'unique' but instead are an accepted and integral part of the scientific community.

This Web site is funded by the National Science Foundation through the Program Awards to Facilitate Geoscience Education. Woods Hole Oceanographic Institution provided support through cost sharing on the funded grant.

People

Deborah K. Sm

Deborah K. Smith is an Senior Scientist at the Woods Hole Oceanographic Institution. She is the Principal investigator on the proposal. Her web site is humm.whoi.edu

Lori Dolby

Lori A. Dolby is an Information Systems Associate at the Woods Hole Oceanographic Institution and Web and Publications Coordinator at the Sea Education Association.

Ed Schiele

Ed Schiele is a Freelance Science Writer. He interviewed the women and wrote their stories.

Women E

Our knowledge of Earth and its oceans has been pieced together through the work of many individuals. Increasingly women have made significant contributions to marine science.

In this site we feature the careers of remarkable women in oceanography. Each woman has followed a different path to her career and has gathered unique insights about her profession. Learn how these women are contributing to our understanding and appreciation of the ocean and how they go about their daily work.

More Remark

Melanie Holland
Faculty Research Associate, Microbial Ecology

Melanie Holland studies the microbes that thrive in scalding temperatures surrounding hydrothermal vents. These amazing organisms not only reveal important information about the vent communities, they may also provide insights into the origin of life on Earth and the possible existence of life on other planets.

View full profile …

Dawn Wright
Associate Scientist, Geography/Marine Geology

Master Lego-constructor and former bicycle-racer Dawn Wright has immersed herself in two disciplines. As a geologist, she is studying

This is not the first time that the three of us have worked together. In 1998 we shared the experience of a peer-reviewed, NSF-funded, sea-going expedition with students and the general public by making the expedition a World Wide Web educational event. We created a dynamic Web site that was a window into 'real' science, and students and the general public were able to participate in five weeks of fieldwork. Our research cruise took place in October of 1998 off the coast of the Big Island of Hawaii. We surveyed the Puna Ridge, a submarine ridge that is part of the currently erupting Kilauea Volcano. Our cruise proposal brought together a diverse group of scientists from different disciplines (geology, geophysics, geochemistry) to identify and constrain the fundamental processes that govern the intrusion of magma and the eruption of lavas along a centrally fed rift zone. State-of-the-art technology was used and included swath bathymetry and sonar instrumentation, remotely operated vehicles, bottom-towed magnetometers, digital photography, and rock dredging and glass coring apparatus. The Web site is now used as a teaching resource: punaridge.org

The site was redesigned and made Web compliant in 2004/2005 by Jeffrey Croft graphic designer and web developer. See his web site for more information about his work: jeffcroft.com

Carol McLeod Design Company produced the collages of the women.

Breago designed and implemented the content management system for you web site. They also implemented the RSS feeds and automatic site map functionality of our site.

Awards

Remarkable Careers in Oceanography has won the Exploratorium's Ten Cool Sites Award for educational excellence. Our site was featured during the month of June 2000. exploratorium.edu

Sponsors

The National Science Foundation is the primary funding agency for this web site. The Woods Hole Oceanographic Institution provided cost sharing for the development of this web site.

The Women Exploring the Ocean Web site was the result of contributions from many different people. Below we recognize those individuals and organizations that helped produce this web site.

We want to thank each of the women that we profiled for donating so much of their time to this project. All of them took time from work and home to be interviewed, photographed, and to provide all of the materials that we requested.

We thank Cheryl Simmers for her enthusiastic support for our project and the advice she provided during the summer of 1999 when she was a visiting grade school teacher in our lab at WHOI.

the cracks that form in the seafloor along the mid-ocean ridge. As a geographer, she is developing software that oceanographers are using to interpret seafloor data.

View full profile …

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Senior Scientist, Marine Biology

Lauren Mullineaux's research group studies a side of benthic organisms (animals that live on the seafloor) that until recently has received little attention.

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Margaret Leinen
Assistant Director for Geosciences

As a scientist, Margaret Leinen studied sediments that have accumulated on the ocean floor. Now as the Assistant Director of Geosciences at the National Science Foundation, she oversees programs in Earth, Atmosphere, Ocean, and Environmental Sciences. She is also working on initiatives to bring more women and minorities into these fields.

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