NAME
Northwest Aquatic & Marine Educators

Presents

Sky

Sea

July 14 - 18, 2013
Camp Alexandra
Crescent Beach, BC
The facilities are located on 2.5 acres of fenced property, half a block from the ocean. On the grounds you will find picnic tables, a large brick barbecue, a volleyball net and a gas campfire. There is a one acre park with an Adventure Playground across Sullivan Street.

The LODGE (Dining Hall and caterer's kitchen) seats 80 people. There is a fireplace in the dining area and two washrooms.

ALEXANDRA HALL accommodates 90 people. There are two washrooms, a fireplace and a beverage bar.

The STAGEHOUSE (Dorm A) contains 23 beds in five rooms, and has three washrooms with two showers.

The LONGHOUSE contains 24 beds in 12 rooms, with balconies. There are four washrooms and two showers, an Activity Room that will accommodate 35 people and a Lounge/Dining Room that seats 30 people. There are fireplaces in both the Lounge and the Activity Room.

There are seven CABINS which accommodate four to eight people in bunk beds. (One double). There is no running water in the cabins. Washrooms for cabins are located at the SW end of the Office building. Key code is required for entry.

**Not to Scale**

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**CAMP ALEXANDRA ROOM & BED COUNT**

<table>
<thead>
<tr>
<th>Bedroom</th>
<th>T/B</th>
<th>S/T/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>#5</td>
<td>4 Beds</td>
<td>8 Beds</td>
</tr>
<tr>
<td>#4</td>
<td>4 Beds</td>
<td>8 Beds</td>
</tr>
<tr>
<td>#2</td>
<td>4 Beds</td>
<td>8 Beds</td>
</tr>
<tr>
<td>#1</td>
<td>3 Beds</td>
<td>6 Beds</td>
</tr>
</tbody>
</table>

- **Dorm A (Stagehouse) Total 23 Beds In 5 Rooms**
- **Cabin 1** 8 Beds
- **Cabin 2** 4 Beds
- **Cabin 3** 7 Beds
- **Cabin 4** 7 Beds
- **Cabin 5** 7 Beds
- **Cabin 6** 5 Beds
- **Cabin 7** 4 Beds

This layout details the number of bedrooms and beds in each room. Beds are either singles or bunk beds.

**Total Beds Available: 89**
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Photo Credit: Vladimir Menkov
Welcome to Camp Alexandra!

Alexandra Neighbourhood House is a place for people of all ages, abilities and cultures, providing programs, services, community events, residential camps and seasonal day camps for our community on the Semiahmoo Peninsula and beyond. Alex House is a popular retreat and conference centre, with its waterfront location and spectacular ocean view. Alexandra Neighbourhood House is a member of the Association of Neighbourhood Houses of BC and is a partner agency of the United Way of the Lower Mainland.

Conference Themes

Transforming Knowledge into Action

How do we inspire students to take that next step? How do we transform a lesson into action? What tools do students need to become the next aquatic stewards? Share tools, stories, and resources of how you are transforming knowledge into action.

Exploring the Watershed to the Deep-Sea

What we do on land eventually influences the ocean; how are the watershed and deep-sea connected? Share new scientific findings and resources to help bring the earth’s water system into the classroom.

New Waves in Aquatic Education

What is working and why? Share your ideas, curricula, materials, and favorite resources. Introduce participants to new methods you are using with your audiences.

NAME Conference Traditions

With thirty-seven conferences under our collective belt, we can’t help but have a few traditions. If you are a first-time NAME member or conference attendee (and even if you aren’t), read on…

NAME Board Meeting: This is a gathering of NAME’s leaders (at least, the elected and appointed ones). All NAME members are invited to witness leadership in action, come meet the core members of NAME, bring your suggestions, new ideas and complaints.

SeaFaire: Consider it an idea and innovation garage sale, free of charge. Browse brochures, flyers, curriculum, and lots of free giveaways. SeaFaire will be held outside if it is nice, from 12:00 to 1:30 on Wednesday, July 17. If the weather is inclement, the covered area on the stage house or the Alexandra Hall will be the alternative. Conference attendees and local organizations are welcome to reserve a table and show off during this event.

Annual NAME Auction: Always a conference highlight, the auction raises funds for NAME’s mini-grant and scholarship programs. Auction items are varied and donated by members and local organizations, and you never know what will be on the table. There is normally both a silent and live auction. This year’s auction will have a Hawaiian theme, so come dressed in your favourite Aloha shirt!

Chapter Meetings: These meetings give members of each province and state a chance to meet together and plan the upcoming year. Find out what great stuff is happening in your own backyard.

NAME General Business Meeting: U.S. non-profit law requires a general membership meeting once each year, and this is it. Don’t miss this opportunity to learn about the latest NAME innovations, programs, and plans for the future. Be involved.

NAME Awards Banquet: Don’t miss a great evening capped off with our annual fund-raising auction, food, friends, and fun!
General Conference Information

NAME Registration/Information Desk: Registration and check-in will begin at 3:00 pm on Sunday, July 14. The NAME Registration/Information Desk will be in the Longhouse and will be open all day. It will remain open as needed Monday, Tuesday, Wednesday.

Presenters: Please check in at the registration table and double check the media set up prior to speaking. Don’t hesitate to ask for support if you need it.

SeaFaire: SeaFaire will be held outside if it is nice, from 12:00 to 2:00 on Wednesday, July 17. If the weather is inclement, the covered area on the stage house or the Alexandra Hall will be the alternative. We encourage exhibitors to be near their booths during lunchtime Wednesday so folks can ask you questions about your programs.

Message Board: There will be a message board at the registration table in the Longhouse if you want to coordinate rides or simply leave people messages.

NAME tags: Wear ‘em! They are your tickets to events, food, and other cool stuff. Besides, it helps you hide the fact that you can’t quite remember that person you met last year, and helps people you meet for the first time remember you next year.

Meals: All meals will be provided for registered participants and their registered guests. Most meals will be served in the Lodge Dining Hall. If you would like to purchase meals for a guest, please see someone at the registration table. The opening night Reception will be held on Sunday, July 14 at Beecher Place with a beautiful panoramic view. The reception will include 2 drinks and appetizers. Beecher Place is located on the beach front at 12160 Beecher Street in Crescent Beach.

Guest Meal Tickets: If you have purchased additional tickets for your guest/s for meals, banquet, auction, etc., you will receive a name tag for your guest at registration when you check-in. Please use these for entrance to these events.

Field Trips: If you have signed up for a field trip, please confirm your slot when you check in at the registration table and check for departure time and carpool information. If you haven’t signed up yet, we encourage you to check to see if there are any openings left…we’d love to have you join us for an experience that will highlight the rich environment of the lower mainland!

Beverage Cup/Water Bottle: We are dedicated to the Green Conference philosophy. We have made the decision to avoid providing beverage cups for breaks and the like. Please, don’t forget to carry your own cup with you.

Event Waiver Form: Just in case you snuck by us, make sure you have a signed Event Waiver Form turned into Registration. These forms are protection for NAME and you!
Conference Planning Committee

The following people put in countless hours to coordinate everything that made this conference a success: speakers, field trips, presentations, lodging, food, the auction, registration, and all the other details that often go unnoticed.

Jonathan Hultquist, NAME BC Co-Director & Conference Co-Chairperson
Natasha Ewing, NAME BC Co-Director & Conference Co-Chairperson
Jennifer Magnusson, NAME Webmaster & Conference Registrar
Anne Stewart, NAME President & General Conference Support
Joy Tally, NAME President-elect & On-site Registration
Fawn Custer, Concurrent Sessions Coordinator
Yvonne Dawydiak, Field Trip Coordinator & Local Contact
Wade Janzen, Volunteer Coordinator
Alan Rammer, Auction Coordinator

About Northwest Aquatic & Marine Educators

NAME was founded in 1976 and became a chapter of the National Marine Educators Association in 1980. In the early 1990s NAME expanded its mission and membership to include all aquatic environments, recognizing that marine and aquatic ecosystems, environments, and issues are linked together, and that educators working in both environments share common beliefs and strategies. NAME includes members from Alaska, British Columbia, Washington, and Oregon. Annual NAME conferences rotate through these states and provinces. In addition, each state or province offers local professional development opportunities for formal and non-formal educators.

NAME is a “family” of educators who believe:

• That every human on Earth needs to be water-literate.
• In sharing our knowledge, experiences, and visions about the world of water with others.
• That the sharing of that vision creates a community, and that this community supports each of us personally and professionally.
• That informed stewardship of the ocean and watersheds of our region is essential for the continued survival of all life, and the cultural and spiritual well-being of the stewards.
• In using the allure of water, both salt and fresh, to enrich and facilitate learning in all subjects and environments.
• These are our Core Values, values that drive the work we do. We are also guided by a Strategic Plan, annual education and event plans for each province and state, and an innovative, energetic Board of Directors.

Our Goals

• Encourage professional growth by offering quality workshops, conferences, field experiences, and in-services in the Pacific Northwest
• Share information and education materials focused on marine and aquatic environments and issues
• Promote the magic of water as a catalyst for learning
2012-2013 NAME Leadership

**Board of Directors**
Anne Stewart, President, BC  
Fawn Custer, Past-President, OR  
Joy Tally, President-elect, OR  
Maile Sullivan, Secretary, WA  
Robin Dublin, Alaska Director  
Jonathan Hultquist, British Columbia Co-director  
Natasha Ewing, British Columbia Co-director  
Jenna Kulluson, Oregon Co-Director  
Sarah Mikulak, Oregon Co-Director  
Amy Sprenger, Washington Co-Director  
Casey Ralston, Washington Co-Director

**Committee Chairs**
Joy Tally, Communications Co-Chair, OR  
Liz O’Connell, Communications Co-Chair, OR  
Amy Sprenger, Flashmail Manager, WA  
Jennifer Magnusson, Webmaster, WA  
Gretchen Glaub, Membership Chair, WA  
Pat Willis, Award Chair, OR  
Fawn Custer, Mini-grants/Scholarships Chair, OR
# Concurrent Sessions

<table>
<thead>
<tr>
<th>Monday • 10:00 - 11:00 am • Session 1a</th>
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<tbody>
<tr>
<td>LDG TKA From Our Watershed to YouTube</td>
</tr>
<tr>
<td>Eva LaMar, 4th grade teacher, Springfield Public Schools</td>
</tr>
<tr>
<td>LL/F NWA Virtual Field Trips: Connecting Students and Scientists</td>
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<tr>
<td>Callie Stark, Education Specialist, Alaska SeaLife Center</td>
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<table>
<thead>
<tr>
<th>Monday • 10:30 am - 12:00 pm • Session 1b</th>
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<tbody>
<tr>
<td>LAR/F NWA Turning the Tides (Tides Module) with Maury Project</td>
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<tr>
<td>Lauren Brooks, Grade 9-12 science Teacher, Mount Vernon High School</td>
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<tr>
<td>AH NWA Environmental Learning Grounded in Place: Earth Science Meets Seaquaria in Our Community</td>
</tr>
<tr>
<td>Eileen Van der Flur-Kellers, Assoc. Prof., Univ. of Victoria, School of Earth and Ocean Sci.</td>
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<tr>
<td>Catherine Carolsfeld, Seaquaria in Schools</td>
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<thead>
<tr>
<th>Monday • 11:00 am - 12:00 pm • Session 2</th>
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<tbody>
<tr>
<td>LDG TKA Natures Classroom</td>
</tr>
<tr>
<td>Sarah Atherton, Education Program Coord., Langley Environmental Partners Soc.</td>
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<tr>
<td>Stephanie Captain, Agriculture Program Coord., Langley Environmental Partners Soc.</td>
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<tr>
<td>LL EWD The Cascadia Initiative: Deployment and recovery of deep-sea seismometers</td>
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<tr>
<td>Dr. William Huhshamaker, Oregon Sea Grant Chief Scientist, OSU/Hatfield Mar. Sci. Ctr</td>
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<tr>
<th>Monday • 1:00 - 2:00 pm • Session 3</th>
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<tbody>
<tr>
<td>LDG NWA Manned Submersibles: Simulated Exploration from the Classroom</td>
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<tr>
<td>Erika Bergman, Submersible Pilot/Educator, ExploreOcean.org</td>
</tr>
<tr>
<td>David Todd, Education and Outreach Director, ExploreOcean.org</td>
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<tr>
<td>AH EWD Aliens Amongst Us—Easy ways to interest kids in science, biology</td>
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<tr>
<td>Orlay Johnson, Biologist at NOAA (retired)</td>
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<tr>
<td>LAR TKA Turn Your Students into Effective Community Educators</td>
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<tr>
<td>Cara Ianni, Resource Conservation Program Manager, Seattle Tilth</td>
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<tr>
<td>LL NWA Marine Science for The Classroom</td>
</tr>
<tr>
<td>Monica Pelz, K-12 Marine Science Activity Developer, Ocean Networks Canada</td>
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<tr>
<td>Natasha Ewing, K-12 Education Coordinator, Ocean Networks Canada</td>
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<tr>
<th>Monday • 2:00 - 3:30 pm • Session 4</th>
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<tr>
<td>LDG TKA Learning from Observing Visitors: What Visitors can tell us about their own Learning</td>
</tr>
<tr>
<td>Dr. Shawn Rowe, Professor, Oregon State University/HMSC</td>
</tr>
<tr>
<td>AH TKA Seaquaria in Schools: The Classroom - Community Connection</td>
</tr>
<tr>
<td>Pat Carrico, Grade 3 Teacher, Vic West Elementary Sch.</td>
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<tr>
<td>Lauren Brain, Teacher - District First Things First Program, Vic West Elementary Sch.</td>
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<tr>
<td>Tanya Wardle, Classroom Teacher - Gr. 4-5, Hillcrest Elementary School</td>
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<tr>
<td>LL/F NWA The Oregon Coast Education Program: Bringing the coast to your classroom</td>
</tr>
<tr>
<td>Jenna Kullison, Coastal Education Specialist, South Slough NERR</td>
</tr>
<tr>
<td>LAR NWA OceanLiveTV - A StoryWorld for Ocean Literacy</td>
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<tr>
<td>Rich Seave, Manager, Education &amp; Public Engagement, Ocean Networks Canada</td>
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<tr>
<th>Tuesday • 11:00 - 12:00 pm • Session 5</th>
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<tbody>
<tr>
<td>LDG NWA Ship-2-Shore Marine Educators</td>
</tr>
<tr>
<td>Natasha Ewing, K-12 Education Coordinator, Ocean Networks Canada</td>
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<tr>
<td>AH EWD Environmental Lessons From the Traditional Knowledge and Wisdom on Long-term Peoples</td>
</tr>
<tr>
<td>Gloria Sivriy, Professor, University of Victoria</td>
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<tr>
<td>LAR/F TKA Restoring Pride and Knowledge in Traditional Harvesting Practices: A project for high school students</td>
</tr>
<tr>
<td>Michèle Tomason, French Immersion/Aboriginal/Environmental Ed Teacher, Esquimalt HS, MA Candidate in Environmental Ed at UVic</td>
</tr>
<tr>
<td>Wilfred George, Director of the Lekwungen Harvesters Community Garden</td>
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<tr>
<td>LL/F TKA An Aquarium for All: Learning how to better engage our entire community</td>
</tr>
<tr>
<td>Giovannina Souns, Broadening Participation Coordinator, Seattle Aquarium</td>
</tr>
</tbody>
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AH: Alexandra Hall
LL: Longhouse Lounge
LAR: Longhouse Activity Room
LDG: The Lodge
F: Field
### Concurrent Sessions

**Wednesday • 10:00 - 11:00 am • Session 6a**

| AH/F | TKA | Exploring Our Place: Schoolyard (and Backyard) Fieldtrips  
Jennifer Stonehouse, Elementary teacher and education consultant  
Sarah Lockman, Educational consultant and adult educator  
Learning in Place Educational Consulting |
|------|-----|-------------------------------------------------------------|
| LAR  | NWA | What’s that on the beach?  
Danielle Ason, Graduate Student, Oregon State University |
| LL   | NWA | Korean elementary students’ perceptions of relationship with marine organisms  
Jong-Mun Kim, Doctoral Student, University of British Columbia  
Dr. David Anderson, Professor, University of British Columbia  
Dr. Sandra Scott, Instructor, University of British Columbia |
| F    | EWD | Water Connections Games  
Kelsey Shore, Aquavan Coordinator, Vancouver Aquarium Marine Science Centre  
Catriona Wilson, AquaZone Coordinator, Vancouver Aquarium Marine Science Centre |

**Wednesday • 10:00 am - 12:00 pm • Session 6b**

| LDG  | NWA | Communicating About Climate Change Through Metaphor: Using the Heat Trapping Blanket Model  
Joy Talley, Education Specialist, South Slough NERR  
Jenna Kulluson, OCEP Program Coordinator, South Slough NERR |
|------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LAR  | TKA | Species at Risk in the classroom  
Pamela Zevit, Coordinator, South Coast Conservation program |
| LL   | NWA | Searching for effective environmental education: A study of children’s environmental knowing  
Dr. Sandra Scott, Professor of Teaching, UBC  
Dr. Douglas Adler, Lecturer, UBC |
| AH   | NWA | Size and Sex: How Citizen Science turned crab fishing Regulations into Conservation through volunteer Interpretation and Education  
Melissa Holloway, Beachkeeper Coord./Park Interpreter, Metro Vancouver Reg. Parks |

**Wednesday • 11:00 am - 12:00 pm • Session 7**

| AH  | TKA | Building Future Marine Biologists: The Vancouver Aquarium’s Counting on Howe Sound Program  
Jennifer Stonehouse, Elementary teacher and education consultant  
Sarah Lockman, Educational consultant and adult educator  
Learning in Place Educational Consulting  
Laurel Johnston, School Programs and Campus Coordinator, Vancouver Aquarium |

**Wednesday • 2:00 - 3:00 pm • Session 8a**

| LL  | EWD | Why Does Water Clarity Matter?  
Barbara Kiethly, Beach Watcher, Youth Ed Team Lead, WSU Extension, Beach Watchers |
|-----|-----|--------------------------------------------------------------------------------|
| F   | EWD | Beyond the Shores and Into The Abyss  
Perry Poon, Props Coordinator, Vancouver Aquarium |
| LAR | NWA | Attend the birth of C-NOL, the absolutely new, Canadian Network for Ocean Literacy  
Anne Stewart, Marine Education and Communication Specialist, Bamfield, BC  
Natasha Ewing, K-12 Education Coordinator, Ocean Networks Canada  
Rick Searle, Manager, Education & Public Engagement, Ocean Networks Canada |

**Wednesday • 3:00 - 4:30 pm • Session 8b**

| AH  | NWA | Culturing Marine Education: Western Science In Indigenous/ Multicultural Science Education  
Karen Matsumoto, School Outreach Coordinator, Seattle Aquarium |
|-----|-----|-----------------------------------------------------------------------------------------------|
| LAR | NWA | Linking Watershed Education to the “Real World”  
Jennifer Hopper, Education and Outreach Coordinator North, Taylor Shellfish Farms  
Nicole Hopper, Education and Outreach Coordinator North, Taylor Shellfish Farms |
| LL  | TKA | Ocean Acidification in Every Classroom  
Paul Williams, Shellfish Biologist, Suquamish Tribe |

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TKA: Transforming Knowledge into Action  
EWD: Exploring the Watershed to the Deep-Sea  
NWA: New Waves in Aquatic Education
Conference at a Glance

**Sunday, July 14**
8:00 am–12:00 pm .....NAME Board of Directors meeting
3:00 pm ..................Registration Opens
7:00 pm ..................Opening Reception at Beecher Place

**Monday, July 15**
7:30–9:00 am .........Breakfast and Registration
9:00-10:00 am ........Speakers: Nikki Wright & Earl Claxton
10:00–11:00 am ......Concurrent Session 1a
10:30 am–12:00 pm ...Concurrent Session 1b
11:00 am–12:00 pm ...Concurrent Session 2
12:00–1:00 pm ........Lunch
1:00–2:00 pm ..........Concurrent Session 3
2:00–3:30 pm ..........Concurrent Sessions 4
5:00–6:00 pm ........Dinner and Chapter Meetings
8:00–10:00 pm ........Campfire

**Tuesday, July 16**
7:30–9:00 am .........Breakfast and Registration
9:00–10:00 am ........NAME Speaker & AGM
10:00 am–11:00 am ...Speaker: Elizabeth May
11:00 am–12:00 pm ...Concurrent Session 5
12:00 pm ..............Brown Bag Lunch pick-up
Afternoon (varies)......Field Trips
5:00–6:00 pm ..........BBQ Dinner
6:00–8:00 pm ........Poster Session and Silent Auction

**Wednesday, July 17**
7:30–9:00 am ........Breakfast and Registration
9:00-10:00 am ..........Speaker: Chris Harley
10:00–11:00 am ......Concurrent Session 6
11:00 am–12:00 pm ...Concurrent Session 7
12:00–1:00 pm .........Lunch
12:00–2:00 pm ......SeaFaire
2:00–3:00 pm ..........Concurrent Session 8a
2:00–3:30 pm ..........Concurrent Sessions 8b
5:00–8:00 pm ..........Banquet Dinner, Live Auction, Raffle

**Thursday, July 18**
7:30–9:00 am ........Breakfast
9:00–9:30 am ........Closing Remarks & Slideshow
12:00–1:00 pm .........Lunch
1:00 pm ..................Closing Ceremony
Varies.....................Post-conference Field Trips & Workshops

Photo Credit: Joe Mabel
Conference Details

Sunday, July 14

8:00 am–12:00 pm .....NAME Board of Directors meeting (Longhouse)

The NAME Board of Directors will meet in the Longhouse. Board meetings are open to any NAME member who would like to sit in and hear what’s happening in the organization at the grass-roots level!

2:45–4:45 pm .............Field Trip: Be a Beach Hero! Interpreted Intertidal Walk ($5)

Be a Part of the Solution: Enjoy an interpreted tour of the Crescent Beach shoreline at low tide while participating in a Shoreline Cleanup! Encounter the singing fish; learn about the incredible biodiversity and special adaptations of life in the intertidal zone; spot eagle and heron feasting in the bay all while practicing conservation-minded beach etiquette and leaving the shoreline in better shape than you found it. Led by the Beach Hero Marine Interpreters and local area naturalists active in restoration and education initiatives. Informative educational hand-outs available (Sponsored by Friends of Semiahmoo Bay Society, a local non-profit—www.birdsonthebay.ca)

3:00 pm ......................Registration Opens (Longhouse)
• Please bring in your Auction Item to drop it off here
• Receive your lodging assignment
• Field trip check-in, volunteer sign up
• Message Board Available

7:00 pm ......................Opening Reception (Beecher Place)

Appetizers and 2 drink tickets will be provided. Enjoy a welcome from NAME, the local aboriginal band, and the city of Surrey, as well as entertainment by a musical biologist.

Monday, July 15

7:30–9:00 am ..........Breakfast (The Lodge) and Registration (Longhouse)
9:00-10:00 am ..........Plenary Speakers (Alexandra Hall)

**Nikki Wright**, Executive Director of SeaChange Marine Conservation Society

**Nikki Wright** has served as the Executive Director of SeaChange Marine Conservation Society since 1998, and as Co-Chair of the Seagrass Conservation Working Group since 2001. Hands-on feet-wet marine education is a focus for much of her work throughout the Salish Sea. Nikki works with others to take what has been learned locally about eelgrass restoration in the Saanich Inlet and helps other coastal communities in B.C. contribute to a net gain of nearshore marine habitat. She considers herself very fortunate to work within communities to help make a change in the ways we perceive the ocean and all its beauty.
Monday, July 15, Continued

9:00-10:00 am ..........Plenary Speakers, Continued

Earl Claxton, Tsawout Elder

Earl Claxton is an Elder of the Tsawout (houses in the air) Nation, one of the Saanich tribes. He is a well-known and respected Elder who has considerable knowledge and experience of the traditional ecological knowledge and wisdom practices of Indigenous peoples. He has a passion for Native plants, and has an extensive knowledge of their medicinal, food and tool uses. Earl is a frequent guest speaker and field trip leader for students from kindergarten through to university. He supports the removal of invasive species and is an active promoter of beach and shoreline restoration.

This plenary will include an overview of two case studies.

Experiencing the beach with an ecological perspective

Young people can learn to map and monitor a stretch of intertidal eelgrass at a particular beach and pass on their knowledge to students following in their footsteps. Many times, eelgrass (Zostera marina – one of the two native species of eelgrass on the BC coast) is a gateway of learning during our time on the shore and in the estuary. This is the story of Nikki’s experience with eelgrass as a teacher. Suggestions will be made for exploring seagrass communities for Grades 1-6. The effects of seawalls, climate changes, and seaweed harvesting on eelgrass and sand lance habitats will be explored.

Experiencing Home through Traditional and Western Science

Learning through all the senses is one of the oldest ways we can impart love of place. The EcoRowing program, now in its ninth year, emerges young people (middle and elementary students) in the Place of the Blue Grouse (SNIDCEL, pronounced sngect kwith in Sencoten) or Tod Inlet on the Saanich Peninsula. Elder Earl Claxton shares the traditional ecological knowledge practices of the Coast Salish people. Photos and direct quotes will illustrate the students’ enthusiasm for the ethnobotanical tours, paddling and rowing, and marine studies that fill their day at this very special site.

10:00–11:00 am ..........Concurrent Session 1a

From Our Watershed to YouTube

Eva LaMar, 4th grade teacher, Springfield Public Schools
(The Lodge)

Harnessing the power of the Internet, see how students created salmon habitat stewardship Public Service Announcements (PSAs) to post on Youtube.com, classroom blogs and webpages. When students post compelling projects, parents and community members watch and learn. We have the opportunity to change riparian stewardship and increase the community stewardship of local creeks and streams and other fish habitats.

Come see what one teacher created... and learn how to create your own. Also see how you can contribute to the pool of images, movie clips, and other media that are intended for students to use is similar projects. This is inexpensive. This is powerful.
Monday, July 15, Continued

10:00–11:00 am .........Concurrent Session 1a, Continued

**Virtual Field Trips: Connecting Students and Scientists**

*Callie Stark*, Education Specialist, Alaska SeaLife Center
(Longhouse Lounge + Field)

Explore the Arctic, virtually! The Alaska SeaLife Center introduces their newest virtual field trip (VFT) following real Arctic researchers as they explore how changing sea ice conditions are impacting the marine food web. We’ll try out hands-on activities from this engaging curriculum and discuss the value of virtual field trip as an outreach tool for researchers and a unique teaching tool for educators. Participants will receive VFT and corresponding curriculum activities on CD.

10:30 am–12:00 pm ...Concurrent Session 1b

**Turning the Tides (Tides Module) with Maury Project**

*Laurelyn Brooks*, Grade 9-12 science Teacher, Mount Vernon High School
(Longhouse Activity Room + Field)

Each Year teachers are invited to apply for an opportunity to take part in an intensive Physical Oceanography course called the Maury Project, a two-week teacher enhancement program offered by the American Meteorological Society (AMS). The purpose of the program is to improve teacher effectiveness in the areas of science, technology and mathematics among pre-college students. The Maury project provides scientifically accurate and pedagogically sound instructional resource materials for teachers (k-12). Explore the Deep-Water Ocean Waves Module (one of eleven) via experiment, field trip to the beach, a powerpoint presentation and hands on activities ready for your classroom.

**Environmental Learning Grounded in Place: Earth Science Meets Seaquaria in Our Community**

*Eileen Van der Flier-Keller*, Assoc. Prof., Univ. of Victoria, School of Earth and Ocean Sci.
*Catherine Carolsfeld*, Seaquaria in Schools
(Alexandra Hall)

This workshop explores the educational value of combining life and earth science activities in the classroom and community. The Pacific Northwest is particularly well-suited to these investigations because of its coastal location, providing access to plentiful and varied marine ecosystems; and its rich earth history, preserving millions of years of geological time. Hands-on activities combine biology, geology, and palaeontology; model investigative skills; and allow participants to interact with the world of living and fossil organisms. These activities highlight connections between Earth science topics and other disciplines, and provide take-home resources to help you apply these ideas to your own community.
Monday, July 15, Continued
11:00 am–12:00 pm ... Concurrent Session 2

**Natures Classroom**
Sarah Atherton, Education Program Coord., Langley Environmental Partners Society  
Stephanie Captein, Agriculture Program Coord., Langley Environmental Partners Soc.  
(The Lodge)

Nature’s Classroom is an innovative program connecting students with the natural world as they discover where food comes from, learn how to grow their own food, and develop awareness about environmental issues and social responsibility. Participants in this session will learn about the program, take part in activities for food and garden learning, and will receive a curriculum package. (Nature’s Classroom was designed for grades 3-7.)

**The Cascadia Initiative: Deployment and recovery of deep-sea seismometers**
Dr. William Hanshumaker, Oregon Sea Grant Chief Scientist, OSU/Hatfield Mar. Sci. Ctr  
(Longhouse Lounge)

The Cascadia Initiative consists of a grid of undersea seismometers and terrestrial GPS stations. The information gathered from this network will be analyzed to measure changes in the crust along both sides of the Cascadia Subduction Zone. This ongoing research project included designing two types of deep sea seismometers, including one that is resistant to accidental encounters with trawl nets. The challenges of the deployment and recovery of these seismometers at sea has been captured on video.

12:00–1:00 pm .......... Lunch (The Lodge)

1:00–2:00 pm .......... Concurrent Session 3

**Manned Submersibles: Simulated Exploration from the Classroom**  
Erika Bergman, Submersible Pilot/Educator, ExploreOcean.org  
David Todd, Education and Outreach Director, ExploreOcean.org  
(The Lodge)

ExploreOcean, a non-profit organization, would like to invite innovative educators to help us workshop ideas in simulated ocean exploration for education. We are developing an education program based on first hand experience and we would be grateful for fellow educator’s critical feedback. Our goal is to engage young people with 1st hand experience and encourage them to consider ocean sciences and technology as a pathway to pursue their passions. Our ‘Exploration Simulator’ will create an atmosphere in the classroom that mimics the multidisciplinary nature of oceanography. Students will participate as “true to life” crew members roles in an expeditionary team simulating manned submersible operation. With this program we strive to stimulate the innovations the next generation will provide oceanography.
Monday, July 15, Continued
1:00–2:00 pm .............Concurrent Session 3, Continued

Aliens Amongst Us—Easy ways to interest kids in science, biology
Orlay Johnson, Biologist at NOAA (retired)
(Alexandra Hall)

Ideas will be presented on way to introduce young hominids to an alien phylum who arrived on the scene about 400 million years ago and dominated the seas for the next 200 million years. Why did they never venture onto the land? We will provide info appropriate for teaching a wide range of age groups about squids, octopuses, cuttlefish, nautili and prehistoric forms of the phylum.

One way to introduce these aliens is by dissection of the common squid - a creature already cheaply available at Asian markets, dissection tools can be blunt, clean up is easy, and it truly is a alien species whose evolution is both vastly different and remarkably similar to humans. Plus, at the end, we can write a greeting to your loved ones in squid ink.

Turn Your Students into Effective Community Educators
Cara Ianni, Resource Conservation Program Manager, Seattle Tilth
(Longhouse Activity Room)

Think out of the box for project-based learning and consider turning your students into community educators. Review a model curriculum, learn important tips and check-out replicable materials used to guide youth through designing and executing student-driven outreach projects related to aquatic habitat and water quality issues. Handouts will be provided.

Marine Science for The Classroom
Monica Pelz, K-12 Marine Science Activity Developer, Ocean Networks Canada
Natasha Ewing, K-12 Education Coordinator, Ocean Networks Canada
(Longhouse Lounge)

This presentation will focus on resources and activities to help bring marine science into the classroom. Educators will explore new marine resources from Let’s Talk Science and Ocean Networks Canada and participate in demonstrations and activities available for their classroom. Participants will leave with new ideas and activities that can be used in the K-8 classroom.
Learning from Observing Visitors: What Visitors can tell us about their own Learning

Dr. Shawn Rowe, Professor, Oregon State University/HMSC
(The Lodge)

Visits to museums, zoos, aquariums, and parks are key experiences in people’s learning and learning to care for and responsibly use ocean and aquatic resources. For the last 8 years, Oregon State University’s College of Education, Oregon Sea Grant (OSG), and the Hatfield Marine Science Center Visitors Center (HMSCVC) have been working on tools for better understanding how that learning happens and how to better support it. In this workshop, Shawn Rowe will showcase some of the emerging technologies being used to allow for continuous data collection about and promote active participation of learners. Dr. Rowe will demonstrate some of the tools being used currently to customize both place-based and cyberlearning experiences using real-time assessment and evaluation allowing visitors the opportunity to construct knowledge across learning contexts and become active participants in research. He will also share some initial findings from that research on how visitors learn and participants will work together with real data to explore what that can tell each of us as educators about supporting learning.

Seaquaria in Schools: The Classroom - Community Connection

Pat Carrico, Grade 3 Teacher, Vic West Elementary School
Laureen Brain, Teacher - District First Things First Program, Vic West Elementary Sch.
Tanya Wardle, Classroom Teacher - Gr. 4-5, Hillcrest Elementary School
(Alexandra Hall)

Since 2003, our students have been caring for and learning from creatures in their Seaquaria: chilled, saltwater aquaria, filled with local marine organisms. We share our successes in meeting K-5 learning outcomes in diverse classroom and community settings through: hands-on, multi-disciplinary learning with the Sea Tank in a traditional classroom setting; extending this approach to our most vulnerable learners; and sharing learning in the larger community through leadership activities. Participants will interact with local creatures and discuss how to extend their ideas to other educational settings. Bring a flash drive so we can share our lesson plans and resources!

The Oregon Coast Education Program: Bringing the coast to your classroom

Jenna Kullson, Coastal Education Specialist, South Slough NERR
(Longhouse Lounge + Field)

Join us as we explore hands on materials and resources newly offered on the NAME website that bring meaningful coastal edcuation experiences to Oregon students. Using guidelines and funding from NOAA’s B-WET program, OCEP created two education modules that highlight watershed, estuarine and ocean ecosystems in the Pacific Northwest while a thrid module focusing on the fundementals of ocean sience and climate change is in development. These modules, developed in concert with a series of teacher workshops, feature learning activities and formative assessments that get students engaged, outdoors and connected to Oregon’s coastal environments.
Monday, July 15, Continued

2:00–3:30 pm ..........Concurrent Sessions 4, Continued

**OceanLiveTV - A StoryWorld for Ocean Literacy**

*Rick Searle*, Manager, Education & Public Engagement, Ocean Networks Canada
(Longhouse Activity Room)

In this presentation, participants will learn about an exciting transmedia project being developed by Ocean Networks Canada, in partnership with ShawTV and RaceRocks 3D, aimed at increasing public understanding and stewardship of the ocean through the creation of a storyworld encompassing television programs, video-over-the-internet, mobile apps, and games. Participants will also have an opportunity to discuss and explore how storyworlds might be created to assist with their environmental education programs.

5:00–6:00 pm ..........Dinner and Chapter Meetings:

- Alaska (Longhouse Lounge)
- British Columbia (Longhouse Activity Room)
- Washington (The Lodge)
- Oregon (Alexandra Hall)

8:00–10:00 pm ..........Campfire (Field)
Tuesday, July 16

7:30–9:00 am .............Breakfast (The Lodge) and Registration (Longhouse)

9:00–10:00 am ...........NAME Speaker & Annual General Meeting (Alexandra Hall)

Besides the fact that U.S. non-profit law requires a general membership meeting once each year, this is an opportunity to learn the latest NAME innovations, programs, and plans for the future!

10:00–11:00 am ..........Plenary Speaker (Alexandra Hall)

Elizabeth May, Leader of the Green Party of Canada

Elizabeth May is an environmentalist, writer, activist, lawyer, and leader of the Green Party of Canada. Elizabeth became active in the environmental movement in the 1970s. She is a graduate of Dalhousie Law School and was admitted to the Bar in both Nova Scotia and Ontario. She held the position of Associate General Council for the Public Interest Advocacy Centre prior to becoming Senior Policy Advisor to the federal minister of the Environment from 1986 until 1988. Elizabeth became Executive Director of the Sierra Club of Canada in 1989, a position she held until March 2006, when she stepped down to run for leadership of the Green Party of Canada.

Elizabeth is the author of seven books, including her most recent Losing Confidence: Power, Politics and the Crisis in Canadian Democracy. She has served on the boards of numerous organizations, including the International Institute for Sustainable Development and as Vice-Chair of the National Round Table on Environment and Economy and is currently a Commissioner of the Earth Charter International Council. Elizabeth became an Officer of the Order of Canada in 2005. In November, 2010, Newsweek magazine named her “one of the world’s most influential women.” In the 2011 Election, Elizabeth made history by being the first Green Party candidate to be elected to the House of Commons. She is the Member of Parliament for the riding of Saanich-Gulf Islands. In 2012, Elizabeth won Maclean’s Parliamentarian of the Year award, voted on entirely by her fellow MPs.

11:00–12:00 pm ..........Concurrent Session 5

Ship-2-Shore Marine Educators

Natasha Ewing, K-12 Education Coordinator, Ocean Networks Canada
(The Lodge)

This presentation will give an overview of Ocean Networks Canada’s Ship-2-Shore (S2S) Marine Educators Program and encourage educators to dive in and learn first hand about marine science and technology. The S2S program provides educators a unique way of learning and teaching by sending one educator upon a NEPTUNE Canada or VENUS research cruise. Educators on shore participate by connecting to the teacher on board through daily blogs, video updates and video conferencing. Marine Educators on board the research vessel will get to experience life at sea first hand by collaborating with Ocean Networks Canada’s scientists, engineers and education team.
Tuesday, July 16, Continued

11:00–12:00 pm ........ Concurrent Session 5, Continued

**Environmental Lessons From the Traditional Knowledge and Wisdom on Long-term Peoples**

*Gloria Snively*, Professor, University of Victoria

(Alexandra Hall)

Indigenous science relates to both the science knowledge of long-resident, usually oral culture peoples, as well as the science knowledge of all peoples who as participants in culture are affected by the worldview and practical interests of their home communities. This presentation describes many examples from Canada and around the world of indigenous people’s contributions to science, environmental understanding and sustainability. Special attention will be given to BC examples of marine related traditional ecological knowledge and wisdom. The presenter argues the view that Western or modern science is just one of many sciences that need to be addressed in the science classroom.

**Restoring Pride and Knowledge in Traditional Harvesting Practices: A project for high school students**

*Michèle Tomasinno*, French Immersion/Aboriginal/Environmental Ed Teacher, Esquimalt High School, MA Candidate in Environmental Ed at UVic

*Wilfred George*, Director of the Lekwungen Harvesters Community Garden

(Longhouse Activity Room + Field)

The goal of this project is to promote environmental stewardship with students in Esquimalt High School’s First Nations Earth Science 11 class. Students will work at the garden once per week starting in mid April until early June 2013 to learn more about the garden and harvesting practices of the Lkwungen. It is hoped that students will learn the local ethnobotany, how plants were utilized in the past and the current best practices for harvesting traditional foods. The Lkwungen Harvesters have identified a number of projects that students can assist with including plant identification signage in Hul’q’iumi’num and Sencoten, and creating a harvesting chart for the community. The main question to come from this project is how can schools and First Nations bands work together to educate students in ways that include an understanding of traditional ethnobotany, culture, and language?

**An Aquarium for All: Learning how to better engage our entire community**

*Giovannina Souers*, Broadening Participation Coordinator, Seattle Aquarium

(Longhouse Lounge + Field)

In July, 2012 the Community Engagement section of the Seattle Aquarium was created to address several community goals in the Seattle Aquarium’s Strategic Plan. Giovannina Souers, Broadening Participation Coordinator, works within this department to proactively engage underserved, underrepresented, and special needs communities. In this session, Giovannina will share what she has learned in her first year in this new position, and how the Community Engagement section is putting knowledge into action in order to reach a broader audience with our mission, inspiring conservation of our marine environment.

12:00 pm ..................Brown Bag Lunch pick-up (The Lodge)
**Fish Hatchery Tour**

Time: 1:00 - 4:00 pm • Cost: $10 • Enjoy an interpreted walk alongside the picturesque Little Campbell River as you learn about the flora and fauna as well as historical and environmental values of the local area. Join volunteers from the Semiahmoo Fish and Game Club for a tour of the workings inside and outside the Little Campbell Fish Hatchery. Established in 1983, this hatchery is responsible for producing 80,000 coho and 30,000 chinook salmon along with steelhead and cutthroat trout annually. They are also active in the Salmonid Enhancement School Program and help to educate thousands of local students. *Box lunch provided and eaten on site.

**Afternoon Paddle—Kayak Lesson & Tour**

Time: 1:30 - 4:00 pm • Cost: $65 • Explore the waters of Crescent Beach by paddling alongside an experienced local guide. View the area from a unique perspective as you glide over eelgrass beds and paddle past local landmarks all in a safe, supportive atmosphere! The tour is suitable for all levels from novice to advanced. Single Kayaks are provided but, if you prefer, a few doubles are available by advanced request. The tour will begin with 1/2 hour basic kayak and safety instruction. Launch site is within easy walking distance of Camp Alexandra. NB: will be cancelled in the event of unsafe weather conditions.

**Paddleboarding—Catch the New Wave in Fitness!**

Time: 1:30 - 4:00 pm • Cost: $55 • Join a certified stand-up paddle instructor for this unique fitness experience. Receive on the water training in paddling skills and safety awareness and, as you get the hang of the technique, begin to explore the bay while getting a great workout. All skill levels welcome! NB: will be cancelled in the event of unsafe weather conditions.

**Ethnobotany Tour of Blackie Spit**

Time: 1:30 - 4:00 pm • Explore the Indigenous knowledge of Native plants, including Native names and meanings, medicinal uses, as well as food and tool uses alongside Earl Claxton, a well-known and respected Elder of the Tsawout (houses in the air) Nation, one of the Saanich tribes. Earl possesses a passion for Native plants, and has an extensive knowledge and experience of traditional ecological practices of Indigenous peoples. He supports the removal of invasive species and is an active promoter of beach and shoreline restoration. Invasive plant species will be identified with attention given to species that have the potential to negatively impact humans, animals and ecosystems. A guest ‘guide’ will include a local area naturalist on hand to highlight local restoration projects and provide educational information and resources.

5:00–6:00 pm .............BBQ Dinner (The Lodge)
Tuesday, July 16, Continued

6:00–8:00 pm ..........Poster Session and Silent Auction (The Lodge)

The **NAME Silent Auction** raises funds for NAME’s mini-grant and scholarship programs. Auction items are varied and donated by members and local organizations, you never know what will be on the table!

**Poster Session Presenters:**

*Got video ideas but need Fair Use Images and Video Clips?*

*Eva LaMar*, 4th grade teacher, Springfield Public Schools

*Engaging Ecology Students in Research Using Stream Leaf Packs*

*Alída Janmaat*, Lecturer, University of the Fraser Valley

*Squamish River to Estuary Education program*

*Edith Tobe*, Executive Director, Squamish River Watershed Society

*Preservation of Marine Invertebrates and Fish*

*Perry Poon*, Props Coordinator, Vancouver Aquarium

*Squamish Education Outreach Programming for Grades 1-4*

*Kim Slater*, Education Coordinator, Squamish River Watershed Society

*Why Does Water Clarity Matter?*

*Barbara Keithly*, Beach Watcher, Youth Ed Team Lead, WSU Extension, Beach Watchers

*Marine Education and Mobile Learning*

*Michael Hammond-Todd*, Doctoral Student, Uvic
**Wednesday, July 17**

7:30–9:00 am ..........Breakfast (The Lodge) and Registration (Longhouse)

9:00-10:00 am ..........Plenary Speaker (Alexandra Hall)

*Chris Harley*, UBC Climate Change Professor

Chris Harley began his Pacific Northwest research career as a graduate student at the University of Washington in 1995. Since then, he received his PhD in 2001, headed south for postdoctoral research in California, and then returned to the northwest in 2005 to take a faculty position at the University of British Columbia. Chris’s research program focuses on ecological responses to climate change - including ocean acidification, warming, and altered salinity - in the coastal marine environment. He and his students are examining the effects of these changes on invasive species, endangered species, shellfish aquaculture, food web structure, and overall biodiversity. Chris has worked, taught, and conducted outreach at sites including the Bamfield Marine Sciences Centre, the Island Scallops aquaculture facility, the Friday Harbor Laboratories, the Padilla Bay National Estuarine Research Reserve, and UBC’s Beaty Biodiversity Museum. He regularly teaches a lab and field-based experimental invertebrate biology course, and has led a UBC field ecology course to the shores of Hong Kong.

**Experiential learning and global change biology**

Global change biology, which includes the effects of climate change, ocean acidification, invasive species, and other human-driven changes, is a hot topic that generates quite a bit of public interest and media coverage. This makes it a great topic for engaging students with science. Helping students experience how coastal ecosystems are changing first-hand, in the field, is one way to connect them with these pressing issues. This is not always easy, especially when opportunities for trips to the beach are limited. There are, however, several types of projects that can involve students in global change issues with only a single field trip. I will give a few examples from my own experience, including the use of historical photographs of rocky shores to look for evidence of sea level rise, space-for-time substitutions to show how changes from place to place may predict changes in time, and resurveys of particular sites to show the effects of pollution and invasive species. If these field trips can be repeated regularly from one year to the next, the students themselves will build a valuable database on how the ecology of the shore changes through time. Finally, I will discuss some recent findings in the field of ocean acidification, and suggest some ways in which we might incorporate ocean acidification into our teaching.
**Wednesday, July 17, Continued**

10:00–11:00 am ..........Concurrent Session 6

**Exploring Our Place: Schoolyard (and Backyard) Fieldtrips**

*Jennifer Stonehouse*, Elementary teacher and education consultant  
*Sarah Lockman*, Educational consultant and adult educator  
Learning in Place Educational Consulting  
(Alexandra Hall + Field)

Looking for an easy to implement, hands-on, lowcost fieldtrip opportunity for your elementary or middle school class? Look no further than your own schoolyards! Whether your school is located in an urban, rural, or mixed setting, the schoolyard offers myriad opportunities for experiential and place-based learning that can be linked to student action and stewardship. Come and learn innovative activities and lessons that can be used to transform your schoolyard (or community, home, backyard) into ideal places for learning and active exploration.

**What’s that on the beach?**

*Danielle Asson*, Graduate Student, Oregon State University  
(Longhouse Activity Room)

The presentation will discuss my MS project, in which I designed a protocol, in conjunction with Dr. William Hanshumaker, to allow for the identification and reporting of stranded marine fish, squid, and turtles by beachgoers. The protocol is designed in English and Spanish, with both a hard copy and a smartphone version. I will also discuss data collected to date. During the second half of the presentation the audience will get a chance to use the protocol (hard copy or app) to identify sea turtle carapaces and large images of squid.

**Korean elementary students’ perceptions of relationship with marine organisms**

*Jong-Mun Kim*, Doctoral Student, University of British Columbia  
*Dr. David Anderson*, Professor, University of British Columbia  
*Dr. Sandra Scott*, Instructor, University of British Columbia  
(Longhouse Lounge)

Employing a validating quantitative data model (Creswell & Plano Clark, 2007), this explorative study examined sixth grade Korean students’ previous experiences with, their awareness of interconnectedness to, and their perceptions of valuing marine organisms using a specially designed survey questionnaire. This research provides marine environmental educators and practitioners with insights into the varied perceptions of Korean elementary school students which may lead to the development of ideas on how to more effectively design marine environmental educational experiences that increase ocean literacy with this demographic and possibly other students with similar cultural backgrounds.
**Wednesday, July 17, Continued**

10:00–11:00 am ....Concurrent Session 6, Continued

**Water Connections Games**  
*Kelsey Shore*, Aquavan Coordinator, Vancouver Aquarium Marine Science Centre  
*Catriona Wilson*, AquaZone Coordinator, Vancouver Aquarium Marine Science Centre  
(Field)

Using Play to form a deeper understanding of the importance of water. This game will familiarize students with the many forms that water can take and gain an understanding of how water pollution impacts everything in the water cycle. This is an active game that incorporates y=tag and a scavenger hunt to uncover the scarcity of fresh water and our interactions that impact and influence the water cycle.

11:00 am–12:00 pm ...Concurrent Session 7

**Communicating About Climate Change Through Metaphor: Using the Heat Trapping Blanket Model**  
*Joy Tally*, Education Specialist, South Slough NERR  
*Jenna Kulluson*, OCEP Program Coordinator, South Slough NERR  
(The Lodge)

Climate change can be a tricky subject to talk about it, never mind teach about it. Discover how a simple metaphor “the heat trapping blanket” can effectively communicate about climate change and bring understanding to your audience. We will discuss effective methods for teaching about climate change and the current science of climate change.

**Species at Risk in the classroom**  
*Pamela Zevit*, Coordinator, South Coast Conservation program  
(Longhouse Activity Room)

The South Coast Conservation Program (SCCP) will be presenting information about their Species at Risk in the Classroom project. The SCCP has developed Module 1 of their guidebook for educators, which focuses on amphibians and reptiles at risk in the South Coast area. Participants will have the opportunity to learn more about at risk species on the South Coast and take away some new activity ideas for teaching children and youth about species at risk.

**Searching for effective environmental education: A study of children’s environmental knowing**  
*Dr. Sandra Scott*, Professor of Teaching, UBC  
*Dr. Douglas Adler*, Lecturer, UBC  
(Longhouse Lounge)

Direct and in-depth experiences with other (non-human) animals can develop environmental knowledge, connection, caring, and commitment for the natural world, but what kind of experiences foster this environmental knowing among children, and what do these experiences look like in practice? This study investigates children and their relationships with aquatic animals during a five-day environmental education experience at a marine science centre. We present children’s environmental stories as they observe, study, and interact with their chosen animal companions and consider how these experiences inform and enhance their environmental knowledge, caring, advocacy, and commitment to action.
Wednesday, July 17, Continued

11:00 am–12:00 pm ...Concurrent Session 7, Continued

**Size and Sex: How Citizen Science turned crab fishing Regulations into Conservation through volunteer Interpretation and Education**

*Melissa Holloway*, Beachkeeper Coord./Park Interpreter, Metro Vancouver Reg. Parks

Citizen Science at Belcarra Regional Park has turned a dismal situation into a success story. A decline in legal sized crabs was observed, but without records it couldn’t be proven. Volunteer Beachkeepers began to compile population data and today the results go beyond numbers. Crabbers and visitors are discovering connections between their actions and intertidal life, learning about fishing regulations without threats, sharing their knowledge and self-regulating. Using the Beachkeepers as a model, this workshop will demonstrate how you can use Citizen Science as a tool to promote education and conservation with your group or at your site.

12:00–2:00 pm ..........Lunch (The Lodge) and SeaFaire (Field)

2:00–3:00 pm ..........Concurrent Session 8a

**Building Future Marine Biologists: The Vancouver Aquarium’s Counting on Howe Sound Program**

*Jennifer Stonehouse*, Elementary teacher and education consultant

*Sarah Lockman*, Educational consultant and adult educator

Learning in Place Educational Consulting

*Laurel Johnston*, School Programs and Campus Coordinator, Vancouver Aquarium

The Vancouver Aquarium’s new Counting on Howe Sound program delivers the best place-based, experiential and online learning for youth. This program uses an innovative mentorship model to provide ecological leadership and connect young students and young adults to our local waters. This two day model engages both elementary and secondary students in hands-on learning focusing on habitats, ecosystems, taxonomy, animal identification and biodiversity. Come and learn about how this new program was developed, lessons learned from first-year implementation, and how the program has increased student knowledge and perceptions of their local marine environment.

**Why Does Water Clarity Matter?**

*Barbara Keithly*, Beach Watcher, Youth Ed Team Lead, WSU Extension, Beach Watchers

(Longhouse Lounge)

**Beyond the Shores and Into The Abyss**

*Perry Poon*, Props Coordinator, Vancouver Aquarium

(Field)

Seventy-two % of the earth is covered by ocean and a majority of the ocean depth is more than a kilometer deep. This is an extreme environment inhabited by bizarre animals. Enjoy demonstrations and picture presentation on the deep sea environment and the creatures that live in the deep sea. This presentation, being interactive, and will also include hands-on props and activities, that will be beneficial to school teachers.
Wednesday, July 17, Continued

2:00–3:00 pm .............Concurrent Session 8a, Continued

**Attend the birth of C-NOL, the absolutely new, Canadian Network for Ocean Literacy**

Anne Stewart, Marine Education and Communication Specialist, Bamfield, BC  
Natasha Ewing, K-12 Education Coordinator, Ocean Networks Canada  
Rick Searle, Manager, Education & Public Engagement, Ocean Networks Canada  
(Longhouse Activity Room)

Earth is the blue planet and Ocean its defining feature. “Ocean Literacy means understanding the ocean’s influence on you and your influence on the ocean.” (http://oceanliteracy.wp2.coexploration.org/) Americans have developed an Ocean Literacy platform, Europeans are in the process. Canadians already do great things in Ocean Literacy across the country, where the Sky Connects to Sea in every watershed. Canada fronts the Arctic, Pacific and Atlantic and is influenced by and influences the Ocean beyond our shores. This workshop will help move Ocean Literacy forward in Canada by celebrating what has already been done and laying out a pathway towards Ocean Literacy in Canada. Come prepared to learn, expand your horizons and be part of the start, of an exciting new Canadian Network.

2:00–3:30 pm .............Concurrent Sessions 8b

**Culturing Marine Education: Western Science In Indigenous/ Multicultural Science Education**

Karen Matsumoto, School Outreach Coordinator, Seattle Aquarium  
(Alexandra Hall)

As an informal marine educator and person of color working with both mainstream and Tribal students, I am challenged with how to integrate traditional ecological knowledge (TEK) and multicultural perspectives into marine education programs. A need for a paradigm shift in teaching and learning science, and how to incorporate western science in indigenous marine education while preserving traditional worldviews will be discussed. The presentation will provide a case study approach and opportunities for discussion and interactive activities. We will examine implementation of a Citizen Science model using the marine environment as a context to integrate cultural values into field science.

**Linking Watershed Education to the “Real World”**

Jennifer Hopper, Education and Outreach Coordinator North, Taylor Shellfish Farms  
Nicole Hopper, Education and Outreach Coordinator North, Taylor Shellfish Farms  
(Longhouse Activity Room + Field)

Learn how shellfish farming can be used as a concrete example for a variety of environmental education topics both in the classroom and informal educational settings. Participants will learn about activities to use in the classroom and out on the beach with students including: oyster dissections, filtering demonstrations, oyster economics game, cooking, life science unit, ocean acidification experiment, etc.
Wednesday, July 17, Continued

2:00–3:30 pm ..........Concurrent Sessions 8b, Continued

Ocean Acidification in Every Classroom
Paul Williams, Shellfish Biologist, Suquamish Tribe
(Longhouse Lounge)

A group of marine scientists, managers and educators have come together to increase the use of ocean acidification materials in the public school system. We feel this is the best way to spread awareness about this fundamental ocean chemistry change that is already affecting marine life.

5:00–8:00 pm ..........Banquet Dinner, Live Auction, Raffle (The Lodge)

A great evening of fun, food, friends, and music. Come dressed to impress in your Hawaiian best...our theme this year is a Hawaiian Luau!

The NAME Awards are our chance to honor and recognize the work of NAME members who have put their hearts into aquatic and marine education.

The NAME Auction is always a conference highlight; the live auction raises funds for NAME’s mini-grant and scholarship programs. Auction items are varied and donated by members and local organizations, you never know what will be on the table!

Thursday, July 18

7:30–9:00 am ..........Breakfast (The Lodge)

9:00–9:30 am ..........Closing Remarks & Slideshow (Alexandra Hall)

Varies.........................Post-conference Field Trips

Paddleboarding—Catch the New Wave in Fitness!

Time: 10:30 - 1:00 pm • Cost: $55 • Join a certified stand-up paddle instructor for this unique fitness experience. Receive on the water training in paddling skills and safety awareness and, as you get the hang of the technique, begin to explore the bay while getting a great workout. All skill levels welcome! NB: will be cancelled in the event of unsafe weather conditions.

Burns Bog and Vancouver Aquarium Tour

Time: 10:00 - 3:00 pm • Cost: $25 • An insiders tour at the Vancouver Aquarium awaits as you carpool from Crescent Beach to Vancouver. Not to be overlooked along the way is Burns Bog, the largest raised peat bog in western North America and the ‘lungs of the Lower Mainland’. You’ve been invited on a guided walk of this newly declared Ramsar site by the dedicated individuals working to preserve the greater bog area prior to heading into the big city and Stanley Park, home of the Vancouver Aquarium. There you’ll be treated to a tour and free run of the Aquarium exhibits! Lunch is available for purchase at the aquarium. A treat not to be missed!
Thursday, July 18, Continued

Varies..........................Post-conference Field Trips, Continued

**Seashore Sleuths**

Time: 10:00 - 2:00 pm • Cost: $5 • Get down and dirty exploring Boundary Bay as you learn about the biodiversity on, in and under the expansive, windswept mudflats. Don’t forget to bring your binoculars as this rich and diverse site is a RAMSAR designated wetland area and an internationally-recognized Important Bird Area! We’ll examine this unique ecosystem through fun and informative hands-on activities. After our explorations, treat yourself to some goodies at the new concession stand.

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