



T'aanuu Telegram

A NEWSLETTER ABOUT EELGRASS CONSERVATION IN BRITISH COLUMBIA

Issue No.5
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SCWG Turns Five!

T'aanuu is Haida for eelgrass. The Seagrass Conservation Working Group (SCWG) is a consortium of stewardship groups, government agencies, First Nations and consultants working to conserve and protect seagrasses in British Columbia since 2001.

SCWG meetings are held quarterly in various sites of the Strait of Georgia. Our website is:
www.stewardshipcentre.bc.ca/eelgrass/index.html

Training manuals, maps and other documents are available on the Community Mapping Network:
www.shim.bc.ca

Contact the SCWG & the SCWG Co- Chairs at seachange@shaw.ca

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A note from Co-Chair Nikki Wright:
I am quite excited about what we have accomplished in the last five years! We have come a long way in helping conserve eelgrass habitats in 22 coastal communities. The enthusiasm and commitment of the members of the BC Coastal Eelgrass Network is inspiring to say the least!

Our greatest challenge in the next while is continuing to map and monitor eelgrass meadows with diminished financial resources and influencing decision makers with our maps. I envision the April 2007 SCWG Conference (see page 6) as an opportunity for us to strategize an integrated approach to our

eelgrass data presentations. We could address local municipalities on "green" approaches to shoreline development in a way that is economically and ecologically advantageous. We could wrap up information gathered by others to provide shoreline landowners with proof that shorelines have valuable stories that inform us about the present and the past. We could work with First Nations communities to improve water quality so that shellfish habitats are safer for harvesting. With our collective creativity and resourcefulness, the possibilities for working with others are as diverse as the life in an eelgrass meadow.

Edith Tobe, Co-Chair, and I welcome your input. A heart full thank you to all!

Introducing Our New Co-Chair

I am excited to be able to assist as Co-chair of the Seagrass Conservation Working Group and hope to be able to meet the challenges and expectations of the group. It has been a most interesting past five years for me as I've not only learned more about the value and importance of eelgrass and seagrasses but have been able to bring a new recognition of this important foreshore subtidal habitat to some of the communities in which I work. I know we have even greater challenges ahead of us as we struggle to get the much needed funds that will enable us to achieve the necessary education, restoration and mapping of this dwindling habitat. I am very much reassured by the positive energy and strides forward that each member of the SCWG brings forward to their own areas and to the table. I hope I can serve the group well and look forward to being available to the needs that will arise.

Edith Tobe, RPBio, SCWG co-chair.

Busy Boots on the Beach in Boundary Bay!

Ramona C. de Graaf

Friends of Semiahmoo Bay Society's programs have grown from our humble eelgrass rhizomes to a multi-program Marine Conservation Initiative with programs ranging from habitat monitoring, education, public events, and a stunning new habitat atlas.

Ocean's Day 2006 was highly successful with over 1000 of participants visiting 45 displays at Blackie Spit, Crescent Beach. Visitors were treated to fun, interactive displays and nature walks throughout the day.

Our workshops began on June 11 with our eelgrass training workshop with 13 volunteer trainees in attendance. It was a beautiful day on the beach getting boots dirty and learning the methods and equipment for eelgrass mapping and monitoring. Our field program has changed a little from previous years. We have adopted a monitoring strategy that will better allow us to monitor for changes to our immense eelgrass beds in Semiahmoo Bay. We have now established four permanent monitoring locations as well as two locations specially to monitor the health of the eelgrass near to the White Rock Pier. By returning to these locations year after year, mapping the shoreward and seaward edges of the eelgrass, monitoring eelgrass densities and reproductive status we hope to provide valuable data on any changes to the eelgrass habitats due to human pressures and climate change.

A new monitoring program for us is our forage fish spawning habitat project. We began our season in February searching the beaches for beach cast eelgrass with herring spawn attached. This will allow us to understand the timing of regional herring spawning events so that we can plan a dive survey in 2007. On June 21, Mr. Dan Penttila of the Washington Department of Fish and Wildlife presented a workshop on forage fish and sampling and 25 folks attended this very informative workshop. Since July, our boots have been hard at work on the beach sampling gravels for evidence of surf smelt spawn; and we look forward to the fall and winter spawning of sand lance. This program will continue for a full 12 months. We have been collaborating with a number of partners and much of the energy both before our sampling season and during is thanks to our dedicated volunteers and UBC biology undergrad interns.

The Beach Hero 2006 Program had a very successful summer! Through our marine interpretation walks, special events and recreational use surveys on Boundary Bay beaches, we reached over 2000 individuals -- 60% more than in the 2005 program. Families enjoyed beach ecology lessons about the amazing biodiversity of Boundary Bay, recreational users were regularly encouraged and equipped to apply better practices and stewardship of our fishing resource, and shellfish harvesters were advised of water quality issues affecting bivalves and the illegal nature of their activity. Many beach heroes were made!

On September 24, we *dove deep* to participate in a sub tidal debris removal at Blackie Spit, Crescent Beach as we joined the Great Canadian Shoreline cleanup. With the help of Ocean Pro Divers, Canada World Youth and numerous community volunteers we were able to collect 143 plastic bags, 239 food wrappers, 7 shotgun shells, 921 cigarette filters, 203 pieces of Styrofoam.....and much more! In addition our divers were able to bring a bicycle, skateboard, cell phone, cd player, 9 crab traps, numerous batteries and more to the surface! All in all we managed to collect approximately 200 kgs of garbage! A great job by all!

Our data will now be sent to The Ocean Conservancy who will compile and analyze data collected by over 300,000 volunteers in over 90 countries. This information will help to identify the activities and general sources causing the debris. An Annual Report will then be created and distributed to help educate the public, business, industry and government officials about marine debris issues.

In November, we'll be launching the Georgia Basin Habitat Atlas which is viewable at the Community Mapping Network website.

We have been very fortunate in receiving the support of the Vancouver Foundation and Vancity Envirofund for our larger Marine Conservation Initiative. We especially would like to thank our partners and our hard working volunteers for their hard work and commitment to the wildlife of Boundary Bay.

To learn more about our upcoming events, please visit our website at www.birdsonthebay.ca

See you on the beach!



The hooded nudibranch on eelgrass in Boundary Bay
Photo by R Swanstont



A Beach Hero at work
Photo by Catriona Day



Herring Spawn on red algae and eelgrass
Photo by R. Swanston ,



New Communities Join the Network

Training sessions took place in Deep Bay, and on Lasqueti Island this year. Mapping Saanich Inlet began in the summer. The total number of communities within the BC Eelgrass Network now totals 22. They are: Boundary Bay, Bowen Island, Sunshine Coast, Squamish, Saturna Island, Quadra and Cortes Islands, Saanich Inlet, Sidney, Bamfield, Tofino, Cowichan Bay, Nanaimo, Parksville/Qualicum, Deep Bay, Campbell River, Lasqueti Island, Broughton Archipelago, Bella Bella, (Waglisla), Prince Rupert, Kitimat and Haida Gwaii.

The eelgrass beds on Lasqueti seem to be recovering from the damage caused by log storage sites from about 50 years ago.

In Deep Bay some areas show little or no eelgrass, but there are some areas that are quite lush – lush enough that a family of otters who were out there with us – it's rough when you have to share the beach!



Network Continues to Grow

Not only did three new communities join the Eelgrass Mapping network this past summer, some new members were at the recent Network meeting in Nanaimo.

Joining us at the Network meeting was a private sector company, Castor Consultants Ltd., represented by Rob Waters who works with developers to help them find options to better care for their shorelines

Also at the meeting were Rod MacVicar and Ruth Foster from Reed Point Marina Education Centre. They have done a trawl survey of eelgrass beds along the coast and have photos from various locations. They are interested in transplanting eelgrass and have come to the SCWG meetings to learn more and see how we can all work together.

Cowichan Estuary Project Wins Award!

Ann Archibald of the Cowichan Community Land Trust Society (CCLT) and her crew of many tireless volunteers, partners and community members are to receive one of the new awards from the Habitat Conservation Trust Fund (HCTF).

The HCTF has helped to fund the CCLT's Eelgrass Restoration Project in the Cowichan Estuary over the past two years and have recently selected this project for recognition. The CCLT will be awarded the Silver Award for Stewardship, named in honor of Rod Silver in celebration of HCTF's 25th anniversary this year. This award is one of three awards to be given out this year recognizing achievement in the field of ecological protection and restoration.



The Eelgrass Restoration Project is a result of many helping hands and hard work put into community research, pilot transplanting and the ultimate transplant of over 6,000 eelgrass shoots. With any luck, this spring will see a lot of new growth from these transplants that will restore the eelgrass meadows and revive the productivity of the Cowichan Estuary.

Planning is underway to mark this award presentation event with the partners, volunteers and community that have made this project possible. As well, we have nearly raised the required funds for the new eelgrass interpretative signage that will be installed at the Cowichan Bay boat launch to permanently recognize and celebrate community effort in the eelgrass revival in Cowichan Bay.

Congratulations to everyone involved in this project!

♣ “Ask Cynthia” ♣

Dear Cynthia,

Why is the SCWG interested in restoring former eelgrass beds? Wouldn't it have come back naturally if the habitat was suitable? Signed *Habitat Challenged*

Dear *Habitat Challenged*;

The native eelgrass (*Zostera marina*) does not reproduce very effectively from seed. Therefore, once it is eliminated from an area it is unlikely to 'come back naturally'. It does however reproduce very well vegetatively via branching. A single transplanted shoot of eelgrass often produces ten shoots per year, under good conditions. However, if the impact that led to the loss is still present then it is highly unlikely that transplanted eelgrass will survive. At many sites the impact was temporary, such as shading by barges or logs booms. These are excellent candidates for transplanting projects. In cases where the impact that led to the loss is unknown, pilot (small scale) transplants should be used to determine whether the habitat is in fact capable of supporting eelgrass. If the transplanted eelgrass survives several seasons then additional transplanted is recommended.

Sincerely,
Cynthia



Announcements

SCWG Conference 2007 in Bamfield

Set aside **April 13-15, 2007** for the next SCWG Conference. Bamfield will be the location. A planning committee has been struck and ideas for topics include: Coastal Shores/Greenshores training, working with government jurisdictions, how to monitor eelgrass beds and analyze data, *Spartina* identification and management,. We are hoping to have use of the Bamfield Marine Science Centre's computer room to work on data solutions especially regarding data gathering and data entry. Let us know if you have other ideas – send them to Nikki Wright (seachange@shaw.ca), Edith Tobe (tobe@shaw.ca), or Michele Deakin (auklet@shaw.ca).

Land Trust and Stewardship Seminar Series 2007

A 10 year Celebration of BC's Conservation Success

March 16-18th at Cowichan Outdoor Education and Conference Centre

Workshops include Garry Oak ecosystems, fundraising, land trust tools, and 15 other seminars, and site visits to Wildwood and Keating Farm. For more information check

out: www.landtrustalliance.bc.ca



Research

Traditional harvesting of Tsatsayem (eelgrass)

Severn Cullis-Suzuki

We all know how important eelgrass is to organisms of marine ecosystems, but did you know that people on the Northwest coast used to eat it? Many First Nations people on Vancouver Island and across on the mainland once gathered *Z. marina* rhizomes for food, and recognized the plant as important habitat for other culturally significant species - as spawning grounds for Pacific herring and nurseries for cod and perch. They harvested *Z. marina* by manipulating poles from their canoes to entwine the leaves and pulled up entire plants. Elders remember harvesting it year after year from the same location. I have been researching the traditional techniques and ecological knowledge surrounding the Kwakwaka'wakw harvest of eelgrass for a M.Sc., and hope it will help inform conservation and restoration strategies.



In my interdisciplinary study over the last two years, I conducted harvesting expeditions with elders who recalled harvesting the plant, and in a biological field experiment conducted in parallel with SCUBA to mimic fragmentation such that traditional harvesting would have caused, monitored the growth response. As 'compensatory growth' (the positive growth response to damage) has been seen in First Nations harvesting of terrestrial clonal plants, my hypothesis is that through their methods of harvesting, Kwakwaka'wakw harvesting actually induced compensatory growth in eelgrass, and maybe even enhanced the meadows, and was therefore a sustainable practice. The examination through both perspectives is necessary to test this hypothesis. One unexpected result during the harvesting expeditions was in the elders' response to the current state of eelgrass ecosystems. Elders were adamant that the eelgrass specimens obtained at most of the locations were not the right colour or size, and attributed this to

nearby pollution sources. At each site, nearby point sources of pollution (salmon aquaculture, pulp mill and mine site) could indeed be responsible for affecting the condition (and delectability!) eelgrass rhizomes. So far, it has been an exciting privilege seeing science and traditional perspectives corroborate my hypothesis and give insight to ecosystem degradation.

Eelgrass Links

Colin Rankin

Colin Rankin from C. Rankin and Associates sent in these links for your information.

New Eelgrass Growing Techniques Would Help Bays

Before disease decimated it years ago, eelgrass thrived around the globe in estuaries like Delaware's Inland Bays. The sea-dwelling plant provides food and habitat for crabs, fish and waterfowl. It improves water quality by removing excess nutrients from the water and stabilizes the bay bottom as its long, ribbon-like leaves trap floating particles of sediment.

<http://www.udel.edu/PR/UDaily/2007/dec/grass121106.html>

Seagrass Ecosystems at a Global Crisis

An international team of scientists is calling for a targeted global conservation effort to preserve seagrasses and their ecological services for the world's coastal ecosystems, according to an article published in the December issue of *Bioscience*, the journal of the American Institute of Biological Sciences (AIBS). The article "A Global Crisis for Seagrass Ecosystems" cites the critical role seagrasses play in coastal systems and how coastal development, population growth and the resulting increase of nutrient and sediment pollution have contributed to large-scale losses worldwide.

http://www.eurekalert.org/pub_releases/2006-12/uomc-sea112906.php

Datadatadata

Leanna Boyer

This summer I learned, and am still learning alot, about data management. Sounds boring, I know, but there is a sense of satisfaction that comes along with editing my own GPS points in Excel and zipping them off to Suzanne Richer in Ottawa as a shape file! My fellow data geek Ramona and I have been working on the field data sheets to make them more user friendly and to make data entry easier overall. I have been gathering data from some groups to help them post it on the CMN. Suzanne has been an angel. She has data on the site within minutes of sending it to her. I will be contacting more groups to help them with data entry so beware the data geek will be calling you soon!