

## Sea Grass Studies

By Bonnie Olesko

Jan McGown and Bonnie Olesko were invited through LINC to participate in a weekend shoreline workshop on Thetis Island in late April. We enjoyed presentations on forage fish, eelgrass, nearshore ecology and oceanrise.

Biologists and representatives from DFO, Parks Canada, Provincial Parks and Vancouver Aquarium attended, with several doctors and doctoral candidates in biological science, along with us, representing conservancies like LINC, Valdes Island Conservancy, Conservancy Hornby Island, and Pender Island Conservancy. An elder from the Penelakut band shared wonderful stories and spoke about the native approach to ecological sustainability.

This workshop made me realize the profound importance of healthy shorelines. The shoreline acts as a placenta of nourishment and protection in the critical early stages of almost all marine life. We were motivated by this experience to investigate enhancing at least one bay on Lasqueti. Our hope is that through education, observation, dialogue and restoration



*Seen in Passing:* Oystercatcher Eggs  
Photos: Wendy Schneible



we will improve the health of our shorelines and all marine species.

### The benefits of enhancing foreshore areas include:

- ✓ survival of forage fish during development
- ✓ healthier salmon protected from predators in eelgrass forests
- ✓ mitigation and slowing down of water turbulence and destructive wave action by sea grass beds
- ✓ reducing shoreline property damage from rising sea levels and bigger storm surges
- ✓ improved habitat for crab and rockfish
- ✓ improved water quality (there are up to 80% fewer pathogens in a healthy foreshore)

Wendy and I went and explored Maple Bay in May, known to be one of only a few substantial eelgrass beds on the island. We plan to do more observation and mapping of this amazing bay in future.

### Squitty Bay Day - Yeah!

Join us Sunday August 20th, at 10:30 for our annual exploration of the park

- brunch with local lamb, and lots more

- featured walks including shoreline walk with Nikki Wright - Eelgrass Conservation Society

- boat trip to nearby islands

Membership \$5.00 annually **Donations to support our work are tax deductible**

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# Species at Risk on Lasqueti

by Aimee Mitchell, Dan Stewart,  
and Chris Currie

Our team of biologists, as well as many others, have recognized that Lasqueti represents a unique opportunity to make considerable progress in protecting some of the many different species at risk and their habitats. As many of you are aware, the land and water of the Salish Sea are increasingly threatened by human activities, including resource extraction, residential development, invasive species, and anthropogenic climate change. Much of this area, and all of Lasqueti, is classified as the Coastal Douglas-fir Biogeoclimatic Zone (CDF). Covering less than 1% of BC, it is the smallest of 14 broad ecosystems in the province, yet it is home to approximately 75% of the Provincial population of Species at Risk.

The CDF zone still contains incredible biodiversity, with the highest diversity of flora and overwintering birds in BC. However, it is now one of the most endangered ecosystems in Canada, with only 1% of the original forest cover left, and only 9% of that area is formally preserved, well below the provincial average.

In light of all this, it is no wonder that the CDF zone is home to the highest number of species and ecosystems at risk in BC. Many species at risk continue to decline, and the only chance to preserve them is to maintain enough healthy, functioning ecosystems to support them.

The combination of a lack of recent industrial logging pressure, the presence of many unique, relatively intact habitats, low population density, and an engaged community with a strong conservation ethic, means conservation measures have an excellent chance of succeeding.

Our project is focused on six Species at Risk that are associated with the ecosystem, including amphibians (Red-legged Frog,



Western Toad), a reptile (Sharp-tailed Snake), a bird (Western Screech-owl), a bat (Little Brown Bat) and a plant (Rigid Apple-Moss).

Red-legged Frogs thrive in

the shaded, moist conditions of coastal forests. During mating, male frogs call up to one meter below the water to attract females. Adults breed in forested ponds or slow-moving streams and are often found in the forest adjacent to these habitats. Small froglets then emerge from breeding ponds by mid summer. We have found egg masses of these frogs in several wetlands on Lasqueti, including the pond beside the Community Hall. One of the many threats to these frogs is predation by bull frogs and draining of wetlands.

Western Toads can be found in almost any habitat during the non-breeding season. In spring, adults congregate in wetlands to breed, tadpoles can later be seen

in large 'schools' in the water, and when ready to leave the water, toadlets congregate and migrate in huge numbers. As true toads,



Western Toads are toothless, appear warty, and are capable of excreting a poison through its warts and parotoid glands when stressed. You may have seen these large toadlet migrations in summertime. One of the major threats to this animal is that these large migrations often cross roads, and year after year of being run over can cause populations to disappear.



Unlike the three Garter Snake species seen on Lasqueti, Sharp-tailed Snakes are generally dark in appearance without stripes, and only grow to the size of a pencil. They spend most of their time under the leaf litter, or in rotting logs, and are rarely seen. Even though they are not known to occur on Lasqueti, the habitat is excellent, and it may be that they simply haven't been documented because of their secretive nature and a lack of search effort.

The Western Screech-Owl is a medium-sized owl, whose range is restricted to the coastal forests of Alaska, British Columbia, Washington, and Oregon. Unlike many other birds in the region, Screech-Owls are non-migratory, defending their territories throughout the year. Populations have drastically declined in southwestern British Columbia, including Lasqueti, in recent decades, likely in part to the arrival of the non-native Barred Owl.

The Little Brown Bat is a small, insectivorous bat found in the forests of all Canadian provinces and territories. Formerly Canada's most common bat, they are now endangered due to huge declines caused by White-nose Syndrome. This devastating disease is caused by a fungus that was introduced to North America in 2006, and is expected to arrive in BC in the near future. Wetlands are important habitats for bats to forage over, and for water, as they drink by skimming the surface of the water while flying. These bats often roost in houses and outbuildings.

Rigid apple-moss is a small (< 3 cm), brownish green moss with distinct, spherical spore capsules that distinguish it from most other mosses in the region. Though found all over the northern hemisphere (even

mountains in the Middle East) there are currently less than 10 populations known in British Columbia, one of which occurs in the Lasqueti Island Ecological Reserve. Lasqueti is full of suitable habitat for this moss (dry, south-facing bluffs), and we are optimistic that undocumented populations may occur here.

By using these species as the "thin edge of the wedge", we are able to observe and assess various habitats on Lasqueti and prioritize areas to protect.

In our most recent trip in late May, we met with LINC and BC Parks at Squitty Bay Provincial park to discuss the repair of the current sheep-exclusion fence. This fencing hasn't worked at keeping sheep from entering the Rocky Mountain Juniper Reserve, and grazing is significantly reducing the floral diversity of this habitat, despite it being suitable for many rare and unusual plants. Supporting the repair of this fence is but one example of what we hope to achieve on island in 2017-2018.

Lastly, we want and need your help! Since we can only be on the island every few months, we are hoping for the public's help in finding our target species. If you know where any of our target species can be found, please contact us: email [atheneecological@gmail.com](mailto:atheneecological@gmail.com) or call 1-604-355-6133 (Chris Currie).

There has been an increased focus by many groups to try and conserve what little is left of the important habitats found in the CDF zone. With funding provided by the federal Habitat Stewardship Fund, we have partnered with numerous organizations, including the Lasqueti Island Nature Conservancy, the Islands Trust Fund, and the Coastal Douglas-fir Conservation Partnership, to help move forward with identifying and protecting key habitats on the island.

#### Photo Credits:

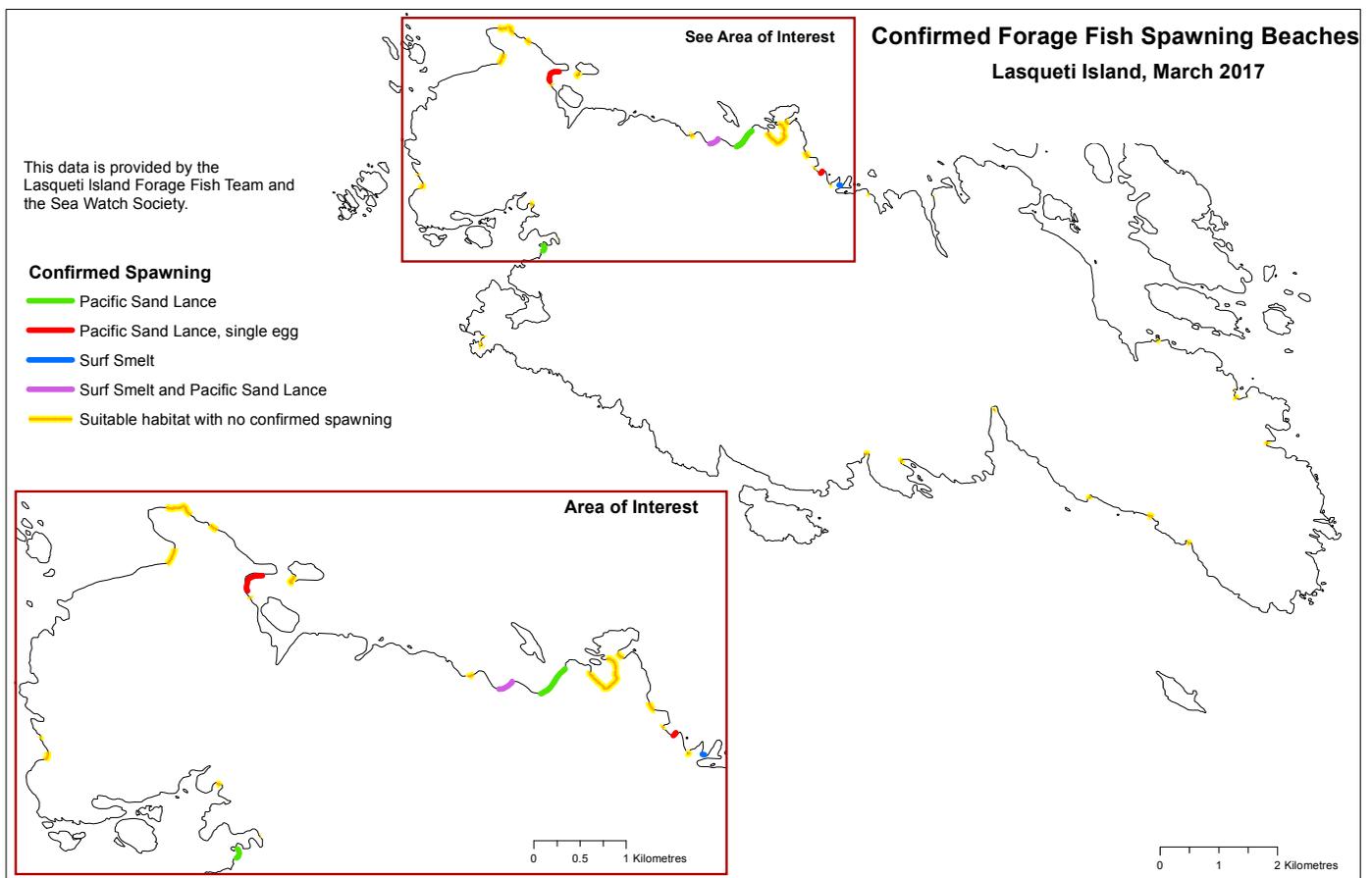
Left Page top: Western Screech Owl - Chris Currie

Left Page top right column: Red-legged Frog - Bill Parker

Left Bottom right: Sharp-tailed Snake - Christian Englestoff

Left Page bottom column left: Western Toad - Aimee Mitchell

Right Page above: wetland on main road, Chris Currie



This map was developed by the Islands Trust Fund with data provided by the Lasqueti Island Forage Fish Team and the Sea Watch Society. We spent 3 years doing intensive sampling of some of our more accessible beaches and were rewarded with positive samples for Matheson's Beach (near the ferry dock), Maple Bay, Marshall Beach, Chris and Doug's Beach, East Sandy Cove and West Conn Bay. There is a series of maps showing greater detail of each area, plus other beaches and coves with their forage fish potential, along with those identified as non forage-fish habitat on our website at [lasqueti.ca/LINC](http://lasqueti.ca/LINC). Many thanks to Connie Haist and Ramona DeGraff for years of inventory and mapping, and to the LIFFT team for 3 years of hard work checking our beaches!

## Special Appeal

### LINC is busy!!

As you can see by our inserted Annual Report, we do a lot with very little money. In addition to all the education, management, and stewardship work we do, we are working to arrange legal protection of several properties on Lasqueti for conservation and public use. This costs money.

Please support LINC by sending us a donation.  
All donations are tax deductible.