BC Nature Vancouver Island and Gulf Islands Regional Seminar

(Florence Filberg Centre, Courtenay, October 27-28, 2018)

By Lance Nordstrom, Staffan Lindgren, and Michael Stebbings

Hosted by Comox Valley Nature and chaired by BC Nature regional director for Vancouver Island, John Neville, this day-long seminar covered various topics of interest to island naturalists. More than 50 people attended, representing BC Nature clubs from Victoria, Salt Spring Island, Duncan, Nanaimo, Parksville, and Courtenay/Comox. In addition, representatives from groups such as the Conservancy Hornby Island and Comox Valley Land Trust were in attendance. Four members from Nature Nanaimo attended the seminar.

The morning session consisted of four seminar topics involving group discussion of the issues. Sharon Niscak of Comox Valley Nature introduced a discussion on shoreline concerns, particularly beach erosion. Issues related to "hard shoring," i.e., the construction of fences or riprap rock to protect the shoreline, were considered. A major concern is residential development too close to the shore and the removal of protective plants and drift wood along beaches. Alternatives such as "green shoring," which uses vegetation or logs to stabilize the shore, and kelp beds, which moderate wave action along shorelines, were discussed. Other suggestions included educating land owners about protecting the shoreline on their properties and attending local development meetings to voice concerns about environmental impacts.

This topic was followed by a conversation about wetlands preservation led by Genevieve Singleton from Cowichan Valley Nature. After describing some of her favourite marshlands, such as Hamilton marsh near Errington and Somenos marsh near Duncan, Genevieve identified some of the benefits of wetlands, including food, flood control, filters for pollution, and a source of oxygen. It was pointed out that residential and industrial development on marshland threatens these beneficial functions, while the prospects for protective legislation in BC are slim. Insurance availability and cost can influence development on risky sites such as shorelines and marshlands. It was recognized that marshes are subject to ecological succession and may eventually become forest, though a stable source of water such as permanent springs may slow this process.

Jim Boulter from Comox Valley Nature opened a discussion of invasive species, pointing out that 70 invasive species are found in southern Vancouver Island. These species are non-native, aggressively fecund, and crowd out native species. Examples include Scotch Broom, Spurge-Laurel, Giant Hogweed, and Tansy Ragwort. Actions that can be taken to manage invasive species include: prevention, eradication, containment, and control. Jim drew attention to the Coastal Invasive Species Committee, whose mission is to support collaborative and ecologically sound invasive alien species management through efficient use of available resources. The discussion that followed considered the idea of finding economic or other uses for invasive species, recruiting children to pull invasive weeds (e.g., ivy), biological control of spotted knapweed in the Nanaimo area, replanting with native species, knotweed in riparian zones, and the problem with herbicides (not selective enough). It was further pointed out that some native plants can also be considered "invasive," such as snowberry and Douglas fir.

The final seminar topic was on biodiversity and development, moderated by Loys Maingon of Comox Valley Nature. Developers tend to remove vegetation and soil, affecting water retention and drainage as well as species diversity. Wetlands are often cheap to buy in relation to other land types, so developers

frequently drain wetlands for residential or industrial development. A major problem is the short-term, rather than long-term, vision for developments.


Herring spawn off Comox shoreline
(Photo by Bari Lewis)

The afternoon was devoted to four speaker presentations. Grant Scott opened with a talk titled "Are BC Herring in Dire Straits?" He stated that the herring spawn between Denman and Hornby islands is the last big one on the west coast, from Alaska to Mexico. Herring is an important part of the marine food web, but the commercial fishery is threatening the herring spawn. Herring longevity is about 10 years. They feed on plankton and krill, spawn on eelgrass, and provide a food source for seabirds, dolphins, porpoises, orcas, seals, sea lions, and other predators. Grant noted that two herring populations contribute to the spawn; a large population off the west coast of Vancouver Island that migrate into the strait to spawn, plus a smaller local population. Recently, herring numbers have declined dramatically—about 20% of biomass. The herring roe fishery can be regarded as a "reduction" fishery (which is illegal in Canada) because only 10% of the body weight is roe, with 90% of the herring biomass caught being used as food for fish farms, livestock, and domestic pets. The fishery gets around the legality issue by calling it a "roe fishery". Grant also directed attention to the Conservancy Hornby Island's *Marine Conservation Atlas*, an informative and richly illustrated book mapping elements of the marine ecosystems surrounding Hornby Island; it may be downloaded for $5 from their website at: (https://conservancyhornbyisland.org/donate-and-download/).

Randal Mindell, a paleobotanist from UBC, spoke on south coast fossil conservation. He emphasized that fossils are important because they are an irreplaceable record of biological evolution. They provide, among other things, insight into the origin of life and the relationship between mass extinctions and climate change. In the last 15 years, more than 100 scientific papers have been published on Vancouver Island fossils. Randal noted that Alberta rigorously protects provincial fossils; all fossils are considered to be property of the Alberta government, with fines and penalties imposed on those who sell or collect fossils without authorization. In contrast, BC has a "Fossil Management Framework" that relies on existing legislation (Land Act, Heritage Conservation Act, Ecological Reserve Act/Environment and Land Use Act, Park Act). Several examples were given, including: Burgess Shale in Yoho National Park (UNESCO World Heritage site); McAbee Fossil Reserve/Heritage Site near Cache Creek; and Driftwood Canyon fossil beds near Smithers. Randal described the destruction of a prime fossil plant site when the Cranberry Pub in Cedar expanded their paved parking lot. Other Vancouver Island fossil sites mentioned include: Ammonite Falls in Mount Benson Regional Park; Oyster Bay—a 50 million year old site featuring fossil crabs, sharks, flowers, fruits, fungi, moss, conifers, and marine invertebrates; and Puntledge River—an 80 million year old site containing fossil elasmosaurs, mosasaurs, and turtles. Pictured is Graham Beard with the cast of a giant ammonite found in the Mount Benson area near Nanaimo.

Michael Motek presented an interesting talk titled "Native Plants: Restoration is for the Birds." He pointed out that restoration efforts on disturbed sites impact wildlife, and should include vegetation that provides shelter, feeding, and nesting opportunities for birds. He stressed the importance of creating an inventory of bird and wildlife species in the area, and of restoring native plant species that

can be used by the animals identified in the inventory. Michael noted that removal of invasive species without replacement affects bird populations, and he recommended that native plants should be established immediately following invasive removal or other invasives will take over the site. Shrubs should be replaced with shrubs, grasses with grasses, etc. A useful online application recommended by Michael is the "Natural System Restoration for the Birds" tool. As an example, Michael showed that 36 species of birds use the introduced Himalayan blackberry, which can be replaced with such species as blue elderberry, salmonberry, red elderberry, thimbleberry or red-osier dogwood.

Finally, Loys Maingon talked about "Forgotten Wetlands, Future Water Quality, Freshwater & Marine Biodiversity." He began by noting productivity declines in the strait due to upper tidal and foreshore development, which frequently affects wetlands. Loys then went on to discuss the importance of humus and humic substances in wetlands, pointing out that plants produce and require humic acids. Wetlands are a significant source of humic acids derived from decomposition, including vernal (temporary) wetlands that are often forgotten. Such small wetlands are proving to be more valuable than previously thought. He described forest vernal swamps as "biogeochemical reactors." Freshwater wetlands store nearly 10x more carbon than tidal saltwater sites, so the movement of this organic material from these inland areas to the strait via streams and rivers is essential for a productive and diverse marine environment.

A second day with a choice of field trips was offered, but none of the Nature Nanaimo members attended. To conclude, the seminar was an excellent opportunity to meet like-minded folks devoted to nature on Vancouver Island. It also served as a useful source of ideas for future meetings and projects that we can consider for Nature Nanaimo. Periodically throughout the seminar, it was stressed how important it is to write to local politicians, particularly Members of Parliament and Members of the Legislative Assembly, to voice concerns about environmental issues in our regions and to seek their support in protecting our natural heritage. Finally, we would like to thank Jim Boulter and the volunteers from Comox Valley Nature for their fine job in hosting the seminar.