

Metchosin BioBlitz 2012

By Kem Luther

A BioBlitz is a 24-hour field inventory of species populations in a restricted area. The term "BioBlitz," not yet found in major dictionaries, originated at a 1996 inventory of the Kenilworth Aquatic Gardens (Washington, D.C.) organized by Sam Droege of the United States Geological Service and Dan Roddy of the U. S. National Park Service. Susan Rudy, also with the National Park Service, coined the term. "While we were discussing logistics, [Dan] asked me what we should call this event," Susan writes. "I suggested 'BioBlitz,' because it was a hunt for biological resources (bio-) that was fast and furious (-blitz)."

Over the last fifteen years hundreds, perhaps thousands, of BioBlitzes have been held all over the world. Canada hosts several important BioBlitz events each year. Here in BC there are, besides the Metchosin events, annual BioBlitzes at Burnaby Lake and Whistler. Last year the Stanley Park Ecology Society hosted one. A BioBlitz was scheduled for August of this year at Whaletown Commons on Cortes Island.

This year's Metchosin event was organized by the Metchosin Biodiversity Project (Andy MacKinnon, Moralea Milne, and the author). In the early morning, birders, coordinated by Ann Nightingale, fanned out across the district. Later in the morning specialists in plants, lichen, fungi, marine organisms, insects, slugs, reptiles, fish, amphibians, and mammals convened at the Mel Cooper cabin of the Metchosin Boys and Girls Club. Members of the public soon arrived to join the experts. Andy MacKinnon organized the arrivals into groups and sent them out to survey five Metchosin locales. One group of 10 scientists, led by Hans Roemer, was given permission by the Department of National Defence to visit their site at Mary Hill. Marine experts met up with a morning beach seine conducted by CRD Parks.

Three hours later the groups reconvened at the Mel Cooper cabin for a lunch of pizza and soup. In the afternoon the experts and members of the public formed themselves into new teams and headed out to several more Metchosin locations. One group of seventeen, led by Adolf and Oluna Ceska, went to Camp Thunderbird to inventory late spring fungi.

At the end of the afternoon forays, the BioBlitz experts turned their tired feet toward home and began to examine their collected specimens, compiling lists of what they had seen. Over the next three weeks they submitted their specie numbers to the BioBlitz co-ordinators, who correlated and checked their sightings -- almost two thousand of them -- against standard lists. The experts had collected the numbers of species shown in the following table.

Species	#	Species	#
Vascular Plants	407	Other Insects	20
Birds	100	Bees	23
Fungi	8	Algae	22
Lichens	78	Mammals	11
Bryophytes	66	Slugs/Snails	8
Marine Organisms	72	Fish	5
Butterflies & Moths	31	Amphibians/Reptiles	5

More than 1200 Metchosin-based species have now been documented in the 2011 and 2012 BioBlitzes. A full listing of the species found at the two events can be viewed at the BioBlitz web site (www.metchosinbiodiversity.com).

Between two per cent and three percent of the species found during the 2012 Metchosin BioBlitz are on provincial red or blue lists. Here are some of the more interesting finds from the species-at-risk subset:

(1) A member of the team that Hans Roemer led into the DND lands caught a glimpse of *Rana aurora*, the blue-listed red-legged frog. The spread of the invasive bullfrog (*Rana catesbeiana*) into areas of South-



BioBlitz volunteers and CRD staff pull seine net to the beach in a catch-and-release count of marine organisms.

ern Vancouver Island has raised concerns in recent years about the viability of native frog populations. Bullfrogs are known to take-over the habitats of red-legged frogs. The District of Metchosin has allocated money in recent years to help control local bullfrog populations.

(2) A fascinating pair of rare mosses turned up at the 2012 BioBlitz. During the Mary Hill foray, moss expert Gerry Ansell homed in on a rarely-seen population of rigid apple moss, *Bartramia stricta*. This red-listed moss, put at risk by the destruction of wide swaths of its Garry Oak habitat, has been found on Vancouver Island in only two places: on Mary Hill and at Nanaimo's Notch Hill. Jamie Fenneman found a second rare (BC blue-listed) moss in the field near the Boys and Girls club cabin. *Physcomitrium pyriforme*, common bladder moss, has attractive, urn-like capsules.

(3) Moralea Milne tracked down one of the sharp-tailed snakes (*Contia tenuis*) that live on her Camas Hill property. She was fortunate -- March and early April are better times to go looking for this small snake. Endemic to California, Oregon, Washington, and BC, sharp-tailed snakes are known from only a few Vancouver and Gulf Island sites.

(4) Two members of the plant genus *Sanicula* were among the rare plants found by BioBlitz experts. The yellow flower clusters of the most common sanicle on Southern Vancouver Island, pacific sanicle (*Sanicula crassicaulis*), decorate the woods and open areas throughout Metchosin. A red-listed cousin, purple sanicle (*Sanicula bipinnatifida*), occasionally turns up in the same habitat. At the BioBlitz Jamie Fenneman found purple sanicle on private property on Lee-field Road. Joe Antos came across another rare cousin, *Sanicula arctopoides*, the bear's foot sanicle, at one of the CRD parks. Bear's foot sanicle has yellow flowers, grows lower to the ground than its cousin sanicles, and likes to live on bluffs near the ocean.

"It's the experts who find the species," says Moralea Milne, "but they could not have

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Book Review The World of Northern Evergreens

Author: E.C. Pielou
2011 Comstock Publishing Associates
155 pages.
Softcover. \$19.95
Reviewed by Rosemary Taylor



(Second Edition)

This informative and interesting book could well be subtitled 'Seeing the wood for the trees' as E.C. Pielou first introduces her readers to the inner workings of a conifer, and then gradually steps back, slowly and carefully drawing attention to the way in which trees and woods, in the widest context, are irrefutably interdependent.

The opening page of Chapter 1 poses a thought-provoking question few people stop to ask - where do trees come from? and how did they get there? Why, in northern latitudes, are they mainly coniferous rather than broadleaf deciduous?

The first few chapters set out to answer these questions, starting with identification of the 10 different conifers found in Northern forests, and then closely examining the inner workings of trees we generally only see from the outside. Some of the details can be a bit technical, but keep going - Pielou is creating a strong foundation on which later understanding hinges. The author carefully builds one's knowledge of things unseen, until eventually these pieces fall into place as the larger picture is brought into view.

One of the many facts presented details the immense role conifers play in the process of water circulation, by way of transpiration through their needles. Meanwhile, as transpiration sends massive amounts of water vapour into the

atmosphere, roots must replenish what is lost, and do so through their connection with forest fungi, details of which are made fascinatingly clear.

Widening the picture further, broadleaves (deciduous trees) are brought into the conversation, outlining their role in the preparation of land on which conifers will eventually stand.

Pielou has now created a general grasp of the trees in a northern forest, and moves on to discuss other forms of life that have co-evolved to live in the same habitat. An ecological approach covers geology and soils, pests and parasites, and some of the many plants, birds and animals depending on forests for their own survival, with descriptions of how to recognize indications of their presence. These inhabitants not only use forests for their own ends, but in return many provide valuable services without which the trees themselves would not thrive. Everything, in the end, is interdependent.

Moving from the organic to the inorganic, consideration is then given to the natural effects of wind, weather, fire, and "unnatural interference" such as logging, acid rain,

and other detrimental results of increasing industrialization. Discussion around the possible effects of climate change follow, musing on ways in which change in forest composition and geographic location can further affect climate, and how those changes may impinge on the natural cycles on which we depend. The take-home message here is that there may be unintended "nasty surprises" in store, for which we presently are unprepared; the butterfly effect may cause such events to come back to bite us in unpredictable ways when we least expect it, some time in the future. ☺

Metchosin BioBlitz 2012 Continued

done their work without the help of our sponsors." Among the supporters of the 2012 Metchosin BioBlitz were the Metchosin Foundation, CRD Parks, the Victoria Natural History Society, CRD Water, DND/Rocky Point, and the District of Metchosin. Gifts of food were received from Costco, My Chosen Pizza, Martha Haylor, and Jo Mitchell.

The next Metchosin BioBlitz is scheduled for Friday night, April 26, 2013, and Saturday daytime, April 27, 2013. "To find a thousand Metchosin species in twenty-four hours seemed like an impossible dream when we started the BioBlitz," says Andy MacKinnon. "Now, with the participation of a few more experts, it looks doable." ☺

Readers of BC Nature who would like to become part of the next blitz should contact Andy MacKinnon (metchosin-macs@gmail.com).


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