Stanley Park BioBlitz:
Summary Report for Partners

Stanley Park "BioBlitz"
Summary Report for Partners
September 2011

Prepared for:

The South Coast Conservation Program (SCCP). Established in 2005, the SCCP is a multi-partner, landscape-level conservation program. The primary objective of the SCCP is to coordinate and facilitate the maintenance and recovery of species and ecosystems at risk in the Lower Mainland eco-region of the South Coast of British Columbia. http://www.sccp.ca/

The Stanley Park Ecology Society promotes awareness of and respect for the natural world by playing a leadership role in the stewardship of Stanley Park through collaborative initiatives in education, research and conservation. SPES has been actively promoting urban ecological conservation and stewardship since 1988.
http://www.stanleyparkecology.ca/

In 1886, Vancouver City Council designed an appointed Park Committee to manage its new charge by building trails and gardens. The park had already been logged from the 1860-1880s with only the largest trees left (they were too big to cut down even then). By 1890, the Park Board had become an elected body and remains the only Canadian board of its kind. http://vancouver.ca/parks/

Funding for this project was graciously provided by:

Vancity enviroFund™

Environment Canada / Environnement Canada

Further funding and support was provided by:

Fraser Valley Watersheds Coalition

BIEAP Burrard Inlet Environmental Action Program

FREMP Fraser River Estuary Management Program

This project was also undertaken with the financial support of the Government of Canada through the Federal Department of the Environment. Ce projet a été réalisé entrepris avec l'appui financier du gouvernement du Canada par l'entremise du ministère fédéral de l'environnement.

Prepared by: Pamela Zevit, R.P. Bio
Adamah Consultants
adamah@telus.net
Re-connecting People & Nature

Cover images: Robyn Worcester, Melissa Todd, Peter Woods, Pamela Zevit. South Coast BioBlitz logo: Pamela Zevit

Acknowledgements:

The contributions and efforts of the following made the Stanley Park BioBlitz an outstanding event!

Alivia Prattas, Amy Hendel, Andrew Scott, Brent Matsuda, Chris Ensing, Chris Lee, Christine Leston, Christine Leston, Damion Ruthven, Daphne Solecki, Daryl Thompson, David Cook, Doug Sinclair, Elizabeth Elle, Erin Rutherford, Graham Gielens, Greg Ferguson, Hamish Meggs, Isabelle Aube, Jeff Meggs, Jordan Rosenfeld, Kent Brothers, Leanne Gallon, Les Leighton Melissa Todd, Michael Price, Peter Davidson, Peter Woods, Roy Teo, Sheila Byers, Sherri Elwell, Susan Leech, Taylor, Green, Terry Taylor, Wade Janzen, Wilma Mosmans.

Adamah Consultants would like to express a special thanks to Patricia Thomson, Robyn Worcester, Brian Titaro and the rest of the incredible staff and volunteers with the Stanley Park Ecology Society for their extensive contributions in coordinating and hosting this event. Thank you as well to the Fraser Valley Watersheds Coalition and the Pacific Streamkeepers Federation for their additional support.

Table of Contents

Figures & Tables

Appendices

Executive Summary

Throughout British Columbia, public and private lands play an important role in linking and protecting critical habitat for a range of species, many of which are at risk. Collaborative actions that enhance understanding of the natural capital such areas support contributes to more effective, ecologically informed decision making. BioBlitzes or "Biodiversity Blitzes, are one of many tools for facilitating such collaborative efforts. Part contest, part festival, part educational event and scientific endeavor, the Stanley Park BioBlitz was a first for the Stanley Park Ecology Society and the Vancouver Board of Parks and Recreation. The event offered a fresh, engaging approach to identifying species and ecosystem diversity throughout the various public and natural areas of Stanley Park.

As well as providing for updated information on pre-existing inventory data and species use, the event hosted stewardship and conservation interests to further raise awareness to a range of public interests about biodiversity and local conservation efforts.

In all, three hundred and ninety-five (395) different species of flora and fauna, including one hundred and fifty-two (152) new species were identified from the BioBlitz. This information will contribute to provincial resources such as the BC Conservation Data Center (CDC) as well as the local and regional knowledge base. In particular, species occurrence data will inform land managers with the City of Vancouver for other parks and natural areas in the municipality. The results of the BioBlitz will also support the work of the Stanley Park Ecology Society (SPES) and the South Coast Conservation Program (SCCP) in their ongoing conservation efforts in the region.

The Stanley Park BioBlitz provided a valuable bridging opportunity to bring together the interests of the SCCP, Stanley Park Ecology Society and the City of Vancouver. With its successful completion, the SCCP is looking forward to seeing these respective stakeholders continue to work collaboratively on efforts to inventory and monitor species and ecosystems of conservation concern in Stanley Park and other parks and natural areas in the City. Such partnerships are integral to the work of the SCCP in coordinating and facilitating the maintenance and recovery of species and ecosystems at risk for the long-term.

"A BioBlitz is designed to increase the public's awareness of the variety of life in their immediate neighborhood and the services these various species provide to improve the quality of their lives.

What better way to address the topic than to invite people to share in our 24-hours of discovery and to experience the vast array of species that we can find in their neighborhood park in just one cycle of the day?"

Source: Center for Conservation and Biodiversity and Connecticut State Museum of Natural History

Introduction

What exactly is a "BioBlitz"? The term was first coined by National Park Service naturalist Susan Rudy while assisting with the first BioBlitz at Kenilworth Aquatic Gardens, Washington D.C. in 1996. A BioBlitz has the dual aims of establishing the degree of biodiversity in an area while connecting local citizens, community groups and land use managers with concepts of conservation science. Often local parks are chosen for BioBlitz events as they have many of the key partnerships or stakeholders in place to facilitate the event.

Specialists in various disciplines like botany, entomology and ornithology all play a role. Some BioBlitzes become an annual event, such as the one which has been occurring since 2006 in the Resort Municipality of Whistler[1]. Scientists establish a base at a point close to the area to be blitzed and provide expertise in identifying species found by the public as well as doing their own inspection of the area.

Ideally, a BioBlitz takes place over a full 24-hour period as different organisms are likely to be found at different times (e.g bats, insects etc.). While only daytime blitzes over shorter periods are equally popular, the results may less accurately show the variety of life in the area. Regardless, BioBlitzes are an innovative way to link aspects of social and natural capital through re-establishing people's sense of wonder at exploring and being part of the natural world.

[1] http://www.whistlerBioBlitz.ca/

Why a South Coast BioBlitz?

The South Coast of BC, made up of three provincial Forest Districts is home to some of the highest levels of biodiversity and species at risk in BC[2].

This incredible natural capital is under a number of existing and potential threats including:

- Habitat loss
- Displacement and predaton by introduced species
- Habitat degradation

The causes are numerous; human population growth, invasive species and climate change are just a few of the sources of biodiversity loss. The more we learn about this valuable natural capital, through efforts like BoBlitzes, the more we can do to protect and sustain it now and in the future.

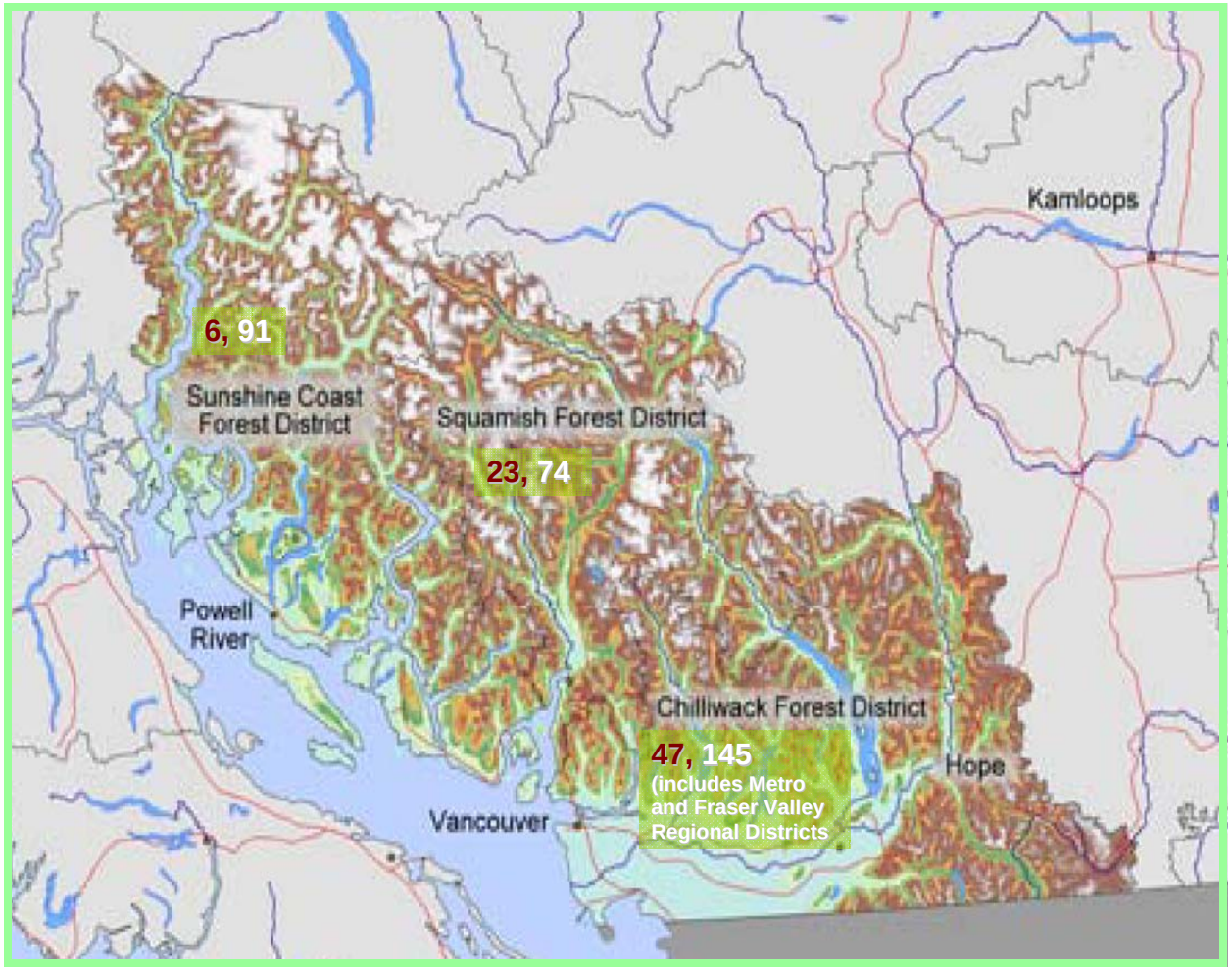


Figure 1. Number of species federally listed at risk (red) and provincially classified as threatened/endangered (white) on the South Coast by forest district (shaded area). Map Source: Imap BC. Data Source: BC Conservation Data Center

[2] Rich Wildlife, Poor Protection: The urgent need for strong legal protection of British Columbia's biodiversity. David Suzuki Foundation 2007.

BioBlitz events have become popular throughout Canada and the US, supported by organizations like Robert Bateman's "Get to Know Program", Parks Canada and a number of universities, local governments and environmental non-government organizations.

On BC's South Coast, BioBlitzes have becoming annual events or are proposed for the following locations:

- Resort Municipality of Whistler
- Iris Griffith Field Studies & Interpretive Center (Sunshine Coast)
- Burnaby Lake Regional Park
- UBC Botanical Gardens (Vancouver)
- Harrison Hot Springs

South Coast BioBlitz Goals:

- Provide opportunities to improve skill sets in the identification of local species of conservation concern.
- Encourage BioBlitz team participants to consider similar survey activities at other potential biodiversity hotspots on the South Coast to add to the regional knowledge base.
- Report out and inform elected officials and land use managers of the biodiversity values present in their local areas.

South Coast BioBlitz Objectives:

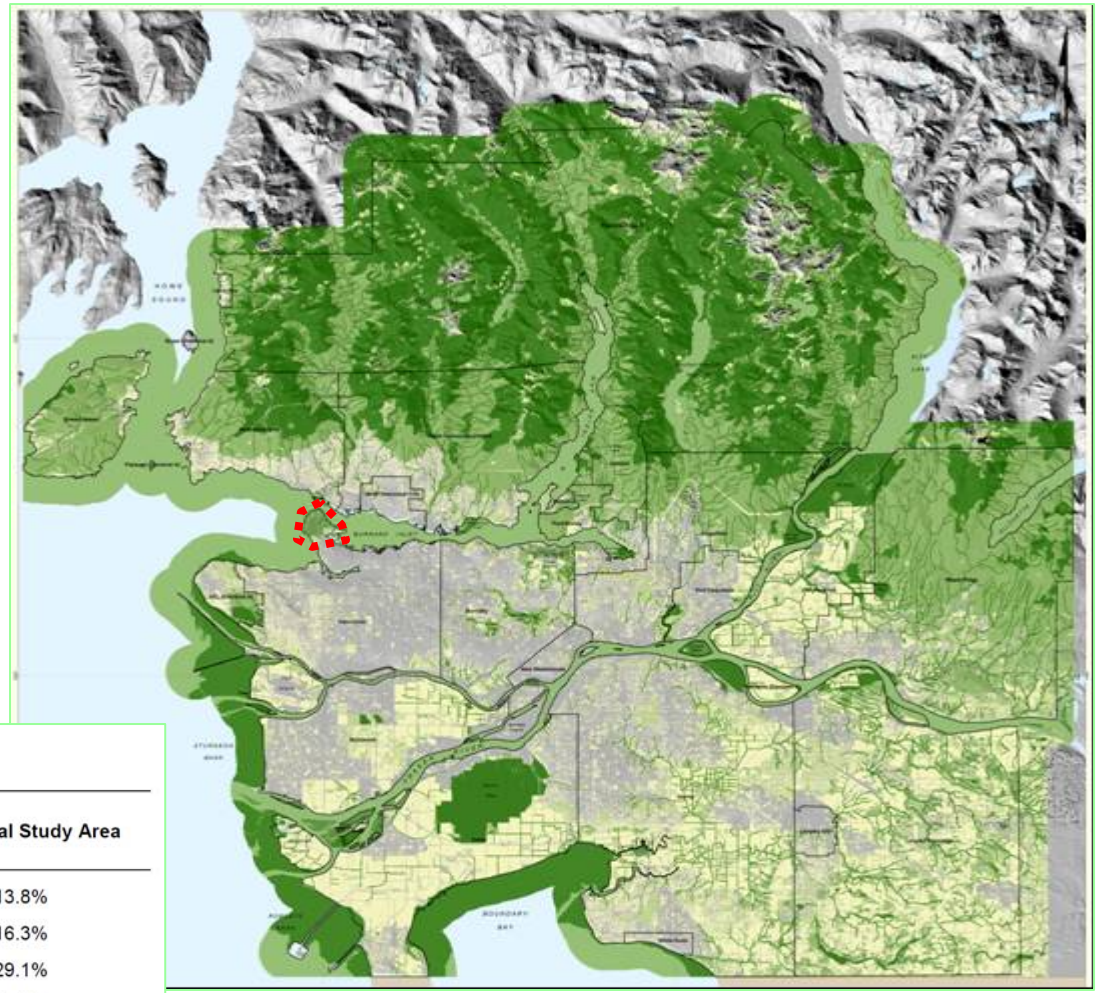
- Increase the capacity of local land use authorities as frontline "managers" to identify species at risk occurring within their areas of management.
- Engage municipal interests, local stewards and the broader public in "citizen science[3]" efforts to enhance conservation actions for species at risk.
- Ensure information and adequate tools are available to maintain species and ecosystem diversity from the local to eco-regional landscape.

[3] "Citizen science" is a term used for projects or ongoing program of scientific work in which individual volunteers or networks of volunteers, many of whom may have no specific scientific training, perform or manage research-related tasks such as observation, measurement, or computation." Source: Wikipedia.

Metro Vancouver Regional Context

The Metro Vancouver Region is home to a number of species of conservation concern, many at the northern end of their North American range. Adjacent to the Fraser Valley Regional District, the Metro Vancouver Regional District supports a diverse mosaic of wetlands, upland forests and one of the most significant estuaries in North America, the Fraser Estuary.

Efforts have been evolving to develop management priorities for conserving biodiversity across the region over the past decade[4]. Integrating biodiversity into the land use decision making process is a critical step to understanding the role priority areas play across the regional landscape for conserving species and ecosystems at risk.



Relative Biodiversity Summary

Colour)	Map Legend Colour	Biodiversity Index	Area (ha)	% of Total Study Area
		Very High	50,859	13.8%
			60,175	16.3%
		To	107,475	29.1%
			16,243	4.4%
		Moderate	67,390	18.2%
				81.8%

Figure 2. Relative biodiversity values across the Metro Vancouver Regional District (Stanley Park – red-dotted line). Map Source: Axys Consultants, Biodiversity Conservation Strategy for Metro Vancouver (2006).

[4] Strategic Directions for Biodiversity Conservation in the Metro Vancouver Region | Forum Proceedings: Key Points and Potential Action Steps (2010), Ecological Health Plan for Metro Vancouver (Draft 2011)

Stanley Park

In 2008, after successfully delivering BioBlitzes in two regional parks in the eastern part of the South Coast (Metro Vancouver and the Fraser Valley) the SCCP began considering more urban locations for future BioBlitzes. Around the same time, the SCCP partnered with the Stanley Park Ecology Society to deliver a workshop on species at risk management practices. Since that time the Stanley Park Ecology Society has completed a "State of the Park Report" and has been looking at how to enhance its outreach programs while increasing local biodiversity knowledge. In 2010 the SCCP approached SPES about delivering a BioBlitz in Stanley Park and planning for the project got underway.

Stanley Park is recognized internationally as a destination point when visiting Vancouver. The park offers incredible views of the North Shore Mountains, English Bay, Burrard Inlet and the downtown Vancouver's skyline. These diverse viewscapes bring tens of thousands of visitors to the park each year. The park itself is a rich mosaic of mature forest, wetlands, intertidal areas and ornamental gardens. What makes Stanley Park such an important asset is that it provides all of these natural amenities in the most populated urban center in BC (see Appendix 1 for detailed habitat classification information for the BioBlitz area)..

A great deal of inventory work has and continues to be undertaken for species and ecosystems at risk in Stanley Park. The Stanley Park Ecology Society has partnered with academic institutions and local naturalist organizations to monitor and document native and invasive flora and fauna. All of these components contributed to setting an excellent foundation for a BioBlitz at Stanley Park.

Figure 3. Stanley Park (red-dotted line) and surrounding area.
Source: Google Earth

To compliment the Stanley Park BioBlitz, various events (bat mist netting, an owl walk, freshwater and marine aquatic surveys) were scheduled to engage the public and gather further inventory data.

Educational displays and interpretive walks were provided throughout the event as a concurrent method to connect nearby residents and visitors to the natural values of the area as well as the activities and efforts of the BioBlitz partners.

Image: Robyn Worcester.

Conducting the BioBlitz

While the SCCP has a focus on species at risk, attempting an overall biodiversity "reading" through conducting a BioBlitz is a complimentary goal. Participants are asked not only to confirm species such as native and invasive plants using a supplied checklist but look beyond the easily identifiable. Less charismatic species such as mollusks, amphibians and reptiles as well as rare plant and animal associations all reflect the unique values present in and around Stanley Park.

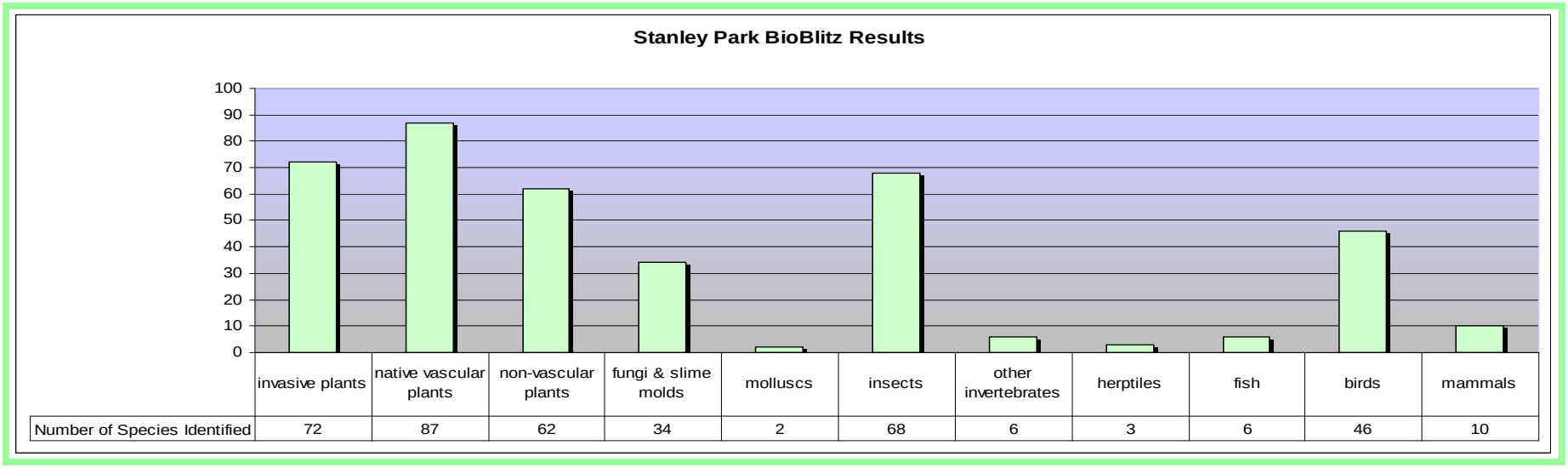
In some BioBlitzes, specialists and experts are just 'let loose' to inventory as much area as they can cover in the time allowed. In others, "Blitz Teams" are created and each team is assigned various areas of the BioBlitz area to inventory. In the case of Stanley Park, specialists went out individually or in pairs, some with a member of the public interested in increasing their skill sets in local plant and wildlife identification and inventory methods.



Stanley Park BioBlitz specialists and inventory teams, Left: Botanists Terry Taylor and David Cook, Center: Intertidal beach seine crew, Right: Ecologists Jeff Meggs and Melissa Todd hunt for dragonflies.

Findings

Baseline information is a value added component to undertaking any BioBlitz. The Stanley Park BioBlitz was a means to update inventory data on invasive species, native flora and fauna and fill in gaps such as insects and non-vascular plants (e.g. lichens) and fungi. In total three hundred and ninety-five (395) different species of flora and fauna, including one hundred and fifty-two (152) new species were identified from the BioBlitz. This information will contribute to provincial resources such as the BC Conservation Data Center (CDC) as well as the local and regional knowledge base (see Appendix 2 for detailed breakdown of species, listings and definitions).



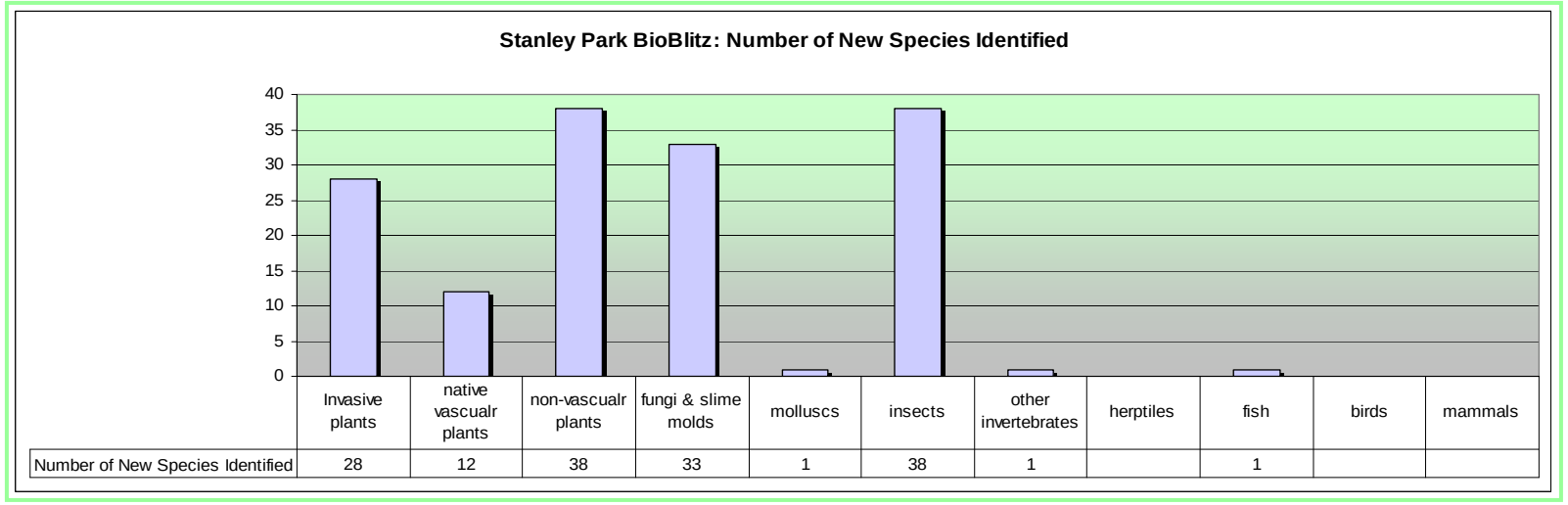


Figure 4. Breakdown of Stanley Park BioBlitz survey results.

As a seasonal snapshot, the results of the Stanley Park BioBlitz demonstrate that the park, even though surrounded by such a highly urbanized landscape is an oasis for a range of plants, fungi and pollinators. Wetlands like Beaver Lake in particular support significant levels of biodiversity. Even managed landscapes such as the Rose Garden and ornamental plantings around high use areas provide food and refuge for insects and small mammals. As with many other parks and natural areas in the region however, a number of invasive plant species of concern, as well as introduced fauna like arion slugs, Bullfrog and Eastern Grey Squirrel proliferate throughout the park.

With information in hand from the BioBlitz, the Stanley Park Ecology Society and Vancouver Board of Parks and Recreation can pool this recent data with historic inventory information to create a more comprehensive species baseline. New information on occurrences of less charismatic species such as plants, fungi and insects can be used as important indicators of the ecological health of the park along with better known fauna such as birds. Future BioBlitzes can then use this digital 'checklist' as a benchmark for observations, monitoring and reporting.

What the Stanley Park BioBlitz provided for participants:

"Meeting biologists/generalists who have a different passion than mine, which is birds, and who were able to draw me into their world of aquatic insects, or fish, and create a greater excitement for Stanley Park's diverse species."

"The BioBlitz provided the opportunity to engage with other biodiversity and conservation organizations. It also enhanced my knowledge of what the Stanley Park Ecology Society and BioBlitzes strive to accomplish."

"It was great to get to know the park better and honing those ID skills for species I don't work with every day."

"The attention to variety of species was great. I wish I could have participated in more of the surveys!"

Image Source: Pamela Zevit

The Stanley Park BioBlitz in Review

The contributions and perspectives of participants are integral to improving and refining future iterations of any large-scale public event. For Stanley Park this was an inaugural event. Depending on whether participants had been to a BioBlitz or worked other similar events before often contributed to their perspectives. It is important to recognize though that regardless of an individual's previous experiences, each BioBlitz is unique and has to be customized to the mosaic of the participants as well as the site conditions and partner capacity.

All in all, participants reported a very positive and worthwhile experience, but felt that some aspects of the event should be looked at for the future including:

- Interpretive displays should be located at destination locations where park users can take the time to stop and enjoy them as opposed to a busy corridor where most individuals are more interested in trying to get from point A to B.

- Some interpretive talks need to simplify conversations with the public to get basic conservation concepts across. When more attention is paid to collecting specimens than to showing the people the differences between species there is less time to speak to conservation issues.

- For specialists and volunteers moving between areas of the park during the event, having bicycles available to use would be advantageous. Trying to move around to survey areas by vehicle on a busy summer weekend is very difficult.

Location then was perhaps one of the main factors affecting how well outreach events were attended. The Saturday afternoon and evening events such as the beach seine, owl walk and bat mist netting were at high use destination locations and captured a lot of public interest. However the following day's education and outreach setup at Lumberman's Arch, while in the heart of day use activities for the park was on a busy arterial route and did not seem to easily divert the attention of passers-by.

In respect to media, the event was advertised in local online media and local commercial venues well in advance and signage for the event was posted in key areas with local residents or visitors. As well local elected officials and media were invited to attend.

BioBlitzes are designed to serve a dual purpose of engaging the public about biodiversity conservation and the natural world, as well as collecting valuable information about local species use. Interestingly some scientists who participated in the Stanley park event felt that combining these two goals were disadvantageous and the public side detracted from collecting robust, credible data. Conversely though, groups like SPES need to make the most effective use of these public opportunities to engage public interest in the science of conservation to affect positive change. Future BioBlitzes can be crafted to bridge these differing perspectives and needs.

Next Steps

The SCCP works to facilitate public engagement and citizen science opportunities around species and ecosystems at risk with local partners. This is done with the intent to provide those partners with tools and ideas as to how best to take further conservation actions. Should the partners in the BioBlitz wish to have BioBlitzes become a regular event for their area, there are learning outcomes from this pilot event to consider:

1. **Set project scope and resources needed:** Partners need to identify the extent and scope of a future BioBlitz and the social capital (people resources) and finances needed to support planning and implementation. This includes securing sufficient specialist expertise (quantity as well as quality) to cover off gaps in knowledge at the local level, as well as providing for wider coverage geographically. In respect to event location, moving the interpretive display component of the event off a pedestrian movement corridor and to a public viewing or "destination" location where people may be more likely to stop (e.g. Prospect Point, Second Beach etc.) may enhance exposure and public engagement values.

2. **Timing and setting deliverables:** Regardless of the certainty of funding, if the partners wish to undertake an event of this nature in the future, planning should occur at least six (6) months in advance. This will allow for optimal planning and notification of the event and advertising to specialists and experts who often have field season schedules planned well in advance. It will also allow for adequate time to build the event and market and disseminate information locally and regionally.

The Stanley Park BioBlitz should be considered successful by all involved. The staff and volunteers of the Stanley Park Ecology Society showed amazing capacity to pull together a large public event in a very short period of time that attracted at least a thousand participants. Stanley Park is an incredible asset to the City of Vancouver and the citizens of the region. With future support, there is no reason why it cannot continue to part of the many BioBlitz events growing in popularity on the South Coast of BC!

Appendix 1. The Stanley Park landscape

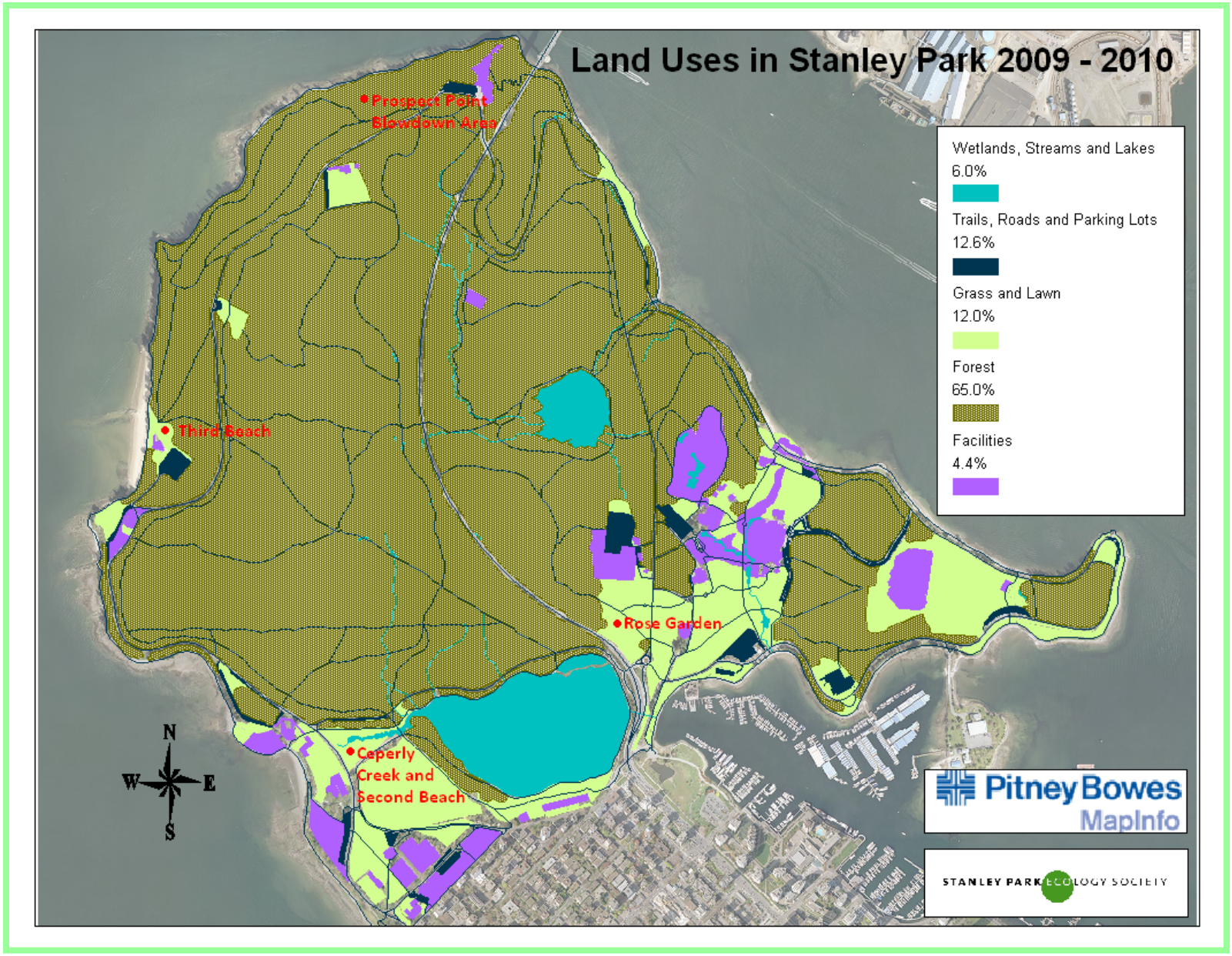


Figure 5. The types of areas surveyed by respective BioBlitz participants and specialists (Source: SPES 2011)

Appendix 2. Detailed BioBlitz survey results and associated species information

*Rows with green highlighting denote new species listings for Stanley Park

Table 1. Vascular and non vascular plants

Vascular Plants		
Scientific Name	**Common name**	**Location**
Trees		
Abies grandis	grand fir	
Acer circinatum	vine maple	
Acer macrophyllum	bigleaf maple	
Alnus rubra	red alder	
Betula papyrifera	paper birch	
Malus fusca	Pacific crab apple	
Picea sitchensis	Sitka spruce	
Populus balsamifera ssp. trichocarpa	black cottonwood	
Prunus emarginata	bitter cherry	
Pseudotsuga menziesii	Douglas-fir	
Thuja plicata	western redcedar | western red cedar	
Tsuga heterophylla	western hemlock	
Shrubs		
Gaultheria shallon	salal	
Lonicera ciliosa	western trumpet honeysuckle	Seawall
Lonicera involucrata	black twinberry	Beaver Lk.
Menziesia ferruginea	false azalea | fool's huckleberry	Lake tr.
Oemleria cerasiformis	Indian plum	
Rhododendron groenlandicum	Labrador tea	bog
Rubus leucodermis	black raspberry	Tatlow tr.
Rubus parviflorus (thimbleberry)	thimbleberry	
Rubus spectabilis (salmonberry)	salmonberry	
Rubus ursinus (trailing blackberry)	trailing blackberry	
Salix hookeriana (Hooker's willow) beaver lk.	Hooker's willow	Beaver Lk.

Salix lucida ssp. lasiandra (pacific willow)	Pacific willow	
Salix sp. (willow)	willow sp.	
Sambucus racemosa	red elderberry	
Sorbus sitchensis	Sitka mountain ash	Beaver Lk.
Spiraea douglasii	hardhack	
Symphoricarpos albus	snowberry	
Vaccinium ovalifolium	oval-leaved blueberry	Beaver Lk.
Vaccinium parvifolium	red huckleberry	
Herbs		
Adenocaulon bicolor	American trailplant | pathfnder	Ravine tr.
Adiantum aleuticum	northern maidenhair fern	Seawall
Anaphalis margaritacea	pearly everlasting	Seawall
Aruncus dioicus	goatsbeard	Seawall
Athyrium filix-femina	lady fern	
Blechnum spicant	deer fern	
Boykinia elata	slender boykinia	Seawall
Brasenia schreberi	watershield	
Bromus sitchensis	Alaska brome	
Cakile edentula	American searocket	Seawall
Cardamine oligosperma (likely C.birsuta)	few-seeded bittercress	
Carex deweyana	Dewey's sedge	
Circaea alpina	enchanter's nightshade	Ravine tr., Chickadee tr.
Claytonia sibirica	Siberian miner's lettuce	
Comarum palustris	marsh cinquefoil	
Cornus canadensis (bunchberry)	bunchberry	Wren tr., Tatlow tr.
Dryopteris expansa	spiny wood fern	
Epilobium angustifolium	fireweed	
Epilobium ciliatum ssp. ciliatum	purple-leaved willow-herb	
Equisetum arvense	common horsetail	
Equisetum telmateia	giant horsetail	
Galium aparine	common cleavers	
Galium triflorum	sweet-scented bedstraw	
Geum macrophyllum	large-leaved avens	

Glyceria elata	tall mannagrass	Tisdall tr.
Heuchera micrantha	smallflower alumroot	Seawall
Juncus articulatus	jointed rush	Seawall
Juncus bufonius	toad rush	
Juncus effusus	common rush	
Juncus tenuis	slender rush	
Lathyrus japonicus	beach pea	Seawall
Leymus mollis	American dunegrass | dune wildrye	Seawall
Luzula parviflora	small flowered woodrush	
Luzula fastigiata	forked wood-rush | smallflowered woodrush	
Lysichitum americanum	skunk cabbage | western skunk cabbage	
Maianthemum dilatatum	false lily-of-the-valley	Ravine tr.
Menyanthes trifoliata	buckbean	Beaver lk.
Mimulus guttatus	yellow monkey flower	Seawall
Montia parvifolia	small-leaved montia	Seawall
Nuphar polysepalum	yellow pond lily	Beaver lk.
Oenanthe sarmentosa	Pacific water-parsley	
Osmorhiza chilensis	sweet-cicely	
Polypodium glycyrrhiza	licorice fern	
Polystichum munitum	sword fern	
Potentilla pacifica	Pacific silverweed	
Pteridum aquilinum	bracken fern	
Rorippa palustris	marsh yellow cress	
Schoenoplectus acutus	hardstem bulrush	
Scirpus microcarpus	small-flowered bulrush	
Sedum oreganum	Oregon stonecrop	
Sedum spathulifolium	broadleaf stonecrop	
Stellaria crispa	crisp starwort | crisp sandwort | curled sandwort	
Streptopus amplexifolius	clasping twisted stalk	
Tellima grandiflora	fringecup	
Tiarella trifoliata	three-leaved foamflower	

Trisetum cernuum	nodding trisetum	
Typha latifolia	cattail	
Urtica dioica	stinging nettle	
Common English names appear in parentheses. '|' separates synonyms.		
When only the genus was identified (as yet), "sp" appears in place of the species name.		
Names and taxonomy are believed to be current as of August 21 2011		
Sources:Terry Taylor, David Cook, E-Flora, BC Conservation Data Center		

Non-vascular plants		
Scientific name	**Common name**	**Location**
Carnvourous plants		
Drosera rotundifolia (Round-Leaved Sundew) bog	round-leaved sundew	bog
Mosses		
Atrichum selwynii	crane's-bill moss | Selwyn's atrichum moss	
Atrichum undulatum (common smoothcap)	common smoothcap	
Calliergonella cuspidata	calliergonella moss | pointed spear-moss	Ravine tr.
Claopodium crispifolium	claopodium moss | rough moss	
Dichodontium pellucidum	dichodontium moss | transparent rake-moss	Seawall
Dicranella heteromalla	dicranella moss | silky forklet-moss	near Beaver lk.
Dicranoweisia cirrata	curly thatch-moss | dicranoweisia moss	
Dicranum scoparium	broom-moss | dicranum moss	
Dicranum tauricum	broken-leaf moss | dicranum moss	

Heterocladium macouni	Macoun's bileaf moss | Macoun's heterocladium moss	
Homalothecium fulgescens)	(tree mat homalothecium moss | yellow curl-moss	
Homalothecium nuttallii	Nuttall's homalothecium moss	
Hypnum circinale	coiled-leaf claw-moss | hypnum moss	
Isothecium myosuroides | *Isothecium cardotii* | *Isothecium stoloniferum*	isothecium moss | variable moss, cat-tail moss	Ravine tr.
Kindbergia oreganum | *Kindbergia oregana*	Oregon beaked-moss | Oregon eurhynchium moss	
Kindbergia praelongum | *praelonga*	eurhynchium moss | slender beaked-moss	
Orthotrichum lyellii	Lyell's bristle-moss | Lyell's orthotrichum moss	
Plagiomnium insigne	coastal leafy moss | plagiomnium moss	
Plagiothecium undulatum | *Buckiella undulatum*	flat-moss | undulate plagiothecium moss	
Pleurozium schreberi	red-stemmed feathermoss | Schreber's big red stem moss	bog
Pogonatum contortum	contorted pogonatum moss	near Beaver lk.
Pohlia longibracteata	longbract pohlia moss	Seawall
Pseudotaxiphyllum elegans	(elegant pseudotaxiphyllum moss | small flat-moss	
Racomitrium heterostichum	racomitrium moss | bristly/lesser fringe-moss	
Rhizomnium glabrescens	rhizomnium moss	
Rhytidiadelphus loreus	lanky moss | loreus goose neck moss	

Rhytidiadelphus squarrosus	bent-leaf moss | square goose neck moss	
Sphagnum palustre	blunt-leaved peat-moss | prairie sphagnum	near beaver lk.
Tetraphis pellucida	common four-tooth moss | tetraphis moss	
Tortula muralis	tortula moss | wall screw-moss	
Liverworts		
Scientific name	**Common name**	**Location**
Bazzania denudata		
Calypogeia azurea		
Calypogeia muelleriana		
Cephalozia bicuspidata		
Jungermannia rubra seawall		
Lepidozia reptans	little-hands liverwort	
Lophocolea cuspidata		
Metzgeria conjugata		
Pellia neesiana	shiny liverwort, ring pellia	
Riccardia latifrons		
Scapania bolanderi	yellow-ladle liverwort	
Lichens		
Scientific name	**Common name**	**Location**
Candelaria concolor	candle-flame lichen	Near Food concession at Pavillion Parking lot On fallen branch of Cherry tree
Cladonia fimbriata	trumpeting pixie	On bark of Fir tree near SPES parking lot
Cladonia macilenta	lipstick lichen	On bark of Beech tree near SPES parking lot
Cladonia sp.		On tree bark near Beaver Lake

Cladonia squamosa	Dragon cladonia	bog
Evernia prunastri	valley oakmoss | antlered perfume lichen	Near Food concession at Pavillion Parking lot On fallen branch of Cherry tree
Hypogymnia physodes	hooded bone | hooded tube	On bark of Beech tree near SPES parking lot
Hypogymnia tubulosa	powder headed tube lichen	Near Food concession at Pavillion Parking lot On fallen branch of Cherry tree
Lecanora sp.	rim lichen	On bark of Fir tree near SPES parking lot
Lepraria incana	dust lichen	On Fir tree bark near Beaver Lake
Lepraria sp.		
Melanelia subaurifera	abraded Camouflage lichen	Near Food concession at Pavillion Parking lot On fallen branch of Cherry tree
Mycoblastus sanguinarius	bloody heart lichen	On bark of Beech tree near SPES parking lot
Parmelia hygrophila	western shield lichen	On bark of Beech tree near SPES parking lot
Parmelia sulcata	hammered shield lichen	Near Food concession at Pavillion Parking lot On fallen branch of Cherry tree
Parmeliopsis ambigua	green starburst lichen	On bark of Beech tree near SPES parking lot
Parmeliopsis hyperopta	grey starburst	
Platismatia glauca	ragbag lichen	On bark of Beech tree near SPES parking lot
Tuckermannopsis chlorophylla | *Cetraria chlorophylla*	powdered wrinkle lichen	On bark of Beech tree near SPES parking lot
Usnea subfloridana	beard lichen	Near Food concession at Pavillion Parking lot On fallen branch of Cherry tree

Common English names appear in parentheses. '|' separates synonyms. '?' following a species indicates that a specimen was found similar to the named species but the species was not (yet) confirmed. .
When only the genus was identified (as yet), "sp" appears in place of the species name. Names and taxonomy are believed to be current as of August 21 2011
Sources: Daryl Thompson, Kent Brothers, Leanne Gallon, Terry Taylor, David Cook, E-Flora

Table 2. Invasive & non-native vascular plants

Invasive Plant Species		
Emergent Species		
(Emergent species are limited distribution or a new invader)		
Scientific name	**Common name**	**Location**
Robinia pseudo-acacia (black locust)	black locust	
Aesculus hippocastanum	horse chestnut	Beaver lk.
Buddleja davidii	butterfly bush	Lost Lagoon
Corylus avellana	common hazel | Harry Lauder's walking stick	
Impatiens parviflora	small-flowered touch-me-not	Tisdall tr., Ravine tr.
Prunus lusitanica	Portugal laurel	
Expanding Species		
(Expanding species are abundant in some areas, but have limited distribution in other areas)		
Calystegia sepium ssp. sepium | Convolvulus sepium | Calystegia sepium	hedge false bindweed	
Fallopia japonica sp. |Polygonum cuspidatum	Japanese knotweed	Ravine tr.
Iris pseudacorus	yellow iris | yellow flag iris	
Lythrum salicaria	purple loosestrife	

Nymphaea odorata	fragrant water lily	Beaver lk.
Phalaris arundinacea	reed canary grass	
Solanum dulcamara var. dulcamara | *Solanum dulcamara*	European bittersweet | climbing nightshade	Ravine tr.
Established Species		
(Established species are abundant or widespread in most areas of the park)		
Scientific name	**Common name**	**Location**
Hedera helix	English ivy	
Ilex aquifolium	English holly	
Rubus armeniacus | *Rubus discolor*	Himalayan blackberry	
Sorbus aucuparia	European mountain-ash | European rowan	
Trailside Species		
(These are non-native species considered a nuisance, but of minimal threat to natural area biodiversity)		
Scientific name	**Common name**	**Location**
Agrostis gigantea	redtop	
Aira caryophyllea	silver hairgrass	Seawall
Anthoxanthum odoratum	sweet vernalgrass	
Arctium minus	burdock	Wren tr.
Bellis perennis	English daisy	
Cerastium fontanum ssp. triviale	mouse-eared chickweed	
Cirsium arvense	Canada thistle	
Cirsium vulgare	common thistle	
Dactylis glomerata	orchard grass	
Daucus carota	Queen Anne's lace | wild carrot	Seawall
Digitalis purpurea	common foxglove	
Geranium robertianum	herb Robert	

Glechoma hederacea	ground ivy	Chickadee tr.
Gnaphalium uliginosum	marsh cudweed	
Hesperis matronalis	dames rocket	
Holcus lanatus	common velvet-grass	
Hordeum murinum	wall barley	Seawall
Hypericum maculatum	spotted St. John's-wort	Hanson tr.
Hypericum perforatum	common St. John's wort	
Hypochaeris radicat	hairy cat's ear	
Lactuca muralis	wall lettuce	
Lactuca serriola	prickly lettuce	
Lapsana communis	nipplewort	
Lepidium heterophyllum	purpleanther field pepperweed	
Linum usitatissimum	common flax	Seawall
Lolium multiflorum	Italian ryegrass	
Lotus pedunculatus	big trefoil | stalked birds-foot trefoil	Beaver lk., Ravine tr.
Matricaria matricarioides	pineapple weed	
Meconopsis cambrica	Welsh poppy	Tatlow tr.
medicago lupulina	black medic	
Myosotis scorpiodes	common forget-me-not	
Nymphaea odorata	white water lily	
Oenothera glazioviana	red-sepaled evening primrose	Lost Lagoon
Papaver rhoeas	corn poppy	Seawall
Persicaria maculosa	spotted ladysthumb	
Philadelphus sp.	mock orange	Ravine tr.
Phleum pratense	Timothy grass	
Phyllostachys sp	bamboo sp.	Seawall
Plantago lanceolata	ribwort plantain	

Plantago major	broad-leaved plantain	
Poa annua	annual bluegrass	
Polygonum aviculare	common knotweed	
Polygonum convolvulus |Fallopia convolvulus	black bindweed	
Prunella vulgaris ssp. Vulgaris	European self-heal	
Ranunculus acris	meadow buttercup | tall buttercup	Tisdall tr.
Ranunculus repens	creeping buttercup	
Rumex obtusifolius	bitter dock	
Sagina procumbens	procumbent pearlwort	
Senecio sylvaticus	wood groundsel | woodland ragwort	Seawall
Silene rubra	campion sp.	
Sisymbrium officinale	hedge mustard	
Sonchus arvensis	perennial sow-thistle	
Sonchus asper	prickly sow-thistle | spiny sow-thistle	
Sonchus oleraceus	common sow-thistle	
Stellaria media	chickweed	
Symphytum x uplandicum	hybrid comfrey	Seawall
Taraxacum officinale	common dandelion	
Trifolium dubium	small hop-clover | suckling clover	
Trifolium hybridum	alsike clover	
Trifolium pratense	red clover	
Trifolium repens	white clover	
Vicia cracca	tufted vetch	
Vulpia bromoides	barren fescue | brome fescue	Seawall
Common English names appear in parentheses. '|' separates synonyms.		
When only the genus was identified (as yet), "sp" appears in place of the species name.		
Names and taxonomy are believed to be current as of August 21 2011		
Sources: Terry Taylor, David Cook, E-Flora		

Table 3. Fungi & Slime Mold

Fungi		
Scientific Name	**Common Name**	**Location**
Biscognizauxia uniapiculata		southwest corner of park
Annulohypoxylon multiforme | *Hypoxylon multiforme*	carbon cushion	southwest corner of park
Boletus smithii	Smith's bolete	southwest corner of park
Clavulina cristata	crested coral	Beaver Lake
Coprinellus micaceus	mica cap	flower beds near Dining Pavillion
Fomitopsis pinicola | *Fomes pinicola*	red-belted polypore	Beaver Lake
Ganoderma applanatum | *Fomes applanatus*	artist's conk	Beaver Lake
Ganoderma oregonense	Oregon varnished conk	Beaver Lake
Gloeophyllum sepiarium | *Lenzites sepiaria*	rusty-gilled polypore	southwest corner of park
Heterobasidion annosum | *Fomes annosus*	Annosus root, butt rot, conifer-base polypore	Beaver Lake
Hypomyces aurantius		southwest corner of park
Hypoxylon cf *investiens*		southwest corner of park
Irpex lacteus | *Polyporus tulipiferae*	Milk-white toothed polypore	southwest corner of park
Kretzschmaria deusta | *Ustulina deusta* | *Ustulina vulgaris* | *Hypoxylon ustulatum*	carbon cushion	southwest corner of park
Nidula candida	bird's nest fungus, common gel bird's nest	Beaver Lake
Osteina obducta | *Oligoporus obductus*	bone polypore	southwest corner of park
Panellus stipticus	luminescent Panellus	Beaver Lake
Phaeolus schweinitzii | *Polyporus schweinitzii*	Schweinitz' butt rot | Dyer's polypore, dye polypore	southwest corner of park
Phellinus ferreus | *Fuscoporia ferrea*		southwest corner of park
Phellinus hartigii | *Fomitiporia hartigii*	conifer white trunk rot	southwest corner of park
Phycomyces sp		southwest corner of park
Psathyrella sp.		southwest corner of park
Ramaria sp.	coral fungus	Beaver Lake
Royoporus badius | *Polyporus badius* | *Polyporus picipes*	black leg	southwest corner of park

Russula sp.		Beaver Lake
Sawadaea bicornis | *Uncinula bicornis*	Maple powdery mildew	
Scleroderma verrucosum	earth ball fungus	flower beds near Dining Pavillion
Stereum complicatum	crowded parchment	Beaver Lake
Tapinella atrotomentosa | *Paxillus atrotomentosus*	velvet pax	Beaver Lake
Trametes versicolor | *Coriolus versicolor* | *Polyporus versicolor*	turkeytail	southwest corner of park
Trichaptum abietinum | *Polyporus abietinus*	violet-pored bracket fungus | purple-toothed polypore	southwest corner of park
Tyromyces caesia	cheese polypore	Beaver Lake
Xylaria hypoxylon	carbon antlers	southwest corner of park
Slime Mold		
Scientific Name	**Common Name**	**Location**
Fuligo septica	dog vomit | scrambled eggs slime mold	Beaver Lake
Families of fungi observed	Sources: Kent Brothers, Leanne Gallon, E Flora	
ASCOMYCOTA (Ascomycete fungi)	Green highlighting denotes new listings for Stanley Park	
Sordariomycetes (Perithecial / flask fungi)		
BASIDIOMYCOTA (Basidiomycete fungi)		
ZYGOMYCOTA (Zygomycete fungi)		

Table 4. Molluscs

Scientific and common names	Location		
Musculium or Sphaerium (Fingernail Clam sp.)	Beaver Lk.		
Mytilus edulis Blue Mussel	Lumberman's Arch beach seine		
Sources: Jordan Rosenfeld, Isabell Aube			

Table 5. Insects

Bees, Wasps & Flies		
"Communal Bees"		
Scientific name	**Common Name**	**Location**
Apis mellifera	Honeybee	Rose Garden/Dining Pavillion
Bombus vosnesenskii	Yellow-fronted Bumblebee	Rose Garden/Dining Pavillion
Bombus flavifrons	Bumblebee sp.	Rose Garden/Dining Pavillion
Bombus mixtus	Bumblebee sp.	Rose Garden/Dining Pavillion
Bombus vagans	Bumblebee sp.	Rose Garden/Dining Pavillion
Bombus sp.	Bumblebee sp.	Rose Garden/Dining Pavillion
"Solitary Bees"		
Scientific name	**Common Name**	**Location**
Anthidium manicatum	Wool Carder Bee	Rose Garden/Dining Pavillion
Duforea sp.		Rose Garden/Dining Pavillion
Megachile sp.	Leafcutter Bee	Rose Garden/Dining Pavillion
Megachile rotundata	Alfalfa Leafcutter Bee	Rose Garden/Dining Pavillion
"Mining Bees"		
Scientific name	**Common Name**	**Location**
Andrena sp.		Rose Garden/Dining Pavillion

"Sweat Bees"		
Scientific name	**Common Name**	**Location**
Halictus rubicundus		Rose Garden/Dining Pavillion
Halictus tripartitus		Rose Garden/Dining Pavillion
Lasioglossum subgenus lasioglossum, species zonulum		Rose Garden/Dining Pavillion
Lasioglossum subgenus evylaeus		Rose Garden/Dining Pavillion
Lasioglossum subgenus dialictus		Rose Garden/Dining Pavillion
"Plasterer Bees"		
Scientific name	**Common Name**	**Location**
Hylaeus modestus		Rose Garden/Dining Pavillion
Other Hymenoptera (wasps)		
Scientific name	**Common Name**	**Location**
Vespidae (includes "paper & mud" wasps)		
Vespula maculatum	Bald-faced Hornet	Rose Garden/Dining Pavillion
Vespula sp.	Yellow Jacket	Rose Garden/Dining Pavillion
Sphecidae ("thread-waisted" wasps)		Rose Garden/Dining Pavillion
Sceliphron sp.	Mud Dauber	Rose Garden/Dining Pavillion
Chrysididae ("cuckoo" wasps)		Rose Garden/Dining Pavillion
sp.	Cuckoo Wasp	Rose Garden/Dining Pavillion
Crabronidae (includes "digger" wasps)		Rose Garden/Dining Pavillion
sp.		Rose Garden/Dining Pavillion
True Flies (Diptera)		
Scientific name	**Common Name**	**Location**
Calliphoridae ("blow flies")		Rose Garden/Dining Pavillion
Lucila sp.		Rose Garden/Dining Pavillion
Eristalinae ("hover flies")		Rose Garden/Dining Pavillion
Eristalis tenax		Rose Garden/Dining Pavillion

Eristalis anthophorina		Rose Garden/Dining Pavillion
Eristalis arbustorum		Rose Garden/Dining Pavillion
Syrphidae ("flower flies or syrphid flies")		Rose Garden/Dining Pavillion
Chrysotoxum sp.		Rose Garden/Dining Pavillion
Eumerus sp.		Rose Garden/Dining Pavillion
Heliophilus sp.		Rose Garden/Dining Pavillion
Melanostoma sp.		Rose Garden/Dining Pavillion
Seriocomyia sp.		Rose Garden/Dining Pavillion
Syrphus opinator		Rose Garden/Dining Pavillion
Toxomerus sp.		Rose Garden/Dining Pavillion
Xylota sp.		Rose Garden/Dining Pavillion
Plus four more that are clearly other species but unable to key out		Rose Garden/Dining Pavillion
Aquatic Insects (to order)		
Scientific name	**Common Name**	**Location**
Hemiptera	Water Boatmen sp.	
Hemiptera	Backswimmer sp.	
Hemiptera	Water Strider	seen at Beaver lake
Odonata	damselfly larva sp.	
Odonata	dragonfly larva sp.	
Trichoptera	caddisfly sp	seen at Beaver lake
Ephemeroptera	mayfly sp	seen at Beaver lake
Lepidoptera (Butterflies)		
Scientific name	**Common name**	**Location**
Pieris rapae	Cabbage White	Rose Garden, Dining Pavilion
Pieris marginalis	Margined White	Rose Garden, hollow tree
Nymphalis antiopa	Mourning Cloak	Dining Pavilion
Neophasia menapia	Pine White	Dining Pavilion, North side of Lost Lagoon, Rose Garden
Vanessa atalanta	Red Admiral | Red Admirable	NE corner Lost Lagoon
Papilio spp.	Swallowtail butterfly spp.	Prospect Point Picnic Grounds
	Unknown Butterfly	Train & Aquarium Grounds

	Unknown Butterfly	Prospect Point Blowdown
Papilio rutulus	Western Tiger Swallowtail	Rose Garden Train & Aquarium Grounds
Pieris spp.	White butterfly spp.	Prospect Point Picnic Grounds, hollow tree
Ochlodes sylvanoides	Woodland Skipper	Rose Garden, Prospect Point Picnic Grounds
Odonata (Dragonflies & Damselflies)		
Scientific name	**Common name**	**Location**
Rhionaeschna multicolor	Blue-eyed Darner	Prospect Point Picnic Grounds, Hollow Tree, East of Second Beach, Lost Lagoon NW, Train & Aquarium Grounds, Rose Garden
Pachydiplax longipennis	Blue Dasher	Lost Lagoon NW
Sympetrum illotum	Cardinal Meadowhawk	Rose Garden
	Dragonflies spp.	East of Second Beach
Libellula forensis	Eight-spotted Skimmer	Lost Lagoon NW
Sympetrum spp.	Meadowhawk spp.	Train & Aquarium Grounds
Ischnura cervula	Pacific Forktail	Lost Lagoon NW, Beaver Lake East Shore
Aeshna palmata	Paddle-tailed Darner	Beaver Lake East Shore
Enallagma carunculatum	Tule Bluet	Lost Lagoon NW, Rose Garden
Miscellaneous		
Anisolabis maritima	Maritime Earwig | Seaside Earwig	Seawall
Sources: Elizabeth Elle, Sherry Elwell, Graham Gielens, Melissa Todd, Jeff Meggs, Christine Leston, Greg Ferguson, Jordan Rosenfeld,		
BugGuide.net		

Table 6. Other Invertebrates

Scientific and common names
Freshwater invertebrates
Annelida, Oligochaeta (aquatic worm sp.)
Gammaridea sp. (scud)
(all found in Beaver Lk.)
Marine Invertebrates
Balanus glandula (Common Acorn Barnacle)
Amphipoda sp. (amphipod sp.)
(from Lumberman's Arch beach seine
Membranipora serrilamella (Kelp-encrusting Bryozoan)
Annelida, Oligochaeta (aquatic worm sp.) Lumberman's Arch plankton tow
Sources: Jordan Rosenfeld, Isabelle Aube, Sheila Byers

Table 7. Herptiles (amphibians and reptiles)

Herptiles	
Scientific and Common Name	**Location**
Rana catesbeiana (Bullfrog)	Beaver Lake
Lithobates clamitans (Green frog)	Beaver Lake
Trachemys scripta elegans (Slider | Red-eared Slider)	Beaver Lake
Sources: Robyn Worcester	

Table 8. Fish

Fish		
Scientific name	**Common Name**	**Location**
Gasterosteus aculeatus	Threespine Stickleback	Beaver lk., Beaver Crk.
Oncorhynchus clarki clarki	Cutthroat Trout, clarkii subspecies | Coastal Cutthroat Trout	Beaver crk
Oncorhynchus kisutch	Coho Salmon	Beaver crk
Cymatogaster aggregata	Shiner Perch	Lumberman's arch (beach seining)
Platichthys stellatus	Starry Flounder	Lumberman's arch (beach seining)
Isopsetta isolepis	Butter Sole	Lumberman's arch (beach seining)

Sources: D. Dagenais, J. Holla, J. Pepineau, Isabelle Aube, Sheila Byers	

Table 9. Birds

Birds				
Scientific Name	**Common Name**	**Location**	BC Listing (red/blue)	Federal listing
Agelaius phoeniceus	Red-winged Blackbird	VPB Parking Lot		
Aix sponsa	Wood Duck	North Lost Lagoon		
Anas platyrhynchos	Mallard	North Lost Lagoon, devonian tr. Beaver lk., seawall		
Ardea herodias faninni	Great Blue Heron *faninni* ssp.	Devonina tr., beaver lk., North Lost Lagoon	Blue (special concern)	Special concern
Bombycilla cedrorum)	Cedar Waxwing	seawall		
Branta canadensis	Canada Goose	VPB Parking Lot, North Lost Lagoon, coal harbour-brockton point, devonian tr.		
Calypte anna	Anna's Hummingbird	Stone Bridge		
Carduelis tristis	American Goldfinch	VPB Parking Lot, Beaver Lake Trail		
Carpodacus mexicanus	House Finch	VPB Parking Lot		
Certhia americana	Brown Creeper	Train Yard Parking Lot, Pipeline Road		
Colaptes auratus	Northern Flicker	seawall		
Columba livia	Rock Dove	North Lost Lagoon, devonian tr. Beaver lk., seawall		
Corvus caurinuscaurinus	Northwestern Crow	throughout park		
Corvus corax	Common Raven	beaver lk.		

Cyanocitta stelleri	Steller's Jay	beaver lk.		
Cygnus olor	Mute Swan	North Lost Lagoon		
Dryocopus pileatus	Pileated Woodpecker			
Empidonax traillii	Willow Flcatcher	Beaver Lake Trail		
Hirundo rustica	Barn Swallow	VPB Parking Lot, North Lost Lagoon, devonian tr.	Blue (special concern)	Threatened
Junco hyemalis	Dark-eyed Junco	South Creek Trail		
Larus canus	Mew Gull	second beach, brockton point, seawall		
Larus delawarensis	Ring-billed Gull	North Lost Lagoon, second beach, brockton point, seawall		
Larus glaucescens	Glaucous-winged Gull	North Lost Lagoon, coal harbour-brockton point, seawall		
Larus occidentalis	Western Gull	seawall		
Lophodytes cucullatus	Hooded Merganser	Stone Bridge		
Megaceryle alcyon	Belted Kingfisher	coal harbour-brockton point		
Melospiza lincolnii	Lincoln's Sparrow	brockton point		
Melospiza melodia	Song Sparrow	Beaver Lake Trail, Catherdral Trail		
Mergus merganser	Common Merganser	seawall, brockton point		
Phalacrocorax auritus	Double-crested Cormorant	seawall, brockton point, North Lost Lagoon		
Phalacrocorax pelagicus	Pelagic Cormorant	coal harbour-brockton point, 7 under lion's gate bridge, 7 on seawall cliffs		
Picoides pubescens	Downy Woodpecker	North Lost Lagoon		
Picoides villosus	Harry Woodpecker	Wren Trail		

Pipilo maculatus	Spotted Towhee	Pipeline Road, Catherdral Trail		
Poecile atricapillus	Black-capped Chickdee	Train Yard Parking Lot, North Lost Lagoon, second beach		
Poecile rufescens	Chestnut-backed Chickadee	Beaver Lk.		
Psaltriparus minimus	Bushtit	devonian tr.		
Selasphorus rufus	Rufous Hummingbird	rose garden		
Sitta canadensis	Red-breasted Nuthatch	Beaver Lake Trail		
Sphyrapicus ruber	Red-breasted Sapsucker			
Stelgidopteryx serripennis	Northern Rough-winged Swallow	nesting @ brockton point		
Strix Varia	Barred Owl	pipeline rd., beaver Lk.		
Troglodytes troglodytes	Pacific Wren	South Creek Trail		
Turdus migratorius	American Robin	brockton point, VPB Parking Lot, North Lost Lagoon		
Wilsonia pusilla	Wilsons Warbler	South Creek Trail		
Zonotrichia atricapilla	Golden Crowned Sparrow	VPB Parking Lot		
Sources: Damion Ruthven, Michael Price, Dave Curror, Robyn Worcester, Roy Teo, Greg Ferguson, Christine Ensing				
BC Conservation Data Center, Bird Studies Canada				

Table 10. Mammals

Mammals

Scientific name	Common Name	Location
Rattus rattus	Roof Rat | Black Rat (introduced)	small mammal trapping
Phoca vitulina	Harbour Seal	seawall, foreshore
Lontra canadensis	North American River Otter | River Otter	lumberman's arch, seawall
Castor canadensis	American Beaver	beaver lk., tisdall tr.
Myotis yumanensis	Yuma Myotis | Yuma Bat	beaver lk., tisdall tr.
Myotis lucifugus	Little Brown Myotis | Little Brown Bat	beaver lk.
Tamiasciurus douglasii	Douglas's Squirrel | Douglas Squirrel	beaver lk.
Sciurus carolinensis	Eastern Grey Squirrel | Grey Squirrel (introduced)	beaver lk., small mammal trapping
Peromyscus maniculatus	North American Deermouse | Deer Mouse	small mammal trapping
Procyon lotor	Raccooon	seen and photographed by volunteers

Sources: Robyn Worcester, Brent Matsuda, Damion Ruthven		
BC Conservation Data Center.		
* Up to date common names used by the BCCDC are provided first, older common names or synonyms are provided second		

Appendix 3. Signage, outreach, and marketing for the Stanley Park BioBlitz

Figure 6. BioBlitz marketing flyer and event map signage with coding for Smartphone users.

Sunday August 21st

Event	Time	Location	Description
Small Mammal Trapping	8:00am	Beaver Lake	Check small mammal traps with our local expert and learn about the small fuzzy creatures living in the forest of Stanley Park.
Bird ID Walk	9:00am - 11:00am	Nature House	Take a walk around Lost Lagoon and meet the birds that call it home. Learn how to identify birds by their feathers and song!
Nature House Displays	10:00am - 3:00pm	Nature House	Come visit Vancouver's only Nature House and learn about the local plants and animals that live in Stanley Park!
Partner Organization Displays	10:00am - 3:00pm	Lumberman's Arch	Come and meet some of the environmental organizations working in your neighbourhood!
Native Plant Garden Tour	11:00am - 12:00pm	Nature House	Learn about the importance of native plants, how to grow and care for them and what wildlife they attract!
Beaver Lake Amphibian trapping	11:00am - 12:00pm	Beaver Lake	Take a look at the creatures living in Beaver Lake. Help pull out amphibians traps and identify what you find with our environmental educators!
Beaver Lake Pond Dip	12:00pm - 2:00pm	Beaver Lake	Try your hand at catching the aquatic insects that call Beaver Lake home and use our magnifying loops to see them up close and personal!
Insect Identification Walk	1:00pm - 2:30pm	Nature House	Take a walk around Stanley Park and learn about the creepy crawlies in the forest all around you!
Freshwater Fish Trapping	1:30 - 3:00pm	Beaver Lake	Join us as we examine fish traps in Beaver Creek, one of the only three natural salmon bearing streams remaining in Vancouver!
State of the Park Discovery Walk	1:30pm - 3:30pm	Nature House	Tour the areas and discuss the issues presented in Stanley Parks first ever State of the Park Report!

Figure 7. BioBlitz event schedule posted online through various sites and at event stations

By **Rebecca Bollwitt**
August 17th, 2011, 1:10 PM (PT)

0 | 9 Share | 12 | 0 comments

Like Be the first of your friends to like this.

posted in: environment, stanley park, vancouver | **tags:** events, non-profit, parks

Stanley Park will host its first-ever BioBlitz this weekend. According to the organizers at the Stanley Park Ecology Society, a Bioblitz is "an extravaganza of many hands-on exploratory inventories of nature."

Participants will be in specific groups alongside science experts and given a designated amount of time to identify as many plants, insects, birds, amphibians, fish, and intertidal creatures as they can. They're calling all "citizen scientists" to help out with this massive undertaking for 24 hours this weekend (12 hours on both Saturday and Sunday).

Schedule for Saturday, August 20, 2011

Nature House Display Time: 10:00am to 3:00pm Meet at: Nature House (Lost Lagoon)	Wild Edibles and Medicinal Plant Walk Time: 6:00pm to 7:30pm Meet at: Beaver Lake
Beach Seine Time: 3:15pm to 5:15pm Meet at: Lumberman's Arch	Bat Mist-Netting Time: 8:00pm to 11:00pm Meet at: Beaver Lake

Vancouver Events Calendar
SPORTS - MUSIC - THEATRE - FAMILY - VANCOUVER 2010

5DayWeather.com
5 day weather forecasts

Home | Events | Submit Event | Search | Newsletter | Tools | RSS | Login

Events >> Events Calendar

Event Calendar

<	Aug 2011					>
S	M	T	W	T	F	S
	01	02	03	04	05	06
07	08	09	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Note: Event Times in PST

Translate Vancouver Events
Select Language
Powered by Google Translate

go back to English click below

Key Vancouver Links
Vancouver Annual Events
Vancouver Webcams
Vancouver Attractions
Vancouver Bed & Breakfasts

Whistler Information Guide

City Guides
Vancouver
Calgary
Edmonton
Winnipeg
Ottawa
Toronto
Halifax

City Event Calendars
Calgary Events Calendar

Recommended
Insurance in Canada
Banks in Canada
Add Photos from Events

follow us on twitter

Events | Submit Event | Search | Newsletter | Tools | RSS

Vancouver Events

Search Google Custom Search

Like 82 people like this.

Hotel Downtown Nanaimo
Excellent Waterfront Location Deluxe Rooms & Suites from $109
www.mayfairhotelsandresorts.com

AdChoices

Find upcoming events in Vancouver, BC! | Find and buy Vancouver Event Tickets
Vancouver Movie Showtimes - Vancouver Movie Listings
Add your Vancouver event to our calendar free!

Stanley Park BioBlitz!

Come to Stanley Park to participate in its first ever 'BioBlitz'! With your help, this 24 hour citizen science relay aims to identify as many living things as possible in Stanley Park. Together with scientists, local stewardship groups and YOU we hope to increase our knowledge of the parks native biodiversity.
Events running throughout the two days are **FREE** and open to the public. Enjoy hands on participation in pond dips, bat surveys, bird counts, amphibian searches, nature walks and more! Community groups and family activities will be centered at Lumberman's Arch. Plus, be sure to visit our interpretative tents at Beaver Lake and at the Nature House on Lost Lagoon.
For more information visit: www.stanleyparkecology.ca
Saturday August 20th 3:00pm - 11:00pm
Sunday August 21st 9:00am - 3:00pm

Saturday, 20 August, 2011
All Day Event

Cost:
FREE

Categories:
Events
Exhibitions & Shows
Family

Location: Weather
Stanley Park
Vancouver, BC V6G 1Z4

Browse Events at this Location

Share this Event
More...
Email to a Friend

Save to Your Calendar
Google Calendar
Yahoo! Calendar
iCalendar (download) (subscribe)
vCalendar (download)
hCalendar & hCard (?)

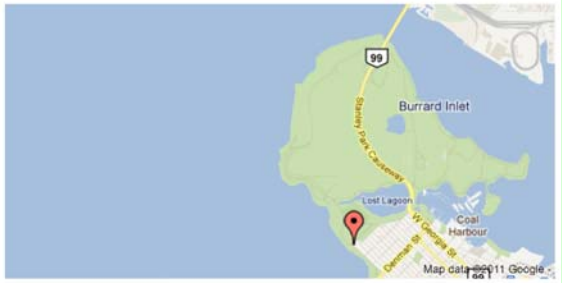


Figure 8. Samples of BioBlitz pre-event online coverage

STANLEY PARK ECOLOGY SOCIETY

Connecting people with nature.

Fall 2011 Newsletter

Sneak Peek

Bioblitz Captivates Citizen Scientists!

Brian Titaro, *Conservation Technician*

The first BioBlitz in Stanley Park was a unique and unparalleled opportunity for visitors to experience the wonder of nature through a scientific lens. Adults and children alike clamored to see how even the smallest of fish and mammals had an identity and a purpose. Birds, insects, plants and reptiles also played starring roles in this show of biodiversity. Hundreds of "hands on" interactions with nature revealed the Park as a hotspot of biodiversity in Vancouver. Not only were citizens entertained, excited and educated, a total of 143 species not previously listed by the Stanley Park Ecology Society were recorded.

During the International Year of the Forest, on a hot weekend at the end of summer, Stanley Park was buzzing with its first ever "BioBlitz". Co-hosted by the Stanley Park Ecology Society and the South Coast Conservation Program, this biodiversity blitz involved local researchers, ecology experts, stewardship groups and the general public. This 24 hour science relay identified a multitude of living organism types in Stanley Park.

Considering how heavily used Stanley Park is, it's amazing that this type of event had never taken place before. Spanning August 20th and 21st, 204 scientists with a legion of volunteers and local citizens launched into the Park, clipboards and field guides in hand, to perform a beach seine, small mammal trapping, lichen surveys, fish and amphibian surveys and many more events in a quest to record the diversity of flora and fauna in this 400 hectare urban oasis.

Even those whose skills weren't scientific enough to tell the difference between a huckleberry and a salmonberry were included. Free interpretive events throughout the weekend were delivered to educate people from throughout Metro Vancouver about the Park's biodiversity and hidden wonders.

Highlights of the weekend included hummingbird, bat and owl surveys. Individuals and families were able to interact with a local expert as he effortlessly caught, analyzed, and delicately banded three Anna's hummingbirds over the course of just

Contact Us
Stanley Park Ecology Society
PO Box 5167
Vancouver BC V6B 4B2
www.stanleyparkecology.ca

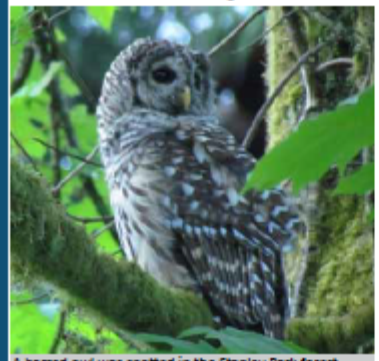
School Programs:	604-257-6907
Public Programs:	604-718-6522
Conservation Progs:	604-681-7099
Co-Existing w/Coyotes:	604-681-9453
Stewardship Progs:	604-718-6547
Volunteers:	604-681-7099
Nature House:	604-257-8544

cont'd

an hour. The owl survey delighted observers as three barred owls flew over their heads and called back in response to the recorded calls that the biologist sent out into the dark forest. Five active, healthy bats were transferred from a veil of mist-nets over dark waterways to the hands of researchers and to the eager eyes of more than 30 people who participated until almost midnight.

The BioBlitz was a huge success largely due to the number of interactions between the public and the biologists . At the close of the weekend, more than 1000 individuals from the community had participated in one or more BioBlitz activity. Many individuals stayed engaged all weekend. One young boy participated in the beach seining, hummingbird trapping, amphibian trapping, fish trapping and aquatic insect pond dipping.

For children and adults, the BioBlitz provided an ideal opportunity to escape the hot city and connect to the natural world with the bonus of guidance from local experts happy to share their knowledge. As the last of the display tents were coming down the organizers celebrated a successful BioBlitz. The positive impact for the public was reiterated as another young boy who had spent the entire weekend under guidance catching frogs, butterflies and insects at Beaver Lake approached and excitedly asked, "Will you be doing all of this again next weekend?" The smiling response from SPES's Conservation Technician was, "Not next weekend, but maybe next year."



A barred owl was spotted in the Stanley Park forest moments before the owl survey began.

Three Anna's hummingbirds were caught, banded and released during the BioBlitz.

Thanks to all the scientists, partner organizations and volunteers who worked to make this weekend such a tremendous success! For a complete list of species identified during the first ever Stanley Park BioBlitz, please check www.stanleyparkecology.ca mid-September.

To keep connecting to nature, SPES has regular interactive walks and events on weekends throughout the year. Check our programs listed on pages 4 and 5, or at www.stanleyparkecology.ca/programs.

Figure 9. Post BioBlitz article SPES Newsletter