UBC Herbarium Newsletter

OCTOBER 2008

Director's Message

It has been another exciting and positive year at the UBC Herbarium, as we continue our preparations and planning for the Beaty Biodiversity Centre (p.2).

Beyond moving to new digs, the move is prompting a number of initiatives that will make substantial improvements to the collections. We will be making changes to the taxonomic organization the of herbarium collections. For example, in the vascular plants we will move away from alphabetical organization of plant families, and towards an organization that reflects evolutionary relationships. Believe it or not, how you organize families in a herbarium is a hotly debated topic. Our decision to switch over to a system that reflects relationships is based in part on the belief that walking among the cabinets can be a didactic exercise, as just seeing that two families are next to each other provides an opportunity to ask questions and learn about shared ancestry. While we are eager to bring about the change, this is a far bigger job than just changing the order of families. There have been many updates and revisions to family membership. For example, the family formerly known as Liliaceae, which was a catch-all for a very large and diverse group of plants that we now know are not all that closely related, is now divided into roughly 25 families which better reflect relationships. To make these changes, we need to carefully go through all of our folders and make sure we assign each species to the right family. Graduate Research Assistant Will Iles took on this work for the Liliaceae (p.7). Will was the right person for the job because his Ph. D. thesis focuses on molecular phylogenetics of a number of former members of the Liliaceae.

Despite the invaluable help provided by graduate students like Will Iles and Chris Sears (who tackled the ferns last year), the brunt of the burden for the move is shouldered by our two collections managers, Linda Jennings and Olivia Lee, and shared by summer students, work study students and volunteers. With the support of the Beaty Biodiversity Museum, the Botany Department, and Herbarium fundraising, we were able to assemble a phenomenal team this past summer that has made it seem possible that we could get ready for the move.

It is clear that when the team is strong, the herbarium is energized and new opportunities arise. In this regard, we are putting a plan into action to strengthen the team, by adding to the number of herbarium curators. The curators provide critical leadership in helping to better link the collections to research and teaching, as well as

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What you will find in this edition:

Director's Message

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setting priorities for future initiatives and growth of the collections. As of this writing, I am pleased to announce that Quentin Cronk (Faculty of Land & Food Systems and the current instructor of the seed plant taxonomy course) has agreed to serve as curator of Eudicots. Sean Graham (Department of Botany and Faculty of Land & Food Systems) has agreed to serve as curator of monocots and basal angiosperms. Sandra Lindstrom has agreed to be the co-curator of the algae, and new faculty member Patrick Martone will be the curator of coralline algae. The fact that these individuals have agreed to take on these positions demonstrates that the UBC Herbarium is indeed a vibrant entity with a diverse community of contributors and supporters.

By Jeanette Whitton, Director of the Herbarium

A Bequest from Vivian Glyn-Jones in Honour of Gerald Straley

We learned recently that the herbarium is the recipient of a bequest from the estate of Vivian Glyn-Jones, in honour of former UBC Herbarium Director, Dr. Gerald Straley. Ms. Glyn-Jones was a dedicated volunteer, including many hours spent preparing and mounting plant specimens for the UBC Herbarium. Vivian especially enjoyed working with Gerald Straley's collections, and as a result, we have a stunning set of their beautiful specimens in the Herbarium. We will use this generous gift to set up an endowment, which will enhance the herbarium's collections for years to come. Coincidentally, the digital archiving of Gerald's collections (p.9) received funding this spring, and the Glyn-Jones gift will be used in part to match funding from the UBC History Digitization Program. We can't imagine a more fitting start to the many ways in which this generous gift will enhance the Herbarium.

By Jeanette Whitton, Director of the Herbarium

Beaty Biodiversity Centre

The building that will house the Beaty Biodiversity Museum is approaching completion, and it has been a busy year for us! In January, we launched our new website (beatymuseum.ubc.ca) and began planning our strategy for packing, moving, tracking, and unpacking our two million specimens of plants, insects, shells, vertebrates, fossils, and fish. To help us prepare for the move, we hired our first group of summer students to work in the Herbarium and the Marine Invertebrate collections, with funding from Young Canada Works and matching fundraising and donations to the herbarium. We then stood back and watched as this tremendously industrious bunch accomplished much more than we thought possible. Thanks very much Beryl, Catalin, Mary, Jen, Raakel, Rolanda, Sam, and Steve for all your hard work.

As we prepare to transition the collections to their new cabinets, we are also acquiring one exquisite new specimen: a 22-metre blue whale skeleton that will be displayed in our atrium. What better symbol of the tremendous biological wealth under our stewardship, than the skeleton of the largest animal that has ever lived on Earth?

Displaying the biggest animal

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Dr. Andrew Trites, Director of the Marine Mammal Research Unit at UBC, with a blue whale vertebra. Photo by Nicholas Stanger.

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ever is, of course, no small task. In December 2007 we sent an exploration team to Tignish, PEI, armed with a treasure map and heaps of warm clothes, to look for a blue whale skeleton that had been buried 20 years ago. Happily, the team found the skeleton and the bones were in good shape, so we decided to proceed with this gigantic project.

In May 2008 we sent a second expedition to Tignish, and in nine action-packed days, they unearthed the whale, stripped thousands of kilograms of rotten flesh from the skeleton, and packed ten tonnes of the world's largest bones into a refrigerated container for their cross-country journey to BC. The job (and the smell!) was even bigger than we anticipated. There are only 21 blue whale skeleton exhibits in the world, and now we know why! The bones are currently in Victoria soaking in a 2500 gallon tank of warm, aerated water full of bacteria and enzymes that will remove the bones' natural oils. Once the bones are clean, Mike deRoos, our skeleton preparator extraordinaire, will begin assembling them for display.

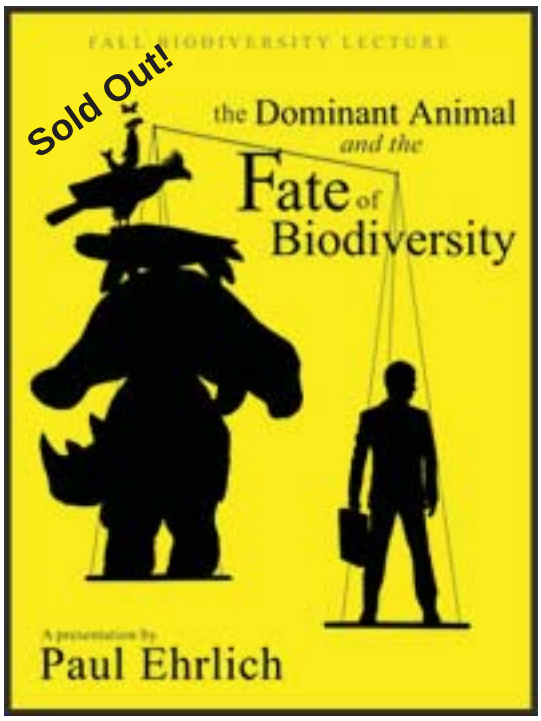
Our opening date is set for Fall 2009. In the meantime, you can visit our website for updates on the Blue Whale Project, pick up a Museum brochure in the Herbarium, or come to one of our public lectures (Paul Ehrlich, author of The Population Bomb, spoke on September 24. The next talk, scheduled for January, will be by UBC's own Wayne Maddison.).

By Kim Woolcock, Outreach and Exhibits Manager for the Beaty Biodiversity Museum

UBC Herbarium advances with Canadian University Biodiversity Consortium

Last year, the UBC Herbarium announced that it would be participating in the Canadian University Biodiversity Consortium (CUBC), a national cyber-infrastructure network with universities across the country. Through this initiative, in July 2008, I joined the UBC Herbarium staff as accessions technician, focusing on the CUBC project. Since then, I have been working on various genera, updating and processing new entries into the Herbarium database. Most recently I have been revising the database with the new classification of the Liliaceae family, based on the Research Assistantship by Will Iles. This fall I will begin the digital imaging of specimens, contributing to the understanding of the diversity, range, distribution, and other biological properties of Canadian biodiversity.

By Amber Saundry, Accessions Technician at the UBC Herbarium



Fall 2008 Biodiversity Lecture:

The Dominant Animal and the Fate of Biodiversity

A presentation by **Paul Ehrlich**

Coming in January!

January 2009 Biodiversity Lecture:

Biodiversity Discoveries in the Jungles of Papua New Guinea

A presentation by **Wayne Maddison**

COLLECTIONS *stats for 2007*

The Algal Collection

"A diverse collection of northeast Pacific algae"

Total Accession = 85, 833
Specimens databased = 68, 824 (100%)
Total Loans received / sheets = 3/ 139
Total Loans sent / sheets = 3/ 100

Mike Hawkes – *Co-curator of Algae*
Sandra Lindstrom – *Co-curator of Algae*
Patrick Martone - *Curator of Coralline Algae*

The Bryophyte Collection

"The most comprehensive collection in Canada and one of the largest in the world"

Total Accessioned = 252,547
Specimens databased = 164937
(7,065 added this year)
Total Loans Received/packets = 4/188
Total Loans sent/ packets = 6/2373
Exchange sent/ packets = 8/4234
Exchange received/ packets = 9/959

Wilf B. Schofield – *Curator of Bryophytes*

HERBARIUM *stats for 2007*

Visitors = 960
Volunteers hours = 550
Web site visitors = 6863

The Fungal Collection

"The biggest research collection of macrofungi of British Columbia"

Total Accessioned/database = 16313
Loans sent /packets = 3/143

Mary Berbee – *Fugal Curator*

The Lichen Collection

"A diverse collection of British Columbian lichens"

Total Accession/databased = 41104
(1783 added since last report)
Loan sent/packets = 2/88

Trevor Goward - *Curator of Lichen*

The Vascular Collection

"An extensive collection of British Columbia vascular plants and is worldwide in scope"

Total Accession = 223, 473
Specimens databased = 137,611 (62%)
Total Loans received / sheets = 24/ 1538
Total Loans sent / sheets = 41/ 4559

Quentin Cronk - *Curator of eudicots*
Sean Graham - *Curator of monocots and basal angiosperms*

A scan of a specimen of *Woodwardia fimbriata* from the Vascular Collection

As in all herbaria, we are continually in the process of examining and enhancing our collections through a variety of different projects. What follows are just some of the highlights from ongoing projects that reflect the value of our collections.

A Novel Kelp From the Aleutian Islands, but Already Endangered?

By Sandra Lindstrom
Co-Curator of Algae

Sandra Lindstrom is currently identifying the species of seaweeds collected during the 2007 and 2008 EMAP cruises.

A previously unknown genus and species of kelp was discovered in the Aleutian Islands by Mandy Lindeberg in 2006 during the Environmental Monitoring and Assessment Program (EMAP). The expedition was run by the Alaska Department of Environmental Conservation and funded by the U.S. Environmental Protection Agency. Discovering a new species of kelp is considered by some to be the marine equivalent of discovering a new bird or mammal species. The new kelp has a simple blade like some other kelp species, but is unique in having a thickened margin at the base of the blade, creating a golden V. It also has a flattened, golden stipe. These features are distinctive among kelps and, together with molecular data provided by Hiroshi Kawai and Takeaki Hanyuda of Kobe University, Japan, suggest that the species represents a novel genus and possibly even family of kelps. A description of the new genus and species was published in the August 2008 issue of the Journal of Phycology, in which it was given the name *Aureophycus aleuticus.*

There is concern that recent volcanic acitivity in the Islands of Four Mountains, where *Aureophycus aleuticus* was discovered, could threaten the existence of this new-found kelp. The species was observed at only two sites in 2006, and one of those sites was found to have been buried by a slide when it was revisited in 2007. *Aureophycus* was not found to grow at any additional sites in 2007 despite an intensive search.

The type specimen and an isotype from the original collection of *Aureophycus aleuticus* have been deposited in the UBC herbarium, which has a strong representation of Alaskan seaweeds, including other types. The type of another recently described genus and species of seaweed from the Aleutian Islands, *Pseudothrix borealis*, which was published in the June 2008 issue of Algae, is also housed in the UBC herbarium.

Glutton in the Fungal Collection

By Paul Kroeger and Samantha Sivertz

On Tuesday, July 22, Food Network star Bob Blumer interviewed local mushroom expert Paul Kroeger in the UBC Herbarium for

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Aureophycus aleuticus. Photo by Shawn Harper

Glutton in the Fungal Collection

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an episode of *Glutton For Punishment*. The subject of the interview was the edible Morel mushrooms, with their poisonous relatives and look-alikes, such as the False Morel. According to Paul, *Glutton For Punishment* is a show about "extreme cuisine (Paul's term), where they present a fun approach to food with some danger thrown in. The interest in interviewing [Paul] at the Herbarium was to throw in the danger part, something to scare the host, Bob Blumer." The creators of the show were referred to Paul by Mary Berbee, the curator of the fungal collection at the Herbarium. The episode featuring Paul's interview is expected to run in the spring of 2009 on the Food Network.

Paul Kroeger (right) being interviewed by Bob Blumer (centre). Photo by Olivia Lee.

A Survey of the Genus *Cortinarius* in British Columbia

By Emma Harrower
Undergraduate Research Assistant

The genus *Cortinarius*, commonly known as "web-cap" mushrooms, is one of the most diverse and abundant genera of gilled fungi. More than 2000 species already have been described and more are named each year. As mycorrhizal symbionts, *Cortinarius* species may be important contributors to the growth of BC tree species. However, the high species diversity, low divergence between species, and the occurrence of different species having the same morphology have made it difficult to identify these fungi.

To create a catalogue of correctly identified fungi and to assess the diversity of these mushrooms in British Columbia, I used a region of ribosomal DNA called the internal transcribed spacer (ITS) as a DNA barcode on 482 *Cortinarius* specimens collected in the province. Preliminary analysis indicates there are at least 92 different species present in the province. This number is probably an underestimate due to under-sampling and a sampling bias towards easily identifiable species. This DNA-barcode was able to match voucher specimens to environmental samples, previously known only from DNA sequences.
106 *Cortinarius* specimens from the UBC Herbarium were included in this study and annotated by Dr. Joe Ammirati, the North American expert on *Cortinarius*. Twenty-eight percent of the herbarium collections had been misidentified, highlighting the difficulty in identification and the need for a good guide to the genus in BC. In addition, I collected 80 new *Cortinarius* specimens with help from the Vancouver Mycological Society (esp. Terry Taylor and Anne Leatham who brought me fresh collections) and the UBC Biology 323 class. Of the newly-collected species, 10 had never been collected in the province before. At least one species (*C.* cf. *vibratilis*) has yet to be described. Other significant new collections to the UBC Herbarium came from Paul Kroeger (Haida Gwaii National Park), Oluna Ceska (Southern Vancouver Island), and Mary Kranabetter (Smithers).

The three most heavily sampled biogeoclimatic zones were Coastal Western Hemlock, Interior Cedar Hemlock and Coastal Douglas Fir. Large areas of the province are left unsampled such as the ponderosa pine forests of the southern interior and the northern boreal forest in the Peace River region. One of the most remarkable findings in this study was how little time one had to spend collecting mushrooms to find novel species. Hopefully researchers at UBC can collaborate with mycologists around the province to increase our understanding of the range of diversity of the genus *Cortinarius.*

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This study could not be completed without the help of SeaRa Lim (UBC Botany M.Sc. student) and numerous undergrads: Adam Cappuccino, a summer NSERC student from McGill, Sebastian Yeung, Matt Mitchell and Juwon Lee.

Updating the Liliaceae *sensu lato*

By Will Iles
PhD candidate in the UBC Botany Department

Will Iles did a four-month research assistantship supported by the Botany Department to update the Liliaceae to according to "Angiosperm Phylogeny Group II" (APG II)

The lily family (Liliaceae), a diverse group of plants that includes members that are of religious, cultural and pharmacological importance to humans. Until recently, it has been taxonomically circumscribed very broadly, in essence, serving as a catch-all. Recent advances in our understanding of flowering plant phylogeny have shown that this old circumscription contains many lineages which are not closely related, and as a result new families have been created and in some instances old families reinstated to reflect grouping based on shared ancestry. These changes were formalized and a new classification scheme was created by an international group of scientists calling themselves the 'Angiosperm Phylogeny Group II'[1]. I have followed their family classification here. In order to update the Herbarium collection to reflect these advances I consulted the World Checklist of Selected Plant Families[2] for updated names and taxon circumscriptions, and the *Flora of North America*[3] for identification. In some cases it was necessary to refer to additional regional floras or journal articles to identify a specimen or decide its proper name and authority. A collection of the journal articles consulted is kept at the Herbarium.

The Herbarium contains 145 genera formerly included within Liliaceae. These genera are now split between 25 families representing six different orders of monocots. I spent the bulk of my four-month research assistantship updating nomenclature and confirming the identity of individual specimens. I succeeded in confirming or updating the nomenclature and identity of approximately one third of the Liliaceae specimens in the Herbarium. The following genera were updated (generally to completion): *Aletris, Amianthium, Anticlea, Bloomeria, Brodiaea, Clintonia, Convallaria, Dichelostemma, Disporum, Lloydia, Lophiola, Maianthemum, Medeola, Muilla, Narthecium, Odontostomum, Pleea, Polygonatum, Prosartes, Scoliopus, Stenanthium, Tofieldia, Triteleia, Uvularia,* and *Zigadenus*.

Identifying specimens of some genera (e.g., *Toxicoscordion* and *Triantha*) proved very difficult due to subtle differences between closely related taxa and only limited progress was made in these groups. In other cases published taxon descriptions failed to fit the range of morphological variation present in specimens from British Columbia. For example, available specimens of *Maianthemum racemosum* subsp. *amplexicaule* were much less robust with less branching of the inflorescence than described. Further morphological inconsistencies were recognized by Cronquist *et al*.[4] who suggested dropping the subspecies distinction. Some of these groups would benefit from monographic work using both modern molecular and traditional taxonomic methods in order to try and tease out natural groups. Other taxa proved to be completely intractable; for instance, *Erythronium* species tend to require flower colour for proper identification, and unfortunately this fades with drying. If the colour is not recorded while the material is fresh and included on the annotation label, there are few other diagnostic characters with which to make an identification. On the other hand, several previously unidentified and misidentified specimens were assigned to the correct taxon or range of taxa. For example, one unidentified *Maianthemum* specimen was determined to be *Maianthemum scilloideum*. Another, previously labeled *Smilacina formosana*, likely belongs in either *Disporopsis* or *Polygonatum*.

The reorganization of Liliaceae can serve as a starting point for reordering other angiosperm families at the Herbarium within a phylogenetic context. The 25 segregate families can be easily organized according to the sequence suggested by Haston *et al*.[5], providing a nucleus around which future work can be proceed. A herbarium organized along such lines will make the retrieval of information and samples more efficient for researchers because there is an inherent biological meaning, that of evolutionary relationships, to the sequence of families.

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Updating the Liliaceae

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2. The Board of Trustees of the Royal Botanic Gardens, Kew. 2007. *World Checklist of Selected Plant Families.* Published on the Internet; http://www.kew.org/wcsp/ accessed September-December 2007.

3. Flora of North America Editorial Committee. 2002. *Flora of North America North of Mexico v. 26 Magnoliophyta: Liliidae: Liliales and Orchidales*. New York: Oxford UP.

4. Cronquist A, Holmgren AH, Holmgren NH, Reveal JL, Holmgren PK. 1977. *Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. v. 6 The Monocotyledons*. New York: Columbia UP.

5. Haston E, Richardson JE, Stevens PF, Chase MW, Harris DJ. 2007. *A linear sequence of Angiosperm Phylogeny Group II families*. Taxon 56: 7-12.

Dead, Flattened Plants: The Key to Successful Field Work

By Chris Lee

Masters candidate in the UBC Botany Department

I've watched the stars shining on the void-like canvas of night, while shivering in my sleeping bag, surrounded by the snow banks at Lightning Lake. I've listened to the pitter-patter of rain as it poured down around my tent while I changed from wet clothes to less wet clothes, while kayaking in Desolation Sound. I'm familiar with the mournful howls of coyotes and the incessant buzz of cicadas. In short, I've been outdoors...and I love it.

It was because of this love affair with the outdoors that I leapt at the opportunity to do a graduate thesis that involved a large component of field work. I figured with my camping experience and my past work as a field assistant, my field season would be easy to plan. I just have to drive somewhere and look for plants, right?

I should also mention that I work on *Townsendia*, a charismatic genus of Rocky Mountain composites that ranges from highly localized edaphic specialists to species that are found all over the western United States. Many of the plants are small and hidden from the casual observer, unless you catch them when they are in flower. Even though I've had plenty of experience living and surviving in a variety of climates, I've never had the need to pick and choose the location and timing of a camping trip so exactly. This is where the herbarium became an incredible asset to me.

At the UBC Herbarium I had the opportunity to peruse the collections of *Townsendia* from previous UBC researchers, as well as borrowed *Townsendia* vouchers collected by researchers from all over the western United States. Some of these specimens were collected more than 100 years ago. Each voucher carried information about the identity, location, habitat and date of collection, which was useful for planning my month-long trip with the accuracy necessary to find these elusive plants.

For my project, I was trying to get a thorough sampling of *Townsendia* from Wyoming, Colorado and Utah. My first steps involved a lot of grunt work, where I entered the voucher data for hundreds of herbarium accessions into an electronic spreadsheet. I was then able to sort through the data and filter out entries that were outside of my collection area and field work dates. For my last step, I mapped the remaining sites so that I knew where my trip would lead me. I was finally ready to go collecting!

However, the usefulness of the herbarium didn't end once I set off seeking adventure and *Townsendia*. During my trip, I also relied on the voucher data to find specific localities. There were many situations where habitat information (associated species, slope, aspect, soil type) and other parcels of information found on the vouchers helped me focus my search for *Townsendia*.

Even after my trip, the herbarium remains useful to me. I am able to draw on the knowledge of past experts to see how they were determining species. On many of the vouchers, researchers write notes or new identifications. By know-

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Dead, Flattened Plants

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ing which *Townsendia* species have been previously collected in my collection sites, and by understanding what characteristics botanists have used to make their species determinations, I am better able to identify my own specimens. The herbarium also gives me a place to store my collections in an organized and accessible manner. I and future researchers can look back through my collections and know where and when I collected a plant, and know which plants I used for DNA isolation. Of course, there is much more that can be gained through herbarium work. My own work alludes to the potential of using herbaria to map the distribution of species as they change through time, and has been invaluable for planning my first of many field seasons.

Townsendia sp. Photo by Chris Lee.

Gerald Straley Specimens to be digitized

The Herbarium was awarded a $20,000 grant from the British Columbia History Digitization Program under the Irvine K. Barber Learning Centre to digitize Gerald Straley's vascular plant specimens. We were awarded this grant to digitize and present these beautiful and scientifically invaluable specimens available on our web site in March of 2009. The Herbarium houses nearly half of Gerald's collection of 9,000 specimens, which he amassed and documented in his collection books from 1967-1997. Gerald Straley was not only the Curator of Collections and Research Scientist at the UBC Botanical Garden, Director of the UBC Herbarium, and a coordinating editor and author of the Flora of North America, but he also authored several British Columbia Botanical books including Trees of Vancouver, which was awarded the Vancouver Book Award in 1992. Another important motivation to digitize Gerald Straley's collection was the quality of his pressings, both scientifically and aesthetically. If you have not had a chance to see these wonderful specimens, we have already digitized a few, and sell them as a part of our UBC Herbarium fundraising (see *Aconitum delphiniifolium, Rosa nutkana, Myosotis alpestris, Cyprepedium montanu, Briza minor*, and *B. maxima* prints at www.botany.ubc.ca/herbarium, 'Herbarium Shop'). We look forward to making these images of specimens available and easily searchable for researchers , teachers and the general public, to help encourage interest in natural history collections through science and art.

A scan of a specimen of *Rosa nutkana*, collected by Gerald Straley in 1988.

By Linda Jennings, Collections Manager of Vascular plants and Algae

Vascular Collection Summer Students

Using money from herbarium fundraising, the Botany Department, and the Beaty Biodiversity Museum, we were able to hire an Assistant Collections Manager, Beryl Zhuang, and two Collections Assistants, Jennifer Muir and Samantha Sivertz, for the summer of 2008. These three worked together to catch up on collection maintenance and accessioning, assist the Young Canada Works student, Raakel Toppila, with the exchange program, and prepare the herbarium for the Botany 2008 conference. Here is what each assistant had to say about her experience working at the UBC Herbarium:

Beryl Zhuang

Assistant Collections Manager Vascular Plants and Algae

I first started as a volunteer in the herbarium and later as a work-study student. This summer, I was hired as Assistant Collections Manager. Working in the herbarium was interesting and challenging. For example, I had to solve taxonomically difficult problems and organize boxes of specimens that have been sitting on top the cabinets for years. I also had the opportunity to meet many different people at Botany 2008 Conference. My major tasks this summer included organizing type specimens, unpacking and preparing loans, updating annotations, and organizing specimen folders.

Jennifer Muir

Collections Assistant Vascular Plants and Algae

Despite its dust, extreme temperature conditions, and bunker-like appearance, the herbarium at UBC was a great place to spend the summer. Not only did I have the opportunity to work with a dynamic and hilarious group of plant nerds such as myself, I'm proud to say that I helped to process a large part of the herbarium's backlog of specimens. Every new box was an adventure, be it filled with Katherine Beamish's *Dodecatheon* specimens still enclosed in newspaper from the 1940s, or a more recent box of specimens from the Conservation Data Centre filled with rare vouchers and endangered species. I encourage everyone to come up and see what we've accomplished!

Samantha Sivertz

Collections Assistant Vascular Plants and Algae

As someone studying evolutionary biology with a background in museum work, I appreciated being able to learn how the herbarium was managed, seeing how it was useful to researchers, students, and consultants, and having the opportunity to observe and be involved in the formative stage of the Beaty Biodiversity Museum. Over the summer I accessioned and updated synonyms for many specimens in the vascular and algae collections. I was also able to guide a tour of undergraduates through the herbarium, design rubber stamps, format pamphlets, and digitize several specimens. I enjoyed learning about plant taxonomy, working the herbarium booth at Botany 2008, and meeting a number of prominent researchers.

UBC HERBARIUM WELCOMES VOLUNTEERS!

Learn valuable skills and contribute to the Herbarium's important collections including Vascular Plants, Algae, Lichens, Bryophytes and Fungi!

If you have an artistic sense, try mounting herbarium specimens, or improve your knowledge of plant identification and geography by helping us enter data for E-Flora, the Electronic Atlas of British Columbia.

Come check out UBC herbarium located in the Biosciences Bldg., 5th Floor, 400 wing, Room 5470 and talk to a staff member if you are interested in volunteering.

Or email us

ubc.herbarium@ubc.ca

And, check out our web site www.botany.ubc.ca/herbarium

Young Canada Works

Young Canada Works is a Government of Canada program supporting summer jobs and internships for students and recent graduates in Heritage Organizations (see http://www.pch.gc.ca/ycw-jct/html/welcome_e.ht.) The program grants nearly 75% of the salary for up to 16 weeks of summer student work and up to a year for recent graduate student internships. Under the Beaty Biodiversity Museum, the UBC Herbarium was awarded two summer job positions. Raakel Toppila worked in the Vascular Collection updating our exchange system (catching up on 20 years of backlog), and Steve Joya worked in the Bryophyte collection.

By Linda Jennings, Collections Manager of the Vascular plants and Algae.

Raakel Toppila
Young Canada Works Student

At the age of 17, when I got my first job at a local garden centre, I never would have dreamed that a dead plant could be valuable. I was too busy trying to keep "rejected" annuals alive in my predominantly clay-soil garden. Today I am a UBC undergraduate student pursuing an education and a career in public horticulture and have discovered the value of a dead plant (with complete collection information of course). Having worked the past two summers at the UBC Botanical Garden and Centre for Plant Research, I wanted to gain experience in another area of the botanical world. I was hired in the summer of 2008, through the Young Canada Works program, to restore the vascular plant and algae exchange program that had not been active at the UBC Herbarium for 18 years. This summer almost 4500 duplicate specimens were sent to institutions around the world, from Argentina to Alaska, and Japan to Poland. Most specimens were distributed to organizations in the Pacific Northwest as well as Alaska and California. Through the exchange program the collections of the UBC Herbarium and herbaria around the world are enhanced for the benefit of researchers, educators, the public and ultimately plants!

Steve Joya
Young Canada Works Student

My interest in plants developed after I had already started my post-secondary education. I had always been interested in natural history but my fascination with plants came later. Ultimately, my interest was steered towards bryophytes (in large part due to the enthusiasm of Shona Ellis and Dr. Wilf Schofield) and I have never looked back. The existence of the herbarium had been without a doubt instrumental in fostering my development as a budding botanist, so when the opportunity arose I couldn't pass up the chance to work there. My summer position as curatorial assistant afforded me the chance to meet and network with the various professionals and students who make use of the herbarium as an indispensible resource and enhanced my appreciation for the work carried out there by the collection managers. The experience I gained through working at the herbarium this summer will undoubtedly be of great value to me in my future career.

Mounted specimens on drying rack.

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POSTAGE

Visit our herbarium shop on-line and help support the Collections

(http://www.botany.ubc.ca/herbarium, follow herbarium shop link)

Herbarium Prints – High resolution scans of our own herbarium vouchers featuring mainly the native flora of BC, printed with green or cream mat in a glass frame 11x 14, $25.00 each or 3 @ 60.00 or unframed prints, $10.00 each or 3 @ $25.00

Wildflower Cards - Our blank greeting cards showcase photographs of native plants of BC taken in Manning Park and Vancouver Island. The cards measure approximately 5x7 inch and are individually wrapped with envelope in a protective packet.
$4.00 each, 3 @ $10.00, 10 @ $30.00

Plant Press - Our handmade plant presses are lightweight but sturdy, suitable for collecting the field, or your backyard. Each press consists of damp-resistant yellow cedar top and bottom frames, sheets of corrugated cardboard to separate specimens, and heavy-duty nylon straps to bind everything together. The presses are approximately 12x18 inches.
$45.00 each

Eflora Postcards – Help support Eflora by purchasing this collection of postcards celebrating the native flora of BC.
$1.00 each or 5 for $4.00