A newsletter published for everyone in the Athabasca University community

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LETTERS FROM THE LOST A MEMOIR OF DISCOVERY

Helen Waldstein Wilkes



Letters from the Lost: A Memoir of Discovery, written by Helen Waldstein Wilkes and published by AU Press, has been selected as a finalist for the Alberta Readers' Choice Award. Alberta readers will select the winner in an online vote. See the story on page 6.



Athabasca University

DTheses

Faculty of Graduate Studies Dissertations and Theses

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Digital Thesis Room >

The **DThesis** site is a joint initiative between the <u>Faculty of Graduate Studies</u> and the <u>AU Library</u> to enable graduate students to submit their thesis or dissertation electronically to the Faculty of Graduate Studies and the Library. The Dthesis repository is dedicated to collecting, storing, preserving, and making accessible digital versions of the theses and dissertations produced by AU graduate students. The advantages the DThesis site are:

- Increased visibility and wider access to research
- Higher rate of citations and greater impact of research
- Long-term and safe preservation
- AU research is showcased in a central archive
- Accessibility to research by search engines such as Google
- Avoidance of the cost of creating paper copies
- Library shelf space saved

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Enter some text in the box below to search DSpace.

AU Theses and Dissertations GO DIGITAL

The Faculty of Graduate Studies and the AU Library have completed a joint electronic thesis and dissertation submission project. All AU master's theses and doctoral dissertations will now be submitted to the DTheses repository, from which they will be accessible worldwide. Documents in the repository can also be harvested by Library and Archives Canada.

According to Dr. Pamela Hawranik, dean of the Faculty of Graduate Studies, electronic submission of theses and dissertations is a first for AU, and both the electronic submission itself and the documents being accessible through Library and Archives Canada offer significant advantages. "The greater access to our students' research benefits them in their future educational endeavors, their applications for awards, scholarships and grants and future employment opportunities," she said. "It also benefits AU when our student research is made available to a wider audience."

The project team members included Hawranik, Library Services director Steve Schafer, digitization co-ordinator Colin Elliott, digital objects repository network developer Hongxing Geng and Tony Tin, head of Digital Initiatives and Electronic Resources.

Katherine Janzen, a master's student in the Faculty of Health Disciplines, was the first student to submit a thesis, a study of mothers recovering from addictions, to the repository. "I had hoped in some way my thesis would make a difference, past me writing it," Janzen said. "Having it deposited into DTheses means that it won't simply sit on a shelf collecting dust, but the voices of the women I interviewed will in some capacity continue to be heard.

"Their bravery and tenacity was inspiring and having my thesis available worldwide means their voices and courage will still resonate far beyond the pages of my thesis itself. Really, my thesis is a tribute to those women. I am most grateful to AU for making this a reality."

The DTheses site uses an open-source repository software called DSpace,

which is able to manage and preserve digital content. In addition, Tin said, the developers used a plug-in developed by the University of Manitoba to make the repository fully interoperable with the Library and Archives Canada website.

"We had to co-ordinate our development with LAC to ensure that our metadata could be harvested," Tin said. "This involved some fine-tuning of our metadata to meet LAC standards and requirements and going through a testing process with them. We also had to make sure that we have an appropriate copyright clearance process in place, so students sign the LAC agreement as they work through submitting their work."

The submission process was quite easy, Janzen said, taking less than half an hour. Students are directed to a page where they fill out an online form, providing all the required information and then upload their file to the repository. Once approved by the Faculty of Graduate Studies, the thesis or dissertation is made available to the public and harvested by Library and Archives Canada.

AU Business Students at CMA Competition

Business students from AU and seven other Alberta postsecondary institutions participated in the third annual CMA Alberta Board Governance Case Competition in Calgary in March. The members of the AU team were Trevor Eliott, Cynthia Black, Teang Tang and Johnathan Whitmore. Team advisors were Dr. Alain Ross and Dr. Avis Solomon, both of the Faculty of Business.



The AU CMA team (from left) Trevor Eliott, Cynthia Black, Teang Tang, Johnathan Whitmore and advisor Dr. Alain Ross.

"This is the third case team I've coached," Ross said. "Students have universally agreed that the case competition is an extremely valuable opportunity, one

of the highlights of their AU degree. Students can begin to create new networks because we invite industry people to our practice sessions as guest judges, the case competition events give students the opportunity to meet many industry folks and, of course, the competitions allow much time to connect with the other competitors."

Eliott said that he would recommend that any business student, particularly those striving for an accounting degree, compete in this competition. "It provides them invaluable experience in a high-pressure situation, gives greater insight into the CMA designation and provides the opportunity to learn about an incredibly important facet of the business world: board governance," he said. "You will work hard and learn a lot, but in the end you will become a greater student with team working experience that no class can prepare you for."

Both the preparation for the event and competition itself were demanding. While juggling jobs, courses and families, the team members participated in 60 hours of practice and lectures with their advisors in the six weeks before the competition. The competition took another 30 hours.

During the competition, each team had six hours to analyze a governance case, based on a fictitious not-for-profit company, and to develop a presentation with recommendations to a panel of judges made up of leading Alberta businesspeople. The teams were allowed to make flash cards for the presentation, but these were taken away at the end of the first day and not returned until just before the presentation the next day. Students could consult with advisors only during lunch and one 15-minute break.

The governance case for this year's competition focused on a non-profit animal shelter experiencing significant financial and organizational problems. An extremely high rate of euthanizing animals was particularly problematic for volunteers. An executive director who was overstretched in her role and whose influence over the board was too strong was at the heart of the organization's problems. The husband of one of the shelter's volunteers had significant experience turning struggling non-profit organizations around.

The competition involved a two-hour board governance seminar and six and a half hours for teams to prepare a 15-minute PowerPoint presentation, which was followed by questions from the judges. "Our team's recommendations included restructuring the board to include more arm's-length oversight of the organization and more independent directors as well as a probationary period for the current executive director with specific objectives to be met," Ross said. "An innovative recommendation by the team was to develop a Friends of the Shelter program to engage community stakeholders in board decision making. As the Friends program was subscription-based, it also added to revenue generation."

A team from the Northern Alberta Institute of Technology won the competition grand prize of \$10,000 and two teams from Mount Royal University placed second and third, taking home \$5,000 and \$2,000 prizes.

"By the time we got home, we were mentally and physically drained, but after we recovered, we would do it all again in a heartbeat," Eliott said. "For me, after taking part in the competition, I am more confident than ever that I chose the right program at the right school to earn the right designation."

Black agreed that the experience was exhausting but worth it. "I gained a better understanding regarding the issues of board governance and, interestingly enough, the issues can be a lot closer to home than you think," she said. "Now that I'm aware of the issues, I have heard some of the sports leagues I belong to have had the same issues in the past. I also enjoyed meeting and working with other students from AU. We are all in the same program, but now we are able to talk about our classes the way I remember doing at the U of A."

Eliott has also found an application close to home. As a result of this experience, he was elected treasurer of his community association, a position that will provide valuable accounting experience for him. "It's a position that presented itself only because I took an active interest in board governance as a result of this competition," he said.

AU will be participating in both the MIS (Management Information Systems) and additional CMA case competitions this year, so students should watch for announcements during the summer. More information on the Governance Case Competition is available on the CMA website.

RESEARCH BUZZ: AU Researchers Awarded Funding

Vision and Falls

Dr. Pamela Hawranik, dean of the Faculty of Graduate Studies, has been awarded \$10,000 from the Canadian Institute for Health Research's Meetings, Planning and Dissemination Grant: Aging - Aging Program (fall 2010 competition) for her meeting An International Collaborative Approach for Vision and Falls.

Globally, studies have shown that undetected visual impairment can lead to falls which affect the independence of older adults. Falls are also a major source of death and injury in older adults, with hip fractures being the most common injury and the most costly to the health care system. Fall-related hip fractures have been found to be higher in older persons with visual impairment, yet the most prevalent vision deficits in older adults tend to be conditions that are correctable or treatable.

Hawranik's two-day meeting will bring together an international multidisciplinary group of experts to collaborate in the development of a multi-site vision intervention research study in the area of vision, falls and fractures. The participants include representatives from provincial governments, universities and the voluntary, private and public sectors. Clinicians, researchers, administrators and policy-makers have indicated strong interest in participating as collaborators.

The meeting will enable a research effort that could not be accomplished without this deliberately planned opportunity and will address three of the CIHR's priority topics: healthy and successful aging, aging and maintenance of functional autonomy, and health services and policy relating to older people.

Consumption As Politics

Dr. Donica Belisle, assistant professor of women's studies in the Centre for Work and Community Studies, has received partial funding from the Social Sciences and Humanities Research Council (New Scholar) in the amount of \$59,000 over three years for her project Buying Citizenship: Women, Gender and Consumer Activism in Canada: 1890 to 1939.

This project will challenge conceptual links between consumption and apathy. It will show that when Canada became a consumer nation, between 1890 and 1939, thousands of Canadian women turned consumption into a highly charged political activity (through holding boycotts, picketing, staging mass protests, holding sit-ins, creating consumer co-operatives, etc.), revealing that they believed their roles as wives, mothers, consumers and citizens entitled them to fair prices, fair treatment, quality goods and adequate standards of living.

In addition to highlighting the ways in which female consumers subverted the goals of business and the state before World War II, the project will illuminate other, less radical, forms of consumer activism.

Offering the first sustained look at women's consumer activism in Canada before World War II, the project will demonstrate that the rise of industrial and monopoly capitalism at the turn of the twentieth century turned consumption, just as much as production, into a site of accommodation and dissent. It will also reveal that because consumption has historically been cast as feminine while production has been cast as masculine, Canadian historians have, with some exceptions, overlooked the radical implications inherent in consumer politics.

The study will not only contribute to historical scholarship on women's activism but also to a much broader literature. By revealing that the inequalities and alienations that arose with Canadian consumer capitalism triggered widespread attempts to make commodity distribution and consumption more equitable, humane and fulfilling, it will offer a feminist rethinking of the emergence and consequences of Canada's democratic and capitalist political economy.

Outcomes of this research will include a book, several articles, national and international conference papers, public talks, a scholarly article and an open-access website that will offer students, researchers, and the general public several original resources and exhibits in Canadian consumer history. Digital media will be used to preserve and promote Canada's past.

RESEARCH BUZZ: AU Researchers Awarded Funding

Teaching with New Technology

Dr. Marti Cleveland-Innes, professor of distance education in the Centre for Distance Education, has been awarded \$39,015 by the Social Sciences and Humanities Research Council (fully funded) over the next three years for her project Faculty Perspectives on Teaching with New Technology: Uncovering a Possible Case of Unrealistic Expectations.

Innes's research will clarify how classroom teaching and course materials have become more sophisticated and complex in ways that translate into new forms of faculty work and consider how, if at all, changes in teaching are or may be integrated into the faculty member role.

Online learning involves using the Internet for interaction and collaborative engagement previously unavailable to teachers and students. What changes are required to the faculty member role to engage in online teaching? Any effective teacher must be true to the learning objectives of the subject-matter while attending to the characteristics students bring to the experience. Effective teachers bridge content and student needs through appropriate student engagement.

The role of an effective teacher in online learning environments is newer and more complex than in traditional higher education. Even more complex are the implications of adopting the new teaching requirements into the faculty member role. Knowledge gained through this research project will help make decisions about realistic expectations for the faculty member role and how much, and how fast, changes may be made in teaching. The goal is to create a clear picture of the role change required to integrate new teaching technology into the faculty role, and to discover how willing faculty members are to make these changes.

From Streets to Homes

Dr. Josh Evans, assistant professor in the Centre for Global and Social Analysis, will receive \$36,097 (partial funding for the first of three years) from the Social Sciences and Humanities Research Council (New Scholar) for his project From Streets to Homes: Mapping the Rise of Housing First Policies and Programs in Canada.

Despite its growing importance, Canadian urban policy has been a neglected area of study among academics. Evans will seek to address this gap through a careful examination of the role that policy learning and policy transfer processes are playing in the development of Canadian urban policy in the context of the growing problem of homelessness through an examination of the Housing First model.

The Housing First model reflects how Canadian policymakers have looked outside Canada's borders for new policy approaches. It is a relatively new model for alleviating homelessness that has rapidly spread from the United States to parts of Western Europe and Canada. By examining the Housing First model, this research program will build a better understanding of how urban policy is created in Canada in the context of globalized urban policy pathways that connect cities around the world.

More specifically, the project aims to examine the policy pathways that have contributed to the rapid rise of Housing First policies and programs. In doing so, it will seek answers to the following questions:

- Where and when were Housing First policies and programs implemented in Canada?
- How has the Housing First model been presented as a success abroad and within Canada?
- What pathways have permitted the flow of Housing First policies and programs to Canada and have aided in their circulation among Canadian cities?
- How has the Housing First model been adapted to particular places?
- How do these local examples compare on a national and international level?

Answering these questions will provide better understanding of how Canadian policymakers have learned from abroad and experimented at home with regard to one particular urban policy model. The research will advance theoretical understanding of how policies travel and how they are adapted when they land, thereby contributing to a broader understanding of how these local adaptations reproduce (or resist) globalized policy models. These insights will also generate a valuable picture of the urban policy landscape in Canada, particularly with regard to the influence of U.S. social policy.

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Letters from the Lost: A Memoir of Discovery, published by AU Press, is one of five finalists for the \$10,000 Alberta Readers' Choice Award, an annual award for adult fiction and narrative non-fiction. The winner of the award is selected through online

voting by members of the reading public between May 1 and 31. Each reader is permitted to cast one vote per day during the month.

In *Letters from the Lost*, Vancouver writer Helen Waldstein Wilkes recounts her discovery and coming to terms with the traumatic history of her Jewish family, which was fractured by the Holocaust. The book includes letters written by various family members and a narrative by Waldstein Wilkes chronicling her journey of learning about her family's history, much of which was unknown to her until she read the family letters at age 60.

In a foreword to the book, historian Elizabeth Jameson writes, *"Letters from the Lost* differs from most (Holocaust) narratives because Helen Waldstein Wilkes was one of very few children to escape with her parents, and one of even fewer to enter Canada before the formal onset of the (Second World) War. Her narrative speaks not only to the Holocaust, but also to her difficult transition to Canada as an immigrant Jewish child. The search for her roots, for those who were murdered and the few who survived, also helped unlock how her parents' experiences, and the memories they had hidden or forgotten, affected her own ability to connect with people, with Canada, with Judaism."

Sharon Budnarchuk, co-owner of Audrey's Books championed *Letters from the Lost* to be nominated for the ARC Award. "This is a very moving story about the Holocaust, immigration to Canada, denial, survival and guilt," she said. "It is a rather unique approach to the telling of a Holocaust story."

To participate in the selection of the award winner, visit the Alberta Readers' Choice Award website.

How to Set up a Zimbra Reminder to Vote Daily for the Alberta Readers' Choice Award

- 1. Open your Zimbra calendar by clicking on the Calendar tab.
- 2. Create a new appointment by clicking on the New button. The Appointment Details tab should open up.
- 3. In the Subject field, enter: Vote for Alberta Readers' Choice Award
- 4. In the Location field, enter: http://www.albertareaderschoice.ca
- 5. In the Time box, ensure that the Start and End dates are both May 2 (appearing as 5/2/2011).
- 6. Select whatever Start and End times you prefer.
- 7. In the drop-down menu beside Repeat, select Every Day. This will prompt a Customize link to appear.
- 8. Click on Customize. A box titled Custom Repeat will open up.
- In the Custom Repeat box, there is a drop-down menu underneath Repeat. Ensure that Daily is selected in this drop-down menu.
- 10. Under Repeat, ensure that Every Day is selected.
- 11. Under End, select End By.
- 12. Change the date in the End By field to May 31 by clicking on the arrow to the right of the date field and clicking May 31 in the calendar page that pops up.
- 13. Select OK. The Custom Repeat box will disappear.
- 14. Click on Save to save the appointment and add it to your Zimbra calendar.

Mural Depicts Local Boreal Forest



Dr. Robert Holmberg and Jingfen Zhang in front of their mural of the boreal forest

Most of the murals associated with the renovated science laboratory are generic commercial products, but the final one, a photographic collage of organisms typical of the boreal forest, completed at the end of March, is local. The photographs were taken by emeritus professor Dr. Robert Holmberg, the mural was designed by Jingfen Zhang, a visual designer in the Centre for Learning Design and Development, and the physical production of the mural was done by Speedpro Signs of Edmonton.

The mural depicts only a few of the more than 25,000 species that make up the boreal forest in the Athabasca area. It consists of 21 photographs, 13 from the photographer's acreage at Baptiste Lake, the rest from various locations in Alberta, and features eight plant species (not counting the ones in the backgrounds), eight arthropods (seven insects and one arachnid), four mammals, two fungi, two birds and one amphibian.

Holmberg thanked the science laboratory committee for requesting the use of his photographs, Zhang, who did her part of the work on her own time, and Ian Gravois for suggesting a collage format. The mural is 2.7 by 3.5 metres, too large for an enlargement a single photograph. The location in a hallway also makes it easier for viewers of the mural to see the smaller individual images, rather than one large image.

You can view the mural at the science lab; however, if you want a small copy of your own, you should enter the contest described below. A description of the organisms depicted in the mural is available on page 11.

If you want to see more of Holmberg's photography, he is having an exhibition at the Red Roof Gallery, 4711 53 Street, Athabasca, on June 3 from 4 to 8 p.m. and on June 4 and 5 from noon to 5 p.m.

Boreal Forest Mural Contest

Rules

- The contest is open to all AU employees, including all tutors, except Jingfen Zhang, who designed the mural, and full-time academic and laboratory staff in the Centre for Science.
- 2. To enter the contest, answer the questions presented below. Common rather than scientific names can be used for the answers to the questions.
- Entrees must be sent to Robert Holmberg, c/o The Centre for Science or to robert@ athabascau.ca and received by May 29, 2011. For email entries, please put "Contest Boreal Forest" plus your name in the subject line. Each entry must include the name and department of the person entering.
- 4. The prize, for the best answers to the questions, is a photograph of the Boreal Forest mural. If more than one entry is correct, the winning entry will be picked at random. The answers to the questions and the winner's name will be published in the June 13 issue of *The Insider*.

Questions

- 1. Name the largest member of the deer family.
- 2. Name two tree species typical of the boreal forest.
- 3. Name a pair of mutually symbiotic species (both benefit from the relationship) depicted in the mural or mentioned in the accompanying description.
- 4. Name one external parasite and one internal parasite (hint: It starts externally.) depicted in the mural.
- 5. Name three exotic (i.e., non-native) species depicted in the mural.
- 6. Name four predators depicted in the mural.
- 7. Name four mammals depicted (directly or indirectly) in the mural.
- 8. Name six countries that have portions of the boreal forest.

Hints: Nearly all of the answers to the questions can be obtained from the descriptions of the photographs that comprise the mural. Checking the biological meanings of the terms used in the questions may also help.

Television 2.0: Research into Media Fans and TV Habits by Leslie Main Johnson

The Arts and Science Research Talks presented a fascinating and well attended talk by Dr. Rhiannon Bury, professor of women's and gender studies, at AU Edmonton on April 15. Bury's presentation focused on television, fans, research into meanings and forms of viewing and secondary texts produced by fans.

Bury's earlier research into TV audiences, culminated in her 2005 book *Cyberspaces of Their Own*, an examination of female TV fans and their activities. Her new research project on TV viewing and related activities is called Television 2.0.

Bury integrated two video clips into her talk to illustrate negative stereotyping of fans: a vintage *Saturday Night Live* skit satirizing Trekkies and culminating in Captain Kirk's exhortation to his fans to "Get a Life!" and *The X-Files* spin-off vid *Not Only Human*, focusing on Scully, the female star, rather than Mulder.

Bury situated her description of fans and their activities in the theoretical framing of Jenkins, who moved research from the content of media to the activity and construction of viewing and challenged negative conceptualizations about media fans. She quoted Katz who wrote "Ask not what the media do to people, but what people do with the media," and Fiske, who wrote "A producerly text does not prescribe either a set of meanings or a set of reading relations for the viewer: instead it delegates the production of meaning to the viewer-producer."

As technology has changed, the prevalence of time shifting and watching series on DVD has given much more control to the viewer. Bury's current research is a large scale online survey on television viewing habits and responses that examines amounts of viewing time, platform of viewing (TV, laptop, mobile device) and a number of other parameters among people of different age groups. Bury had received the first few Statistical Package for the Social Sciences datafiles only hours before the talk, so she was able to share only a few preliminary results.



Census 2011 Looking for Staff

The Government of Canada is staffing 35,000 jobs across Canada for the 2011 Census. The work term extends from now until mid-August. About 3,900 positions are available in Alberta and about 26 in the Athabasca region. The jobs, for data collectors and enumerators, are ideal for students and people looking to supplement their income.

Click on the Census Jobs. Apply Now link to apply online and to view job descriptions and rates of pay for crew leaders and enumerators. Crew leaders train, lead and supervise a team of enumerators. Enumerators distribute census questionnaires, conduct personal interviews and do follow-up interviews by phone. Applicants must be at least 18, eligible to work in Canada and able to commit at least 20 hours a week, including days, evenings, weekends and holidays as required. They will need a driver's licence and access to a vehicle in some areas. Computer literacy and a home computer with an Internet connection are assets.

Every person in Canada must be included in the 2011 Census, which can be filled out online or on paper. In addition to the 2011 Census, some

residents will be asked to participate in the new National Household Survey.



AU Students and Alumni in the News

Student with Big Goals

Vincenzo Marozzi, a 20-year-old goaltender for the Alberta Junior Hockey League's Spruce Grove Saints, studies at AU. And he was recently featured in *The Vancouver Sun*.

"It's no different than having a full-time job, right?" he told freelance writer Chris O'Leary. "It gets tricky when you're trying to figure out your exams during playoff games. It's a challenge, but it's something I take pride in."

See the full story in *The Vancouver Sun*.



New Chief People Officer

Derek Sidebottom, a graduate of AU's MBA program and a Queen Elizabeth II Scholarship winner, was recently appointed chief people officer with Kabam, a California developer of massively multiplayer social games (MMSGs).

In an announcement of the appointment, the company says that, in his new role, Sidebottom "will be instrumental in building a strong employee experience that attracts, rewards and retains top talent globally."

Sidebottome was formerly vice-president of human resources with Electronic Arts, a leading independent developer and publisher of video games.

The full announcement of Sidebottom's appointment is available on PR Web.

Supply Chain Leader

Nicola Raycraft, another graduate of AU's MBA program, was recently awarded the Purchasing Management Association of Canada's 2011 Outstanding Achievement Award.

Raycraft is director of supply chain management at Jones Packaging in Ontario. "What brings me the most satisfaction is to lead a team and to accomplish company goals and objectives with my team," Raycraft is quoted as saying in a *Canadian News Wire* release.



New Science Laboratory Open House



The Insider is published for AU faculty and staff members and other members of the AU community by the Advancement Office.

Please send any information or photographs for inclusion to the co-ordinator. If a photo opportunity presents itself, please contact Blaise MacMullin. Due to FOIP regulations, a release form must accompany all photos. Please contact *The Insider* co-ordinator for a copy of the release form.

The next issue of *The Insider* will be published on Tuesday, May 24, 2011. The deadline for submissions is May 13.



Posted on The Landing: https://landing.athabascau.ca/ Athabasca University

Boreal Forest Mural Description

The boreal forest is the largest terrestrial ecosystem in the world. It still covers much of the temperate areas of North America and Eurasia. Besides performing important ecological services such as converting carbon dioxide to oxygen, contributing to the water cycle, and providing habitats for tens of thousands of species, the boreal forest also contributes directly to humans: wild foods (flesh of fish, birds and mammals; berries; mushrooms), places for recreation, lumber for buildings, pulp for paper, and soil for agriculture.



Figure 1. Map of boreal forest of Canada, Alaska and Eurasia. Source: National Resources Defence Council.

Mural of the Boreal Forest in the Athabasca Area

A forest is not just trees; it is an interactive complex of many organisms both large and small. This mural depicts only a handful of the more than 25,000 species that make up the boreal forest in the Athabasca area. The background of this mural (top and bottom) denotes the major coniferous tree species in this area – spruce (*Picea* species) and pine (*Pinus* species). The adjoining mural (around the corner of the Boreal Forest mural) features various deciduous tree species.

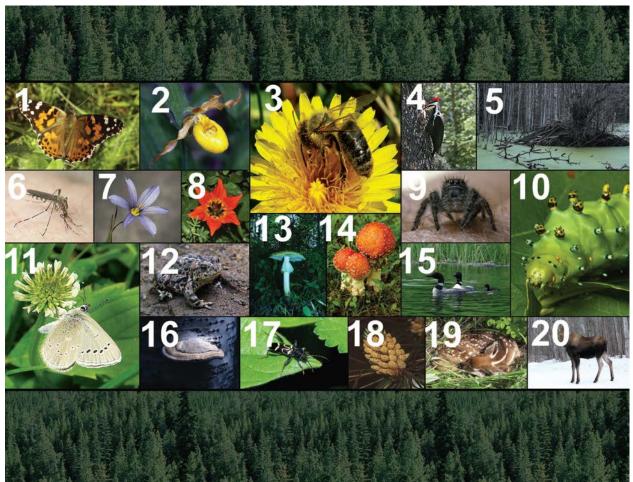


Figure 2. Numbered key to the photographs in the Boreal Forest Mural.

Names and Descriptions of Organisms

- 1) Painted Lady Butterfly (*Vanessa cardui*). This is the most widely distributed butterfly in the world. It is found in all continents except Antarctica and South America. Its larval stages (caterpillars) feed on various plants of the aster family, such as thistles and sunflowers.
- 2) Yellow Lady's Slipper (*Cypripedium calceolus*). Like all monocots, the flowers have three petals and three sepals. The slipper or lip is a modified petal. The two lateral petals are spirally twisted. The sepals resemble the spiral petals, but the bottoms two (not seen in this photograph) are fused. This orchid is found throughout most of North America and much of Eurasia. They require a symbiotic fungus to grow.
- 3) Honey Bee (*Apis mellifera*) gathering pollen from a Common Dandelion (*Taraxacum officinale*). Both of these species were introduced to North America

from Europe. Dandelions were introduced near Hudson Bay as forage for sheep. Honey bees were introduced both for their honey and pollination abilities.

- 4) Pileated Woodpecker (*Dryocopus pileatus*). This year-round resident has an adult body length of 40 to 50 cm and is the largest member of the Family Picidae in North America. It feeds on insects within tree trucks and stumps especially carpenter ants (*Camponotus species*). It is the species on which the old cartoon character Woody Woodpecker was modelled.
- 5) Lodge of Beaver (*Castor canadensis*). Beavers can make significant changes to forests. Beavers feed on deciduous trees and shrubs. To protect themselves and store food under winter's ice, they make dams of sticks and mud in streams to form ponds. The ponds flood low-lying areas. In this scene, the beaver pond has killed the Trembling Aspen (*Populus tremuloides*) and allowed the floating Common Duckweed (*Lemna minor*) to flourish. When a beaver pond gets silted up or the beavers run out of food, the area may become grassland before it reverts again to forest.
- 6) Mosquito (*Aedes* species) feeding on the back of the photographer's hand. Adult female mosquitoes are ectoparasites of vertebrates but both males and females can feed on nectar and so pollinate many plants. In this photograph you can see that the sheath, which encloses the mouthparts, is curved backwards as the stylets penetrate the skin. Like many other flies, mosquito larvae are aquatic.
- 7) Blue-eyed Grass (*Sisyrinchium montanum*). This member of the iris family has a small flower, only about 1.5 cm across, which most people overlook. If you examine the photograph closely, you can see yellow pollen grains on the petals and sepals of the flower.
- 8) Western Wood Lily (*Lilium philadelphicum*). This plant is very widely distributed across North America. From its specific name, you can tell it was originally described from the Philadelphia area. This lily is the floral emblem of Saskatchewan and is depicted on that province's flag.
- 9) Jumping Spider (Family Salticidae). Most spiders are nocturnal but members of this family are diurnal. They can see extremely well – and in colour. You can tell that this specimen was very small because it is resting on the photographer's finger; the hairs of the finger are nearly as long as the spider's legs.
- 10) Caterpillar of the Columbia Silk Moth (*Hyalophora columbia*). The larvae of this species feed on tamarack leaves (*Larix* species). The larvae are protected from many predators by means of spines that are associated with noxious chemicals. The small yellowish or whitish ovals near the head are probably eggs of a parasitic tachinid fly. The resultant larvae (maggots) from the eggs burrow into the caterpillar and feed until they kill the caterpillar.
- 11) Silvery Blue Butterfly (*Glaucopsyche lygdamus*) feeding on nectar of White Clover (*Trifolium repens*). This is one of several small blue butterflies (Family

Lycaenidae) found in this area. This butterfly is native to North America but its food source in this photograph is exotic; the clover comes from Europe.

- 12) Western Toad (*Bufo boreus*). Toads do **not** cause warts in humans. The parotoid glands (swollen areas just behind the eyes) of toads contain alkaloid chemicals that deter predators. Many amphibian species in the world are declining because humans are destroying amphibian habitats and causing other environmental changes.
- 13) Fly Agaric (*Amanita muscaria* complex). The colour differences between this and the accompanying photograph may be just variation in the species or characteristic of different subspecies or species; thus the addition of "complex" in the scientific name. The common name comes from an old practise of crushing the mushroom in milk to make a fly insecticide. This mushroom is generally considered as poisonous (but not deadly) as well as psychoactive. It is native to the northern hemisphere but also introduced (e.g. with pine seedlings) to the southern hemisphere.
- 14) Fly Agaric (Amanita *muscaria* complex). This group of three mushrooms shows that the caps may be orange (rather than yellow as in the previously described photograph) and there are structures (warts) on the cap that resemble flakes of oatmeal. The mycelium of this species is ectomychorizal on the roots of deciduous and coniferous trees. This symbiotic association gives photosyntheticly produced sugars of the tree to the fungus and the fungus helps the tree roots absorb soil nutrients.
- 15) Family of Great Northern Loons (*Gavia immer*). This bird feeds primarily on fish and can dive to 60 m. In North America, its summer range is primarily restricted to Canada and Alaska. The species is the provincial bird of Ontario. It is depicted on the Canadian dollar coin and gives the coin's nickname of "loonie".
- 16) Red Banded Polypore (*Fomitopsis pinicola*) on Trembling Aspen (*Populus tremuloides*). This bracket fungus commonly grows on live or dead coniferous trees. Most fungi and bacteria can be called decomposers because they break down complex organic chemicals into simpler chemicals that are then recycled into plants and other organisms.
- 17) Longhorned beetle with no common name (*Clytus ruricola*). The larvae (grubs) of this brightly coloured adult feed on decaying deciduous trees. The animal belongs to the family of wood-boring beetles, the Cerambycidae.
- 18) Male cones of Lodgepole Pine (*Pinus contorta*). In the Athabasca area, Jack Pine (*Pinus banksiana*) predominates. Such cones produce pollen which is carried by the wind to female cones. Lodgepole Pine is the provincial tree of Alberta.
- 19) Fawn of White-tailed Deer (*Odocoileus virginianus*). The population and distribution of this species has increased considerably due to removal of

coniferous trees and increased agricultural activities (both which increase food for the deer) as well as removal of large predators such as cougars and wolves. This deer species is very common in this area and contributes to many automobile collisions. It is the provincial animal of Saskatchewan.

20) Female Moose (*Alces alces*). Moose are the largest living representatives of the deer family and are the second largest land animal in North America (next to Bison). In Britain, moose are called elk – one of the reasons why biologists usually prefer using scientific names over common names. Scientific names are the same in all languages.

Comments

The mural is composed of 21 photographs – 13 from the photographer's acreage at Baptiste Lake, the remaining from various locations in Alberta. The mural features 8 plant species (not counting the unmentioned ones in the backgrounds), 8 arthropods (7 insects and 1 arachnid), 4 mammals, 2 fungi, 2 birds, and 1 amphibian. Can you find them all? Unfortunately no bacteria (see other murals in the lab area), protists or fish are shown. There are no reptiles in the Athabasca area.

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