

Dr. Nancy Turner
Hakai Chair of Ethnoecology
University of Victoria
2011/2012 Year in Review:



Tula
FOUNDATION

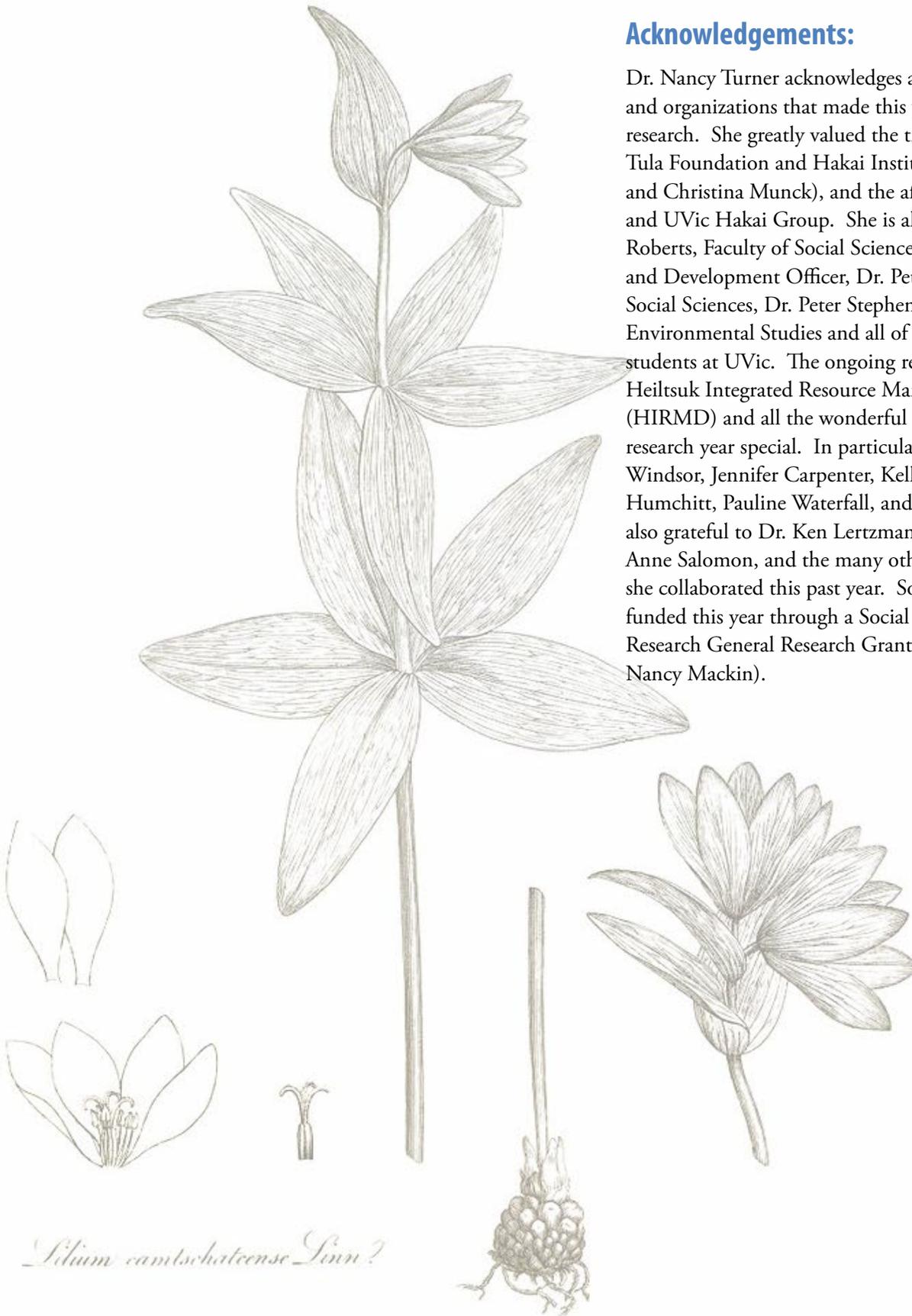
Hakai
institute



Lilium camtschaticense Sinn?

Acknowledgements:

Dr. Nancy Turner acknowledges all of the many individuals and organizations that made this year a success for her research. She greatly valued the tremendous support of the Tula Foundation and Hakai Institute (Dr. Eric Peterson and Christina Munck), and the affiliated Hakai Network and UVic Hakai Group. She is also grateful to Barb Roberts, Faculty of Social Sciences, External Relations and Development Officer, Dr. Peter Keller, Dean of Social Sciences, Dr. Peter Stephenson, Director, School of Environmental Studies and all of her colleagues and graduate students at UVic. The ongoing research relationship with Heiltsuk Integrated Resource Management Department (HIRMD) and all the wonderful people there has made this research year special. In particular she acknowledges Evelyn Windsor, Jennifer Carpenter, Kelly Brown, Chief Harvey Humchitt, Pauline Waterfall, and Laurie Whitehead. She is also grateful to Dr. Ken Lertzman, Dr. Dana Lepofsky, Dr. Anne Salomon, and the many other colleagues with whom she collaborated this past year. Some of Dr. Turner's work was funded this year through a Social Sciences and Humanities Research General Research Grant (# 410-2010-0877 with Dr. Nancy Mackin).



Overview

In 2011, Dr. Nancy Turner was named to a new position as **Hakai Chair in Ethnoecology** and was awarded a \$1.25 million grant from the Quadra Island-based **Tula Foundation** to support her ongoing work over the course of 5 years (2011-2016). This funding and new role allows her to participate more fully in community-based learning and research in ethnoecology, especially as these pertain to critical issues facing Canadians today around the importance of sustaining biocultural diversity in an ever-changing world. Currently, Nancy is working on several research and writing projects. This report outlines Nancy's major activities and accomplishments for the period covering September 2011-September 2012.

Although Dr. Turner was unable to travel for health reasons during the summer and fall of 2011, she made up for this with a very active travel schedule from January to September, 2012. She undertook trips to conduct field research, deliver papers, courses and guests lectures throughout British Columbia, North America and Europe. From ethnobotany courses in the Nass Valley at Gitwinksihkw, BC to giving three talks at the International Society of Ethnobiology in Montpellier France, she spoke of the compelling history of plant cultivation and use in what is now known as British Columbia, and how this vast and intricate knowledge can be applied to many contemporary environmental and land-use planning issues.

No longer engaged in full-time University instruction, Dr. Turner focussed her energies on several writing projects. This year, she completed 3 books and saw the publication of a another textbook, for which she was an editor. She is also working closely with colleague, **Dr. Dana Lepofsky**, as co-editor of a special issue on the field of ethnobotany in British Columbia, due for publication in Fall 2013. She has seen published six articles, submitted another five articles to peer reviewed journals, and is in the process of co-authoring an additional two articles. Most of these articles were co-authored with a variety of colleagues and students and cover such diverse topics as the nutritional values of pine bark to the development of new analytical methods which better incorporate cultural values into ecosystem services.

As part of the Hakai network, Dr. Turner benefitted from the use of the top-notch research facilities located on Calvert Island and kind hospitality of **Eric Peterson** and **Christina Munck**. In May, she taught a course module in ethnoecology with Hakai colleagues **Dr. Anne Soloman** and **Ken Lertzman** from Simon Fraser University, and cultural specialists **Evelyn Windsor**, Heiltsuk First Nation,

and **Jennifer Carpenter**, Culture & Heritage Manager, Heiltsuk Integrated Resource Management Department (HIRMD). In June, with **Jennifer Carpenter** and **Dana Lepofsky**, she helped initiate a field research project on Hunter Island, the beginning of a multi-year study of the history of traditional Heiltsuk integrated land and resource management systems on the north coast of the Island, focused at Hauyat.

The year saw the completion of four of Dr. Turner's Masters students and two of her doctoral students. Nancy is very proud of the well-deserved achievements of all six of her graduating students this year. She also is pleased to welcome a new doctoral student and two new post doctoral fellows to her research team, all receiving funding support through the Tula Foundation and practical and research support from the Heiltsuk First Nation, as well as other sources.

Dr. Turner continued to be busy with several media requests, book and dissertation reviews and student requests. She stayed active on boards and in agencies, as well as organizing to bring **Dr. Gary Nabhan** (a world renowned ethnobiologist from University of Arizona and prize-winning author of numerous books especially on topics around food) to UVic as a Lansdowne Lecturer.



Nancy Turner receives a welcome from Heiltsuk chiefs at Hakai with (from left to right) Chief Kenny Campbell, Chief Mel Innes, Chief Harvey Humchitt and Chief Gary Housty. photo by B. Doman



Primary Research Projects

Hunter Island Project

In the Shadow of M'ənsɣəmxlhi: From Mountain Top to Ocean Floor

This is a collaborative research project between Heiltsuk Nation researchers and those from University of Victoria, Simon Fraser University and other academic institutions reflecting the integration of Indigenous knowledge & perspectives with the tools of western science, to reconstruct the unique geological, ecological, and eco-cultural history of Hunter Island, and to inform a vision for its future. This is a multi-year, integrated research initiative. In the first year (2012), researchers undertook initial survey work on vegetation, topography, known archaeological sites and general cultural history of the northern part of Hunter Island, especially at Hauyat. The complexities of human occupation, traditional resource management systems, and human relationships with other species, including mammals, birds and plants, are being viewed through a multi-lens focus on this culturally and environmentally significant region of Heiltsuk territory. The research findings will help to inform Heiltsuk planning and decision-making around future relationships with this area.

In late June 2012, Dr. Turner, **Jennifer Carpenter, Dana Lepofsky, Julia Jackley, Desirée Lawson, Laurie** and **Dave Whitehead, Maria Shallard, and James Gladstone** (captain) and others conducted an initial survey of the Hauyat area. They found a number of anthropogenic sites and surveyed areas where oral histories located smokehouses and fishing locations. For the 2012 field season, Dr. Turner applied some of her Tula foundation funding to hire 2 Heiltsuk researchers to assist the SFU/UVic team conduct initial archaeological survey work on Hunter Island, and to purchase field equipment, expedite field teams and boat charters for the same.



View of M'ənsɣəmxlhi mountain.



Nancy and Clan Chief Adam Dick (Kwaxisistalla) on their way to the Broughton Archipelago to visit the clam gardens of Kwaxisistalla's youth.



View of Hauyat village site.

Dr. Turner is excited about the upcoming **2012/2013 field season**. Her team will be researching the antibiotic properties of conifer essential oils, in conjunction with the work of the Heiltsuk and other coastal First Nations; examining the human/plant/animal relationships on the Central Coast of British Columbia, particularly in the vicinity of Hunter Island; and searching for archaeological evidence of human use and management of plants and animals on the Central Coast, British Columbia. She will continue collaborating with the Heiltsuk by conducting botanical survey work that will hopefully be compiled into a publication on Heiltsuk plants and their uses.

Other Projects

Dr. Turner continued her ongoing research through interviews and correspondence with **Dr. Luschiim Arvid Charlie** and **Clan Chief Adam Dick (Kwaxisistalla)**. As part of her major book project *Ancient Pathways, Ancestral Knowledge: Ethnobotany and Ecological Wisdom of Indigenous Peoples of Northwestern North America*, this year, Dr. Turner contacted all of her major living indigenous research associates to check facts regarding their contributions to her new book, as well as extensive discussions with colleagues regarding some of the linguistic and other dilemmas associated the presentation of research in these volumes. She conducted a number of field trips in BC (near Spuzzum, along the Sunshine Coast, Salmon river estuary, and Haida Gwaii).

Dr. Turner is convinced of the major contribution that Indigenous knowledge can provide to climate change research. She included her ideas in papers and presentations as well as working with several First Nations in British Columbia on climate change planning projects. Specifically, she assisted with the *Gitga'at* Climate Change Planning Project funding application and project design.



Legal Projects

Dr. Turner continues to provide expert ethnobotanical advice and research on behalf of several BC First Nations involved in legal action regarding Aboriginal rights and title.

Publications

Books

Ethnobiology, eds. E. N. Anderson, Deborah Pearsall, Eugene Hunn, Nancy Turner, Wiley-Blackwell, **published in Fall, 2011.**

A comprehensive treatment of the field, from the leading members of the *Society of Ethnobiology*, this is a specialized textbook for advanced undergraduates and graduate students. Emphasizing basic principles and methodology, this textbook offers a balanced treatment of all the major subfields within ethnobiology, allowing students to begin guided research in any related area—from archaeoethnozoology to ethnomycology to agroecology.

Books in Press

Ancient Pathways, Ancestral Knowledge: Ethnobotany and Ecological Wisdom of Indigenous Peoples of Northwestern North America, McGill/Queen's University Press (2 volumes, under final review—in publication process)

In her latest book, Dr. Turner endeavors to look beyond the details of individual plants and their uses within specific cultures and localities of northwestern North America to determine the overall patterns and processes of their development, application and adaptation. In over 45 years of working with and learning from Indigenous botanical and environmental experts in British Columbia and beyond, she began noticing similarities in the use and knowledge of plants and in the beliefs and values people associated with plants across geographic and cultural space. How did these similarities arise? Were they the result of coincidence, of independent development of knowledge, or of some type of exchange across communities, territories and linguistic boundaries? The more she learned and compared peoples' knowledge of plants and environments, the more intrigued she became. In these 2 volumes, representing her most ambitious book project, to date, she attempts to understand the underlying values, perceptions and perspectives that have guided and directed the botanical and environmental knowledge and practices of the Indigenous peoples of northwestern North America.

Some Important Plants of the WSÁNEĆ (Saanich) People of Southern Vancouver Island, Nancy Turner and Richard Hebda, Royal BC Museum, Victoria BC (This book has completed the review process—publication date, December, 2012)

This book was developed over a long period of time. It was initiated after several years of ethnobotanical collaboration with WSÁNEĆ elders Elsie Claxton (Tsawout) and Violet Williams (Pauquachin) in the mid-1980s to early 1990s, by Nancy Turner and Richard Hebda. The idea of including the teachings of these two knowledgeable elders, Elsie Claxton and Violet Williams was conceived with them.

Both Elsie and Vi were concerned that much of what they knew, and had learned about plants through their lifetimes, would be lost to their children and grandchildren, and to all WSÁNEĆ children, when they passed away. Plants have always been important to the WSÁNEĆ people: trees, shrubs and other kinds of plants, including seaweeds, are major sources of food, materials, and medicines for humans, and provide the backdrop and environmental texture for all cultural



t'xwsúš Springbank clover (*Trifolium wormskioldii*) on Hunter Island, Central Coast, BC



activities. The compilation of their ethnobotanical knowledge is largely informed by interviews with these two elders of the Saanich Peninsula, the book is supplemented with information obtained from other individuals.

Secwepemc People and Plants: Research Papers in Shuswap Ethnobotany, Marianne Ignace, Nancy Turner and Sandra Peacock (eds.) Society of Ethnobiology *Contributions in Ethnobiology* series, jointly published by Society of Ethnobiology and Shuswap Nation Tribal Council, Kamloops, BC. **Set for publication in 2013**

A few others

Yellow Glacier Lily (Erythronium grandiflorum): Important Root Vegetable For The Secwepemc And Neighbouring Peoples Of The Northwest Interior Plateau. Loewen, Dawn C., Nancy J. Turner, And Mary Thomas. In: Secwepemc People and Plants: Research Papers in Shuswap Ethnobotany. (see above)

Coyote, Grouse and Trees: Secwepemc Lessons about Ethnobiological Knowledge. Ignace, Marianne B. and Nancy J. Turner. In: Secwepemc People and Plants: Research Papers in Shuswap Ethnobotany. (see above)

“Everything Is Deteriorating”: Environmental And Cultural Loss In Secwepemc Territory. Thomas, Mary, Nancy J. Turner and Ann Garibaldi. In: Secwepemc People and Plants: Research Papers in Shuswap Ethnobotany. (see above)

Nutrients In Selected Secwepemc Traditional Food Species. Kuhnlein, Harriet V., Dawn Loewen, Sandra Peacock, Donna Legge and Nancy J. Turner. In: Secwepemc People and Plants: Research Papers in Shuswap Ethnobotany. (see above)

Papers published

Turner, Katherine L., Fikret Berkes, and Nancy J. Turner. (2012). ***Indigenous perspectives on ecotourism development: a British Columbia case study***. Special Issue of the Journal of Enterprising Communities, Indigenous Communities and the Bioeconomy 6(3): (online).

This paper examines ***Gitga’at*** First Nation approaches and objectives concerning the use of local biological and cultural resources through the lens of a locally-driven proposal to establish an eco-cultural tourism enterprise. This project was developed in collaboration with the ***Gitga’at*** First Nation and employed a qualitative case study approach. Primary data gathering techniques were active participation, semi-structured interviews, focus group discussions and work with key



Participants learn how to strip cedar bark (*Thuja plicata*) at workshop at Wildwood in Ladysmith, BC.



informants. Participant responses highlight the interconnectivity and importance of social, ecological and cultural integrity in local economic development. Three major principles for resource use were widely expressed: control and management by *Gitga'at*; equitable distribution of any benefits; and the imperative of environmental and cultural sustainability.

Papers in press

Back to the Clam Gardens by, Nancy J. Turner, Kim Recalma-Clutesi, and Doug Deur The authors reflect on a boat trip taken in February 2010 to journey *Kwaxsi'talla*, Clan Chief Adam Dick from Campbell River back to his childhood home in Kingcome Inlet. This is a popular summary of the trip to document *Kwaxsi'talla's* unique and detailed knowledge and experiences of the food harvesting and other resource-based activities of his Qawadiliqalla Clan of the Tsawataineuk people of Kingcome Inlet. As a boy, *Kwaxsi'talla* was removed to this place by his grandparents every winter to avoid attending residential school. The article was submitted to both the funding agencies of the expedition, National Geographic and Ecotrust, and **will be published in the Ecotrust Newsletter in Fall 2012.**

Papers under review

Elephants in the Kitchen: Facing and Overcoming Obstacles to Indigenous People's Resource Management and Decision-making Nancy J. Turner, PhD. Fikret Berkes, PhD. Janet Stephenson, PhD. Jonathan Dick. **Submitted in July, 2012**

Indigenous communities commonly face a major impediment in their ongoing efforts to participate effectively in the stewardship and sustainable management of their traditional lands, waters and resources. Externally driven projects and policies can overwhelm communities' abilities to respond, create havoc in their resource base, and trample on traditional knowledge, practices and stewardship. Such projects and policies can be devastating to small, Indigenous communities struggling to maintain their culture and economic independence in a changing world. This article characterizes these external change agents as the proverbial "elephant in the kitchen" of small-scale resource use for these communities and draws upon examples from Aotearoa New Zealand and Canada. Within the context of Indigenous rights, solutions are proposed to address this type of constraint on Indigenous Peoples' resource use and effective participation in resource management.

Dilbone, Megan, Nancy J. Turner, and Patrick von Aderkas. In press. *The nutrition of Lodgepole pine cambium (Pinus contorta Dougl. ex Loud. var. latifolia Engelm. ex S. Wats.): a springtime candy of people and animals in British Columbia. Ecology of Food and Nutrition.*

Lodgepole pine (*Pinus contorta* var. *latifolia*) is a tree species utilized for succulent edible cambium and inner phloem in the spring by Interior First Peoples of the Pacific Northwest. This paper presents a complete nutritional analysis of this food along with a discussion of nutrients found in lodgepole pine cambium and the potential for modern applications of such a substance.

Reconnecting Social-Ecological Systems: Experiments in Biocultural Conservation Fikret Berkes, Nancy Turner, Janet Stephenson, Henrik Moller **Submitted to Biological Conservation in August, 2012**

Conservation of biological and cultural diversity tends to occur in parallel, each with its own programs. At best, this model is ineffective because biological and cultural diversity are strongly linked. What are some of the alternative conservation pathways embracing a biocultural approach? How can such an approach be adopted; what policy mechanisms be used, and what are some of the challenges? Using biocultural conservation examples from Canada, Aotearoa New Zealand and Mexico to explore these questions based on ongoing participatory projects with indigenous groups, the authors show that conservation planning is beginning (a) to deal with multifunctional and/or cultural landscapes; (b) to accommodate multiple objectives of the local people (political, cultural, environmental) and their livelihoods; and (c) to address multi-level governance needs. Conservation



Nisga'a elder demonstrates how to whip soapberries in the Nass Valley as part of Ethnobotany course.



in a rapidly changing complex world requires collaborative approaches with partnerships, social/institutional learning and adaptive governance to design fine-grained conservation, and stewardship ethics with cultural connections to the land.

Sustained by First Nations: European Newcomers' Use of Indigenous Plant Foods in North America Nancy J. Turner and Patrick Von Aderkas, University of Victoria, Victoria, BC Canada for: *Acta Societatis Botanicorum Poloniae* (December 2012), Wild Food Plants special issue, edited by Lukasz Luczaj <lukasz.luczaj@interia.pl>

Many world-class food products originated in the Americas: maize, potatoes, beans, peppers, tomatoes, pineapples, papayas, chocolate and vanilla, to name just a few. Most of these were introduced to Europe fairly early on by explorers like Christopher Columbus, and all of these examples were crops that were domesticated originally from Central and South America. However, North American Indigenous peoples have relied for millennia on diverse and nutritious plant foods from their own and neighbouring territories. Among these, only a handful, most notably sunflower (*Helianthus annuus L.*), have spread worldwide as domesticated crops. Many others, including wild-growing and locally cultivated species, have been consumed and enjoyed more locally, not only by First Peoples, but by newcomer populations during the trade and colonial eras, and right up to the present day as people everywhere have reclaimed their interest in local, sustainable food systems. This paper focuses on plant foods of North American First Peoples that were adopted by Europeans and other immigrants, in some cases out of necessity, but often because of convenience and appreciation of their quality, taste and nutritive values. To provide a deeper understanding of the types of situations in which these foods were adopted, five key species are highlighted, with details of their procurement, acceptance and adaptation by the newcomers, including their use up to the present time.



Fiddleheads (*Matteuccia*) were a food not commonly eaten by First Nations (who used other parts of the plant for materials), but were valued by European immigrants. Photo by P. Von Aderkas.

“To Feed all the People”: *Lucille Clifton’s Fall Feasts for the Gitga’at Community of Hartley Bay, British Columbia* In press. Nancy Turner (School of Environmental Studies, University of Victoria), Colleen Robinson, Gideon Robinson (Hartley Bay, B.C.), and Belle Eaton (Hartley Bay, B.C.) *Journal of Ethnobiology*, in press

Lucille Clifton, Eagle Matriarch of the *Gitga’at* (Tsimshian) community of Hartley Bay on the north coast of British Columbia, passed away in 1962 at the age of 86. She and her husband, Heber Clifton, were important and respected leaders of the *Gitga’at* Nation. Through her knowledge of traditional foods, her dedication to her community, and her teachings to her grandchildren and other *Gitga’at* children, Lucille had a tremendous and enduring influence on the *Gitga’at*’s present status as a people who still rely on and celebrate their traditional foods. Lucille’s grandchildren (including two co-authors of this paper), themselves now respected elders, recall that Lucille and the other Eagle women regularly hosted a feast around Thanksgiving every year from the 1920s to the 1950s, in which they served an array of traditional foods, including cambium of hemlock (*Tsuga heterophylla*) and amabilis fir (*Abies amabilis*), edible seaweed (*Porphyra abbottiae*), Pacific crabapples (*Malus fusca*) and highbush cranberries (*Viburnum edule*) in whipped oulachen grease, many different fish and shellfish dishes, and a variety of other dishes from the marine and terrestrial environments of *Gitga’at* territory. Today, as traditional food is increasingly recognized as vital for Indigenous Peoples’ health and well-being, Lucille’s teachings are as important as ever, helping her descendants to maintain their resilience, self sufficiency and cultural identity in the face of immense global change.

“Our Eyes on the Future”: *Reclaiming Indigenous Stewardship for Environmental and Cultural Sustainability* Submitted April 2012 Nancy J. Turner, Leigh Joseph, University of Victoria and Squamish First Nation, Jessie Housty, Heiltsuk First Nation. Submitted to *Journal for Cultural Research*.

Indigenous Peoples have occupied the area that is now known as British Columbia, using and sustaining the vegetation and animal life of their lands and waters, for at least 13,000 years. Within



the past 200 years or so, since the settlement of European and other newcomers, the area has experienced almost universal declines in the abundance and quality of native plant and animal populations. There are many reasons for this, but at least one factor has been the constraints placed on Indigenous Peoples in accessing, interacting with and caring for their lands and resources. With industrialization and globalization of resources, their ability to carry out traditional resource stewardship practices has been severely restricted. Recently, however, a number of initiatives to reinstate Indigenous stewardship of lands and resources have been developed. This paper presents six case examples – covering establishment of co-managed parks and protected areas, to production of non-timber forest products, to reclaiming traditional food production, to ecotourism and eco-education ventures – that show promise for restoring and renewing both Indigenous cultural practices and indigenous species and habitats.

Chapters for Food and Agriculture Organization of the United Nations books

Turner, Nancy J., Mark Plotkin and Harriet Kuhnlein. *In press* 2011. *Integrity of Indigenous Food Systems: Global Environmental Challenges*. Chapter 3 in **Book 3 in Series on Indigenous Peoples' Food Systems for Health: Indigenous Peoples' Food Systems for Health: Interventions for Health Promotion and Policy (FAO Book 3)**.

Turner, Nancy J., Wilfred R. Tallio, Sandy Burgess and Harriet V. Kuhnlein. *In press*, 2011. *The Nuxalk Food and Nutrition Program for Health*. Chapter 11 in **Book 3 in Series Indigenous Peoples' Food Systems for Health: Interventions for Health Promotion and Policy (FAO Book 3)**.

Ecosystem services and beyond: Using multiple metaphors to understand human-environment relationships Manuscript to be submitted to *Bioscience* Christopher M. Raymond, Gerald Singh, Karina Benessaiah, Joanna R. Bernhardt, Harry Nelson, Jordan Levine, Nancy J. Turner, Brian Norton, Jordan Y. Tam, Kai Chan

Researchers and managers have embraced the ecosystem services concept as a way to better understand human dependence on natural systems and to internalize externalities of modern markets. Research has emphasized the multiple ways in which ecosystems provide goods and services



Bonnie Thomas, Nancy Turner and Ann Garibaldi in front of Wapato (*Sagittaria latifolia*) restoration. Here, Nancy, Bonnie and Ann were finishing up a successful botanical survey of the Salmon River Estuary, where they discovered a small patch of Sweet Flag (*Acorus americanus*) in a cow pasture.



that support human well-being, often employing an economic production metaphor. We argue that a narrowly understood ecosystem services metaphor, which only considers how ecosystems provide direct benefits (services), usually measured in terms of their economic value for human use, is limiting for environmental research and management. Instead, we make the case that the adoption of multiple, alternative metaphors for human-environment relationships fosters better understanding and representation of the many ways in which humans relate to and value ecosystems. Explicitly articulating a range of metaphors held by stakeholder groups will lead to more inclusive and transparent decision-making and may enable diverse communities to find common ground in our efforts to sustain natural systems.

“We might go back to this”; Drawing on the past to meet the future in northwestern North American Indigenous Communities Submitted to Special Issue on Traditional Ecological Knowledge in Ecology and Society, July 2012 Nancy J. Turner and Pamela Spalding

Traditional Ecological Knowledge systems are as important today for the survival and well-being of many Indigenous People as they ever were. These ways of knowing also have much to contribute to humanity in general, particularly at a time of marked environmental change. As Indigenous peoples have sustained exposure to natural resources and phenomena in particular places over time, they are privy to the cumulative knowledge on the location and timing of a host of significant environmental events and processes. Not only do their intimate experiences of seasonal weather conditions, tides and currents, species and environmental indicators contribute to a better understanding of the nature, rate and intensity of current environmental change, but their modes of knowledge transmission, social institutions and the mechanisms of cooperation and support that are an integral part of TEK systems can provide lessons to society at large about better, more effective planning and decision-making. Furthermore, the values of respect and recognition of kinship with other species that are often embodied in these systems can serve to remind all of us about the imperative to conserve and protect these other species if we are to survive as humans. Here we focus on the Traditional Ecological Knowledge systems of First Peoples of northwestern North America, Canada in describing the various ways in which Indigenous Knowledge systems can contribute to society’s efforts to understand, adapt to, and alleviate global climate change.

Other Contributions

Satterfeld, Terre, Leslie Robinson, and Nancy Turner. (2011). *Being Gitka’a’ata: A Baseline Report on Gitka’a’ata Ways of Life, a Statement of Cultural Impacts Posed by the Northern Gateway Pipeline, and a Critique of the ENGP Assessment Regarding Cultural Impacts.* Submission to the Joint Review Panel for Review of the Enbridge Northern Gateway Project, starting December 2011.

Badiou, Pascal and 22 other authors, including N. Turner. (2011). *Conserving the World’s Last Great Forest Is Possible: Here’s How.* A science/policy briefing note issued under the auspices of the International Boreal Conservation Science Panel and Associates.

Turner, Nancy J. (2011). *“Issues of conservation in Ethnobotany.”* Accompanying posted lecture, “Just When the Wild Roses Bloom.” Canadian Museum of Nature, Native Plant Crossroads Website at Nature.ca; “Conservation Issues”: http://nature.ca/plnt/index_e.cfm

Turner, Nancy J. (2011). *Book review of Ethnobotany in the New Europe.* People, Health and Wild Plant Resources, edited by Manuel Pardo-de-Santayana, Andrea Pieroni and Rajindra K. Puri. New York and Oxford: Berghahn Books (2010). *Environmental History*, 16(4), pp. 734-736. (published online: October 10, 2011: <http://envhis.oxfordjournals.org/content/16/4/734.extract>)

Badiou, Pascal and 22 other authors, including N. Turner. (2011). *Keeping Woodland Caribou in the boreal forest: Big challenge, immense opportunity.* A science and policy briefing note... International Boreal Conservation Science Panel and Associates.



Turner, Nancy J. (2011). *Foreward* for book by Hazel Stark, *Companion guide to Plants of Acadia National Park, College of the Atlantic, Bar Harbor, ME.*

Turner, Nancy J. (2011). *Opinion concerning SmartCentres Proposed Development, Salmon Arm, B.C.*, Underhill, Boies Parker Law Corporation Inc., Vancouver, BC.

Reviews

Manuscript review for: *Principles of Tsawalk*, E. R. Atleo, Umeek, for UBC Press (**August 2011**), *Eating the Landscape: American Indian Stewards of Foods and Resilience* by Enrique Salmon, University of Arizona Press (**September 2011**) *Mycologia* (**October 2011**), *Sacred Ecology, Third Edition*, by Fikret Berkes, for Routledge / Taylor and Francis (**October 2011**), *Journal of Enterprising Communities* (**November 2011**), special issue: People and Places in the Global Economy *Ambio*, *Journal of Canadian Studies*, and *Indian Journal of Traditional Knowledge* (**January 2012**), Edible Wild Plants for *Johns Hopkins University Press* (**February, 2012**), *Human Ecology* (**March 2012**), *Conservation & Society*. (**April 2012**), *American Botanical Council Peer Review* of HerbClip, (**May 2012**). *Indian Journal of Traditional Knowledge* (**July 2012**),

Conference Presentations

February 2012. “*The Sun, the Wind, the Tides and the Rain: Traditional Environmental Knowledge in Sustaining First Nations’ Lifeways.*” Third Annual First Nations’ Renewable Energy Symposium, First Peoples House, University of Victoria

March 2012. “*Adam’s Gardens: Biodiversity and Traditional Food Production of Indigenous Peoples of Northwestern North America.*” Public Lecture in Indigenous North American Ethnobotany series, University of Wisconsin, Madison.

March 2012. *Wise Women of British Columbia: A Legacy from the Past.* WISELI (Women in Science and Engineering Leadership Institute), University of Wisconsin, Madison. April 12-18 Society of Ethnobiology Conference, Denver, Colorado

speaking



Nancy's field trip course class from the Pacific NW College of Art class in Portland (August 2012) in front of Garry Oak (*Quercus garryana*).





Students walk along the beach on Calvert Island during Nancy's ethnoecology module at the Hakai Research Institute course in May 2012.

April 2012 *Cultural Keystone Places: implications for ecological conservation and cultural renewal*. Society of Ethnobiology Annual meetings, Denver, Colorado.

May 2012 *International Society of Ethnobiology Conference; Montpellier, France*
ISE symposium: 13th Congress of the International Society of Ethnobiology,

May 2012 *Diversity in the World. Symposium on Why Do We Value Diversity?*
A dialogue on the definitions, implications and uses of biocultural diversity, 13th Congress of the International Society of Ethnobiology, Montpellier, France., Hameau de l'étoile, France; sponsored by Global Diversity Foundation (UK), Laboratoire d'Éco-anthropologie et Ethnobiologie (France) and Rachel Carson Center (Germany).

May 2012 *"We might go back to this"; Drawing on the past to meet the future in Coastal British Columbia Indigenous Communities* (with Pamela Spalding).
Symposium on "Traditional Ecological Knowledge and Resilience in the context of Global Environmental Change", 13th Congress of the International Society of Ethnobiology, Montpellier, France.

May 2012 *Loss of a Plant: Cultural and Ecological Effects – a case study from Haida Gwaii* (with Kii'iljuus, Barbara J. Wilson). Symposium on Collaborative research, Indigenous knowledge exchange and data management in Northern regions, 13th Congress of the International Society of Ethnobiology, Montpellier, France.

June 2012 *"No amount of Money": Cultural Values and Environmental Security in a Changing World – Examples from Coastal British Columbia* Public lecture delivered by with Kyle Clifton, Gootm Hayda (*Gitga'at* Nation) in: **Workshop on Ecosystems: Services, Stewardship, and Sustainability organized by Kai Chan and T. Satterfield, Peter Wall Centre, UBC.**

August 2012 Ecological Society of America Conf.—Plenary Speaker *Since Time Immemorial": Recognizing Indigenous Environmental Knowledge in Land and Resource Management*. and ESA Conference Session: **Grappling with Intangibles: Bringing Cultural Ecosystem Services into Decision-Making, Not just a tree: Recognizing, Understanding and Assessing Intangible Cultural Values of Nature.** Portland ,Oregon.



Nancy delivers a field lecture at the Nisga'a Summer Language and Culture Institute, at Gitwinksihlw, BC.



Courses/Workshops

March 12-14, 2012 University of Wisconsin-Madison, funded by the Women in Science and Engineering Leadership Institute (WISELI), Indigenous North American Ethnobotany Lecture Series. *Adam's Gardens: Biodiversity and Traditional Food Production of Indigenous Peoples of Northwestern North America*

March 2012 Women's Arboriculture Conference, Qualicum BC Dr. Turner delivered the following two lectures at the Women's Arboricultural Conference, Parksville, BC:

- *Celebrating Cedars: Iconic Trees in the Lives of First Peoples in Northwestern North America* and
- *"Lessons from the Birch Tree": Importance of ecological and genetic diversity in resource use and management* March 2012.

May 2-4, 2012 Coastal Ecosystems and Resilience (SFU field course, organized by Anne Salomon). **Hakai Research Institute Course Module: Ethnoecology and the Traditional Management of Plant Resources**

This course examined the systems of land and resource management developed and traditionally practiced by Indigenous peoples of coastal British Columbia, with reference to other long-resident peoples in other parts of the world. Specifically it explored the role of Traditional Ecological Knowledge (TEK) in documenting and understanding the complexity of ecosystems and considers the contributions of TEK and traditional land management to developing ecosystem baselines, maintenance of ecosystem integrity, resilience and restoration, as well as the inextricable relationships between biological diversity and cultural diversity.

June 15 *Wildwood Cedarbark Workshop* Belinda Claxton and Nancy Turner demonstrate the harvesting of cedarbark at **Wildwood Ecoforest, Ladysmith BC** Co-organized workshop with J. Rastogi: cedarbark harvesting at Wildwood, Yellowpoint; with Saanich cedarbark experts (BC and SU) and The Land Conservancy

July 1-9, 2012 *Bluewater Adventures—Haida Gwaii tour of Gwaii Haanas Expert Naturalist-in-Residence*

June 4-8, 2012 *Wilp Wilxo'oskwahl Nisga'a Course Nisga'a Summer Language and Culture Institute 2012 Biology 350: Ethnobotany*, Gitwinksihkw BC. Co-taught ethnobotany course for Wilp Wilxo'oskwahl Nisga'a (WWN), the post-secondary Nisga'a educational institute of British Columbia.

This week-long intensive course examined the relationships between people and plants, with a focus on botanical knowledge of Indigenous peoples, especially health and nutrition, and the cultural role of plants of the Nass Valley and surrounding regions. *Nisga'a* and other Northwest Coastal plant knowledge formed the cultural and geographic focus, although the course also explored how traditional plant relationships reflect and influence environmental worldviews worldwide and how ethnobotanical knowledge continues to be important for present and future generations. Other instructors were **Nancy Mackin**, **Deanna Nyce** and **Jane Ruddick** with support from Nisga'a Elders and advisors.

August 5, 2012 Field Trip Course on *Indigenous Plants and their Uses* with Pacific Northwest College Class in Portland, Oregon.

Students and professors from the Hakai Research Institute Course: *Ethnoecology and the Traditional Management of Plant Resources*, May 2012.



Nancy's Hakai Research Team

As part of the Tula Foundation grant, Dr. Turner was able to hire a Research Manager (1/2 time) to assist in the project management of her various research initiatives, and to assist with the editing, logistical support and delivery of her many writing projects. In November, 2011, **Pamela Spalding** was hired to fulfill this role.

Dr. Turner's team recently expanded to include one PhD student and two post-doctoral fellows to support her research on Hunter Island. **Dr. Jonaki Bhattacharyya** will be performing research on human/plant/animal relationships on the Central Coast of British Columbia, particularly in the vicinity of Hunter Island, in Heiltsuk First Nations Territory. **Darcy Mathews** (abt) will conduct research on archaeological evidence of human use and management of plants and animals on the Central Coast, British Columbia, in particular, within the vicinity of Hunter Island, in Heiltsuk territory and around the Hakai Institute on Calvert Island, and will be provided with workspace to support that purpose. Dr. Bhattacharyya and Dr. Mathews will begin their two year terms in the late fall, 2012.

Johanna Wilms, from Germany, commenced her doctoral program with Dr. Turner in the School of Environmental Studies in September, 2012. She is researching the antibiotic properties of conifer essential oils, in conjunction with work that the Heiltsuk and other coastal First Nations are doing in a collaborative project. Dr. Patrick von Aderkas in (Biology) will co-supervise Johanna, and Dr. Brian Starzomski (School of Environmental Studies) has agreed to serve on her doctoral committee.



Darcy Mathews on a recent field trip to Hayaut on Hunter Island, Central Coast.



Dr. Jonaki Bhattacharyya at the Hakai Research Institute, Calvert Island, Central Coast.



Dr. Turner helps with a pit cook on Chatham Island with Saanich Elder Sellemah (Joan Morris), former student Thiago Gomez and Darcy Mathews and Dr. Eric Higgs.



Students

Masters Students

Abe Lloyd (completed Spring 2011) *Cultivating the t'ekkillakw, the ethnoecology of dləksəm Pacific silverweed or cinquefoil [Argentina egedii (Wormsk.) Rydb.; Rosaceae]: lessons from Kwaxsistalla, Clan Chief Adam Dick, of the Qawadiliq-ella Clan of the Dzawada7enuxw.*

Amy Deveau (completed Fall 2011) *Kwakwaka'wakw use of the edible seaweed ləqq'əstən (Porphyra abbottiae Krishnamurthy: Bangiaceae) and metal bioaccumulation at traditional harvesting sites in Queen Charlotte Strait and Broughton Strait. (co-supervised with John Volpe)*

Thiago Gomez (completed Summer 2012) *Restoring Tl'ché's: An ethnoecological restoration study in Chatham Islands, British Columbia. (co-supervised with Eric Higgs)*

Leigh Joseph (completed Summer 2012) *Finding Our Roots: Ethnoecological Restoration of lhásəm (Fritillaria camschatcensis (L.) Ker-Gawl), an Iconic Plant Food in the Squamish River Estuary, British Columbia. (co-supervised with Trevor Lantz).*

Andra Forney (ethnoecology huckleberry)

Kate Proctor (ethnoecology of edible blue camas) (co-supervised with Brenda Beckwith)

Victoria Wyllie De Echeverria (ethnecology of wild pacific crabapple-*Malus fusca*) (co-supervised with Gerry Allen)

PhD Students

Carla Burton (to be completed Fall 2012) *Nisg'aa Ethnobotany*

Tania Halber (completed Summer 2012) *"Tribal Journeys" An integrated voice approach towards transformative learning. (co-supervised with Ted Reicken)*

Judy Thompson Hede Kehe' Kahidi (completed Summer 2012) *"Our Ancestors Are In Us": Strengthening our Voices Through Language Revitalization From a Tahltan Worldview*



Nancy with some of her past and present graduate students at the Society of Ethnobiology conference in Denver in April 2012. From left to right: Sandra Peacock, Leigh Joseph, Kimberly Chambers, Andra Forney, Abe Lloyd (in back); Victoria Wyllie De Echeverria, Nancy Turner and Kate Proctor.



honours

Media

November 2011. *Videoed presentation on “Sense of Place – the Clearwater Connection”, for website on the Clearwater Wetlands and Wildlife Corridor, TLC* [see <http://blog.conservancy.bc.ca/get-involved-with-tlc/campaigns/clearwater-wetlands-and-wildlife-corridor/>]

National Geographic Radio Interview February 5, 2012: Many Native American cultures have been labeled ‘hunter gatherers’, but National Geographic grantee Nancy Turner feels that label doesn’t fully capture how accomplished they were at cultivating the landscape to suit their needs.

February, 2012. *Film interview with CBC journalists on Leigh Joseph’s community-based project on ethnoecological restoration of northern riceroot at Squamish.*

February 15, 2012. *CFOX Radio interview (with Frank Stafford) on Third Annual First Nations’ Renewable Energy Symposium, First Peoples House, University of Victoria* (Feb. 2012).

April 2012, interview with Julie Chadwick, reporter for Nanaimo Daily News <http://www.canada.com/Ethnobotanist+studies+bond+between+people+plants/6465014/story.html> [“*Ethnobotanist studies link between plants and people*”]

April 2012. Interview with CBC student interns on “*Reporting in Indigenous Communities*”, Shxw’eyelh, Stories on Health and Healing, on Leigh Joseph’s riceroot Master’s research, Uprooting diabetes: Riceroor grows again <http://www.indigenousreporting.com/story-1/>

Honours

2011-2013 *Official University Orator, University of Victoria.*

July 2011. *Distinguished Economic Botanist of the year, Society for Economic Botany, Society for Economic Botany Annual Meetings, St. Louis, Missouri.*

March 16, 2012 Recipient of *Queen’s Diamond Jubilee Medal* at Government House, Victoria BC

June 16, 2012 *Tl’ches Name Sharing Ceremony* with **Sellemah** at Chatham Island. Saanich Elder **Joan Morris**, honour Nancy by sharing her name, **Sellemah**.

August 6, 2012 *Ecological Society of America, Traditional Ecological Knowledge Section Mentor Award*, at Ecological Society of America Conference, Portland, Oregon.



Dr. Turner and Dr. David Turpin (President of UVic) visit the Hakai Research Institute.



Committees

- *Gitga'at Social and Environmental Impact Assessment team for the Northern Gateway Enbridge oil tanker route* (R. Gregory, chair, with *Gitga'at* Nation and other participants) Committee Member September-December 2011.
- *Marine Planning Partnership's (MaPP) Science Advisory Committee* (member, March 2012-November 2013)
- *International Boreal Conservation Science Panel* (member, 2010-present)
- *Global Diversity Foundation* (President of Advisory Board, GD U.S. 2010-present)
- *Indian Journal of Traditional Knowledge* (IJTK), Member of Editorial Board, January 2009-present
- *Institute for the Preservation of Medical Traditions*. Member of Advisory Board. Smithsonian Institution, Washington, DC. 2010-present.
- *Slow Food*, 2000-present. (helped organize a delegation of >40 indigenous participants for Terra Madre, Turin, Italy. Taught introductory botany course for University of Gastronomic Sciences, November 2005)
- *Tsawout Land Stewardship Society* (Board Member)
- *Mount Tolmie Conservancy Association* (Board Member)
- *Rithet's Bog Conservation Society*
- *The Land Conservancy* (Honorary Patron)
- *Ecoforestry Institute* (Advisory Board Member)

Wild rose (*Rosa nutkana*) blooming at Hauyaat on Hunter Island, Central Coast, BC



Special Events

Introduction to James Miller Lecture

February 8, 2012. Introduction of Dr. James Miller, Royal Society of Canada, Governor General *Lecture Series*, *Vancouver Island University, Nanaimo, BC*.

Gary Nabhan Lansdowne Lecture and Raj Patel Visit to UVic

Worked closely with other faculty, staff and the Horticultural Centre of the Pacific (HCP) to formally invite Gary Paul Nabhan to Victoria as part of the special 50th Anniversary Lansdowne Lecturer in the School of Environmental Studies at the University of Victoria, British Columbia. Dr. Nabhan is an internationally-celebrated nature writer, seed saver, conservation biologist and sustainable agriculture activist who is referred to, by many, as the “the father of the local food movement.” Gary is the author or editor of twenty-four books, and he has been honored widely for his writing and collaborative conservation work. He works for most of the year as a research scientist at the Southwest Center of the University of Arizona, and the rest as co-founder-facilitator of several food and farming alliances, including Renewing America's Food Traditions and Flavors Without Borders. Gary will visit UVic from the October 8-10, 2012. He will deliver a public lecture as well as formal and informal presentations of his knowledge and insights to students, faculty, and local members of the horticultural community. Along with Dr. Nabhan's visit, our colleague, Dr. Raj Patel, internationally renowned food writer and activist will be visiting and speaking in Victoria and is being hosted by the School of Environmental Studies and HCP.

Report text and layout by Pamela Spalding, September 2012.

