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Introduction to the Special Issue in Honor of Lincoln Washburn

Link Washburn, a glimpse at the person

"To test the forefront of knowledge for even a brief period, particularly when the subject matter concerned the intimate workings of nature, provided both a motivation and challenge that ... are deep and real for me…" from one of Link Washburn's rare speeches (1988).

Introduction

This special issue of *Quaternary Research* is in honor of Link Washburn (Fig. 1), who passed away on January 30, 2007 in Seattle; he was 95. In line with Link's interests, research and scientific contributions, this issue celebrates the state of the art and the broad spectrum of approaches in the study of periglacial processes and landscapes.

This article has dual objectives. The first is to serve as a brief prologue to the articles that follow. The second and more important objective is to paint a backdrop for Link Washburn's exceptional impacts in the fields of permafrost and periglacial research. Interestingly, these extended far beyond the particular problems he worked on, the individuals he worked with, the comprehensive papers he wrote, his esteemed textbooks, and the research centers and scientific journals, including Quaternary Research, that he masterminded and launched. Notes by some of his close friends and colleagues, and by his children, were compiled herein to shed a bit of light on the exceptional personal dimension of Link Washburn and Tahoe—his wife, field assistant, friend and companion for 71 years. Glimpses are provided of Link's and Tahoe's extraordinary kindness, warmth, generosity, and humility to illustrate and underline their exceptional personal qualities, which were fundamental to Link's immense contribution to geocryology and Quaternary science.

Special issue on Periglacial Processes, Landforms & Environments

The articles in this special issue are rooted in a small workshop held at the University of Alaska in Fairbanks following the Ninth International Conference on Permafrost. It was attended by approximately forty participants and was sponsored by the Quaternary Research Center, which was founded by Link at the University of Washington in Seattle. Leading periglacial researchers in this field from all over the world were invited to participate in the workshop. These and a few other scientists submitted papers to the journal *Quaternary Research*, for which Link served as the founding editor.



Figure 1. Link and Tahoe Washburn in the late 1930s, working in the Arctic they loved. They lived and worked as a beautifully orchestrated pair, they enriched one another's lives as well as the lives of their many friends and colleagues.

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The diversity of papers and disciplines represented in this special issue resonates with Link's penchant for interdisciplinary research and a broad range of approaches. The papers represent a multitude of disciplines that include the physics and thermodynamics of ice growth in porous media, the mechanics of frost heaving, the geophysics of patterned ground, and the geology and geomorphology of landforms characteristic of periglacial regions, active and fossil. They range from a rigorous examination of interfacial forces associated with phase changes in soils that operate on a microscopic scale and to a more traditional consideration of regional landscapes impacted by periglacial processes. They present results from studies by an international suite of investigators ranging from senior experts to prominent young leaders in the field, and from research sites spread through much of the world, including both polar regions as well as Belgium, Finland, Great Britain, Japan and Switzerland. This global approach parallels much of Link Washburn's own writing in which he included detailed discussions of an exceptionally broad and dispersed literature in many languages by investigators from all corners of the world. The papers in this special issue should be of interest to scientific communities ranging widely from climate change to planetary surfaces. Examples include the role of buried carbon in the Arctic in global climate change to landforms on Mars such as patterned ground and palsas that have close analogs in periglacial regions on Earth. Implications for periglacial features on Mars, and paired ice ridges on Europa, are discussed briefly in two papers (Hallet et al., 2011; Matsuoka, 2011) in this special issue.

Introduction to Lincoln Washburn, the person

Several articles have recently appeared about Link Washburn, including two obituaries, one by his long term friend and fellow Arctic scientist, Carl Benson (2007), and the other by his closest colleague Stephen Porter (2007). A third paper focused on his rich scientific contributions in periglacial geomorphology (Hallet, 2008). The material assembled herein is meant to complement and augment these articles by focusing on the personal side of Link Washburn and his close life-long partner and wife, Tahoe.

The first section of this manuscript compiles a series of notes and photographs contributed by his children Land Washburn, Nuna L. MacDonald, and Sila T. Washburn; they offer glimpses of their father and mother viewed through their eyes and experiences within the close family. Land made an oral presentation at the workshop in Fairbanks on July 4, 2008. The second section assembles a series of notes by Carl Benson, his long-term friend and fellow researcher, who shared Link and Tahoe's love of the Arctic. It concludes with a few words from University of Washington's Minze Stuiver, Estella Leopold, Lisa J. Graumlich, and Bernard Hallet, with contributions from Land and Nuna. Herein, in the spirit of informality that was typically favored by Link, the Washburn children will be referred to by their first names only. Speaking of first names, according to Land, "Dad signed his correspondence as "Link". We never heard any word from him indicating a preference. I'd tend to …. go with whichever from whomever—certainly Dad would have appreciated [Linc] as much as any other [version]." Accordingly, both "Link" and "Linc" appear in the following sections (Fig. 2).



Figure 2. Link and Tahoe Washburn on Victoria Island probably in 1938. Nuna, their daughter, wrote "on a slip of paper in with a negative of the photo of her, Mum had later written—*Fulfillment*."

Remarks from Land Washburn's presentation

Thank you Bernard Hallet and Ron Sletten, for adding this special session in honor of the QRC's Washburnian period to the NICOP extravaganza, and thanks also to Jerry Brown, Larry Hinzman and their legion of associates for bringing off with such élan this most excellent event (Fig. 3).

Over the five-summer span most adolescents endure in tortured study of the formulae that define the meeting or exceeding of the expectations of their peers, my two sisters and I accompanied Mom and Dad to Mestersvig in Northeast Greenland for May–September fieldwork. I therefore missed out on that complicated socialization process, and that fact alone makes me forever grateful that Dad chose the Arctic as the milieu for his life's work (Fig. 4).

I could talk at length about the many other rewards from a youthful period spent in a fairly remote part of the Arctic, in the company of my family, Dad's field assistants, his visiting colleagues, a few miners, a couple of Royal Danish Air Force PBY Catalina aircrews, and the odd Scottish mountain climber (I suspect that some of you know that Scottish mountain climbers can be delightfully odd indeed…).

I've also come to the conclusion (after many words wasted in the trying) that no words can adequately express the marvel of keeping company with terrain so stunning it hurts.

The impact of that period of my life might be demonstrated by the fullness of my emotional response as, 45 years later, I flew into Mestersvig in July 2000, in the company of my two sisters and three generations of the Ejnar Mikkelsen family, led by Naja Duus Mikkelsen of GEUS (Greenland and Denmark Geological Survey), who was at the time pursuing in interest in surveying Dad's 1950s research sites with a view towards the possibility of developing new data 40 or so years after his 5-year study sequence.

Those five field seasons were filled with busy days. Dad would get up early to brew pot — boiled camp coffee — you know, the kind where you float the grounds on cold water, and watch as the water eventually boils up through the brown mat — a process fascinating to any wannabe (but never was) volcanologist. As the grounds settled, he'd boil up a pot of snowmelt for oatmeal: oatmeal with dried apricots, oatmeal with raisins, oatmeal with prunes, oatmeal with oatmeal—lots and lots of oatmeal.

Dad would leave clean-up chores in the hands of his kids, thus showing admirable discipline restraining his penchant for washing dishes, as some of you might recognize having witnessed him barging into your kitchens after enjoying a meal in your home. He and his assistant would then head off to one of the 25 or so working sites he had established within a +/− 10 km radius, leaving Mom to deal with her three adolescents (Fig. 5).

With perfect foresight, Mom had arranged for us kids to become northeast Greenland's sole collectors of butterflies and spiders for the American Museum of Natural History in NYC. (I reflect now about the chances that today we'd be allowed to cross domestic and international borders carrying spiders drowned in vials of alcohol and cyanide bottles for dispatching butterflies!)

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Figure 3. Link and Tahoe Washburn in the High Arctic while Link was working on his doctoral research in the late 1930s.

After chores and maybe some schoolwork, we'd often sally forth towards one of Dad's sites, carrying lunches of Ry-krisp, sardines, mackerel, or liver paste, and maybe a chocolate bar or two, in rucksacks bouncing off our shoulders as we chased fleet yellow sulfur butterflies over periglacial features we were slowly beginning to recognize.

The on-site time spent with Dad, who suffered constantly from hay-fever, gave us our iconic Link Washburn image—hunched over his theodolite, oblivious to his steadily dripping nose and to the mosquitoes re-fueling on his forehead and ears, calling out target readings to his assistant, or meticulously penciling them into his always-damp notebook.

That Dad was a consummate academic was clear to us early on. If he had a cold and was recuperating in bed, he'd read a detective novel or mystery. I learned about Miss Marple, Nero Wolfe, and Mickey Spillane. However, when he didn't have a cold, his bedtime reading tended towards calculus textbooks, about which I learned absolutely nothing — ever.

I did, however, grow up trying to answer Dad's questions:

How do you know that?
Why?
How?
Are you sure?
Have you considered this alternative?

Dad's questions, and those asked of us by you — his colleagues, mentors and grad students — together with Mom's remarkably applied appreciation for all things natural, engendered in us an abiding curiosity which has left little time in our lives for tedium, and for that too we are forever grateful. Of course, one unintended result is that I have found it rather too easy to ignore Dad's incredible attention to detailed preparation in my quest for accumulation of more and more input — which explains why my delivery of these short comments suffers from a lack of practice before an audience of local black spruce. Instead, I took off the other night for what turned out to be a 100-mile drive north to Hess Creek on the Dalton Highway, just for the experience of so doing — which I think reduces to “just for the hell of it”!

Oh, yes—one other lesson learned… we are all individuals, and as such, the magical Washburn formula does not work for all. One of Mom's anecdotes concerns a nameless field assistant, who we all found to be a little surly during his time with us in Greenland. Unlike the rest of the assistants who have kept in touch with us over these many years, this one flew out aboard a DC-3 into social oblivion at the end of the season. Quite a number of years later, at a conference perhaps much like this one, Mom caught sight of him staring at her from across a crowded room. Having been caught looking, he shouldered his way across the room, with an intense expression and nearly maniacal fire in



Figure 4. Link and Tahoe Washburn in 1957 at Mestersvig, Greenland. According to their daughter Nuna, Tahoe had these portraits (complete the with the informal “frame” of red tape) pinned to the wall in Mestersvig the whole time they were there, and at home the same (propped on one of her office tables). Probable photographer: Jørgen Nielsen.

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Figure 5. The Washburn family at their house in Mestervig, Greenland, where Link did much of his early periglacial geomorphology research in the mid-1950s. From left: Sila, Tahoe, Nuna, Land, and Link.

his eyes. Stopping inches away, he hissed "I HATE OATMEAL," spun on his heel, and walked away, never to be seen again.

Well, I don't know whether you all like oatmeal, or not. But I do know that Dad would have taken this opportunity to fondly remember each of you here, and those now gone. And he and Mom would have thanked you for enriching their lives together, and the lives of their children as well.

And so, in the names of Link and Tahoe Washburn, my two sisters Nuna and Sila, and myself I wish to convey to you our very profound thanks, and we wish you all the very best.

A few more words mostly about Tahoe from her children

Land writes "The other aspect of the [Tahoe/Link] partnership worth mentioning [is that Tahoe] became the mechanic and facilitator—she was the one who came up with the hands-on solutions for the do-its and the fix-its of not only family and household life, but also the locating, acquisition, sorting, assembly and shipping of the essentials for meeting the *personal* needs of all the participants in many decades of field seasons. Plus, if something broke, she'd invent a way to fix it with the tools and materials at hand." Nuna, their older daughter, adds "Mum [Tahoe] perhaps thanks to her engineer father, always maintained the tool collection in the family, and I was dismayed when she handed her diminished 'urban' collection off to me some years before her death. On the other hand, I had to smile when I realized on one of my last visits that there was again a tiny assortment of hammers, screwdrivers, tacks, etc. on the closet shelf! Dad was the go-to person for paper, pencils, pens, paper clips of all descriptions, help with German and math, and he taught us as soon as we acquired pocket knives how to properly sharpen a pencil by hand. Mum was the go-to person for most other practical problems we encountered. Both had a lovely quiet dry New England sense of humor." According to their son, Land, "If Dad was the consummate and highly focused academic, Mom was his consummate and highly focused partner, and both were imbued with a deeply rooted sense of world community."

Recollections of Link Washburn by fellow scientist and lover of the Arctic, Carl S. Benson

I begin by thanking Bernard Hallet and Ron Sletten for organizing this special meeting as a tribute to Dr. A. Lincoln Washburn, and for inviting me to speak. Most of us here remember Dr. Washburn as "Link." I appreciate the opportunity to say a few words about Link and how he influenced me.

My first contact with Dr. Washburn was by correspondence in 1948 when he was the Director of the Arctic Institute of North America. At that time I was interested in the Canadian–US Weather Stations in Arctic Canada and Thule Greenland. He wrote a thoughtful response encouraging me to complete my Bachelors Degree first, and that he was pleased to hear from young men interested in working in the Arctic. I completed my degree and joined the USGS in its work in the Northern Foothills of Alaska's Brooks Range doing reconnaissance geological studies in the Naval Petroleum Reserve #4, under the direction of the late George Gryc. George was an alumnus of the University of Minnesota Geology Department and served as a Pied Piper in bringing many people from the Department into his field program. I enjoyed that field season immensely and it confirmed my interest in the Arctic.

I returned to the University of Minnesota and began graduate studies in September 1950. As a graduate student I worked part-time with the Snow, Ice and Permafrost Research Establishment (SIPRE), a research organization within the US Army Corps of Engineers. Its chief scientist was Dr. Henri Bader, from Switzerland, and recently a faculty member at Rutgers University. Bader had been successful in convincing the Army that the only way to make progress in understanding the problems of snow, ice and frozen ground was through basic research. The organization was located at the Engineering Experiment Station on the U of M Campus. I worked under direction of Henri Bader and B. Lyle Hansen.

During 1951, Dr. Washburn became the Director of SIPRE and plans to move the organization headquarters to Wilmette, Illinois were finalized. SIPRE was composed of interesting people and promised a potential of fieldwork in the Arctic; this was reason enough for me to join it, even though the salary offered was low at that time. So, I put my MS Degree "on hold" for several years, and went to meet Dr. Washburn personally in December 1951 at Wilmette. It took me some time to get used to calling him "Link."

My first project involved snow studies at the Central Sierra Snow Laboratory located on Donner Summit at Soda Springs, California in the Sierra Nevada. It was an exciting winter because of the heaviest snowfall on record. The super train "City of San Francisco" was stuck on the California side for several days. Although rail service resumed within a week, because the train ran through snow sheds over the summit, US Highway 40 was closed over the summit for more than a month. I enjoyed the isolation and set up a program to follow evolutionary changes in the deep snowpack.

When the road to Reno (our shopping center) opened, I had the good fortune to meet Dr. James E. Church, the "Father of the Western Snow Surveys," in his office at the University of Nevada. About this time, Link brought Dr. Ukichiro Nakaya from Hokkaido, Japan to be a visiting scientist at SIPRE. I told Dr. Church about this, during one of our frequent lunches together, and was amazed to find out that he and Nakaya were friends and had worked together in the international

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Commission on Scientific Hydrology before the war. This was my first introduction to the international connections in science. One of my lasting benefits from the decision to join the SIPRE bunch was knowing people like Bader, Washburn, Church and Nakaya.

Link assigned me to go to Greenland with Bader in April 1952. Our goal at the time was to help the US Air Force locate sites on the Greenland Ice Sheet to build radar sites to protect Thule Air Base, which was in its beginning construction phase. We used ski-equipped C47s to fly and land at potential sites. Our objective was to determine the rate of accumulation, and whether or not any melt might be expected at the sites. This led to many adventures and turned into a four-year commitment of over-snow traverses for me.

When I returned from the first field season, Link took me to lunch and wanted to know first-hand about everything. He was a gracious host and I soon learned that it was always "Link and Tahoe." Link's wife Tahoe was his partner and confidant. They had spent extended times together doing fieldwork on Victoria Island, Northwest Territories in 1938, 1939, 1940 and 1941 (T.T. Washburn, 1999) (Fig. 6).

At the end of 1955, I completed my MS at the University of Minnesota and entered graduate school at Caltech, under the mentorship of Dr. Robert P. Sharp. I maintained contact with Link and Tahoe and valued their friendship to the end of their lives. They gave Ruth and me a pair of beautiful Royal Copenhagen saucers as a wedding present. Once they visited us when we were at Caltech and took us to a show and dance in Los Angeles. When they moved to Seattle in 1967 we saw them more frequently and enjoyed their matchless hospitality on several occasions. When our son was a student at the University of Washington, he was invited to dinner at their home. I am sure that many of the people at this special symposium for Link can tell similar tales.

Link was quiet about his own activities and I learned more about him as I wrote his obituary (Benson, 2007). It was published in the 60th Volume of the journal Arctic, which he founded as director of the Arctic Institute of North America. During the war he served as an intelligence officer in the Arctic, Desert, Tropic Information Center of the Army Air Corps. In addition to Link, I knew five other members of this elite group. Dr. L. M. Gould was Chief of the Arctic Section. The others were G. William Holmes, Robert P. Sharp, Paul E. Victor and Richard F. Flint. These individuals participated in joint Canadian–U.S. wartime meetings concerning problems both countries were experiencing in the arctic because of their ignorance about arctic field conditions. They resolved to take action and the result was formation of the bi-national Arctic Institute of North America in 1945 with A. L. Washburn as its first Director. Link also founded the journal *Quaternary Research*, and served as the first Director of the Quaternary Research Center at the University of Washington. How many people have founded two scientific journals in their career?



Figure 6. Link Washburn in the early 1980s. Periglacial researchers worshipped Link's work, his scientific honesty, his modesty, and his extreme kindness. They also noted his exceptional appetite for learning and unusual fluency in German and French. Photo courtesy of Steve Porter.

As we look around at the people attending this special meeting (on 4th of July) in honor of Link Washburn it is clear that he indeed touched many lives. I expect that all of us remember his role as a mentor for young people.

Comments from a close colleague and long-term friend, Minze Stuiver

In the fall of 1959 I arrived in New Haven to run the Yale Radiocarbon Laboratory. Linc visited the lab in 1960 and our friendship dates from that time. Linc had just returned from his fieldwork at Mesters Vig, Greenland. He had a great collection of marine shells for radiocarbon dating, and we produced a beautiful exponential uplift curve for the Mesters Vig area. Linc also became a Yale professor in that year and already showed the editorial qualities needed later on for the journal *Quaternary Research* by practicing on my early manuscripts. These always came back with much improved language and many scientific questions. During the sixties we also were comparing our smoking habits on a weekly basis. There was already enough statistical evidence to know that smoking was a mortal sin. We were able to quit smoking altogether around 1965, but without nicotine patches and support groups the going was difficult for both of us. Vietnam also could be safely discussed with Linc, he was a gentleman who never raised his voice and was always looking at different angles of each issue (Fig. 7).

For Linc, family and science were the most important in life. Tahoe was equally involved, and many parties were given for students (children included) and visitors. Our daughters, 40 years later, vividly remember the Arctic tales of "Auntie" Tahoe. And my now retired out-of-state colleagues never forget to mention the dinner meetings at the Washburns'. During one of those occasions (at St. Ronan street, New Haven) Linc was dressed in a jacket he had brought with him from the far North. The jacket had a beautiful belt made from seal skin. I was interested in the bomb radiocarbon signal in high-latitude marine waters, and Linc's dedication to science was such that it took me only a minute to convince him that the belt should be investigated (and combusted) for its radiocarbon content.

At the University of Washington, a major strength of Linc became obvious—he was a master in networking with the administration. It was the only time that University presidents visited our laboratory. Washington D.C., with its many committees, also got a lot of attention. Yet he was a scientist at heart originating, among others, the Antarctic Dry Valley Drilling Project. Linc, I do not know where your presence is felt most but on my next visit to the Arctic I will search the clouds for your image.

Reflections compiled by Bernard Hallet, another close colleague

In closing, a few additional words suffice to fill in some of the many gaps in these notes about Link and Tahoe. Paraphrasing Porter (2007), Link's passion for snow, ice, and the Arctic can be traced to his student days at Dartmouth College. He was an ardent member of the downhill ski team and participated in the 1936 Winter Olympic Games. He was a member of a Harvard–Dartmouth expedition to Alaska's Mt. Crillon in 1934, a National Geographic expedition to Mt. McKinley in 1936, and the Boyd East Greenland Expedition in 1937. These varied demanding excursions exposed him to high-latitude glacial environments. Entering Yale for graduate work, Link studied under the supervision of Professor Richard Foster Flint, who later was both a faculty colleague and a close friend. Link's PhD dissertation was based on pioneering field studies with Tahoe in Arctic Canada (Washburn, 1947).

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Figure 7. Link examining soil plugs and other periglacial features near Resolute, Cornwallis Island, NW Territories, Canada in the early 1980s. Results were published by Washburn (1989, 1997). They helped pave the way to modern quantitative modeling of patterned ground formation (e.g., Kessler et al. 2001). Photograph by Bernard Hallet.

Link was also a true visionary (Hallet, 2008). Decades before the emergence of "earth system science" and the widespread concern about global warming, Link conceived of, and launched, the Quaternary Research Center at the University of Washington to promote interdisciplinary research about the global environment during the Quaternary. This critical period features the evolution of humans and the advent of civilization as well as massive, abrupt changes in climate, sea level, global biota, and ice extent that still challenge our understanding, and remind us of the difficulty of predicting climate and environmental change. Sensing the need for a scientific journal devoted to this important field, Link launched *Quaternary Research*, which appeared in 1970. "He shepherded the journal through its first 5 years, establishing for it a reputation for breadth and excellence, and making it one of the most widely cited earth science publications" (Porter, 2007).

Link has been recognized and honored nationally and internationally as the premier periglacial researcher, or geocryologist. A few apt words by Albert Pissart (personal communication from Liège, Belgium, 2007) capture the essence of this worldwide recognition. Reflecting on his deceased friend, he wrote: "j'avais conservé un culte pour ses travaux, son honnêteté scientifique, sa modestie et son extrême amabilité"; loosely translated, Albert worshipped Link's work, his scientific honesty, his modesty, and his extreme kindness. Moreover, Albert noted that with his appetite for learning and unusual fluency in German and French, he read and understood essentially all published material. On these frequent trips to meetings in Europe between 1959 and 1985, he exchanged ideas and information freely within the European, as well as the American scientific community. This exceptionally rich background contributed to his monographs and books that were the first important syntheses of worldwide knowledge about periglacial processes and landforms, and their connections with fossil periglacial features. Albert also stressed that Link had received the highest scientific recognition possible in Belgium as an elected associate member of the Royal Academy. Steve Porter (2007) provides a listing of the numerous honors he received, and the committees and organizations for which Link served as a directing officer, both nationally and internationally.

Link's deep interest in the "intimate workings of nature" is evident in his own meticulous and exhaustive field and laboratory studies of diverse types of periglacial processes, including patterned ground formation, slope movement, and ice growth in soils. This interest and his untiring, generous effort to present properly the work and ideas of other researchers are clearly visible in his monographs and renowned books that remain the standard references in the field (Washburn, 1973, 1979). In addition, Link launched and directed research centers and scientific journals that have nurtured the study of cold landscapes. Significantly his scientific legacy includes the emergence of the unusually cohesive and amiable permafrost and periglacial community, as it was fostered in part by Link and, his wife Tahoe's, warmth, generosity, and friendship that reached many members of this worldwide community.

The Quaternary Research Center (QRC) is another prominent part of this legacy. The vision and objectives of the QRC have been emulated in at least 20 centers and institutes around the world. Many researchers and leaders in academia esteem the QRC. A notable current example is Lisa J. Graumlich, Dean of the recently established College of the Environment at the University of Washington, who kindly offered these remarks.

"The QRC touched the intellectual life of graduate students across the UW campus. In the 1980s, I was one of the dozens of graduate students from diverse departments who religiously attended the QRC weekly seminar series. At the time, the seminar series was unique on campus in terms of its interdisciplinary breadth. Each semester the organizers chose a "big picture" question and filled the lecture slots with internationally renowned scholars representing varying perspectives and disciplinary backgrounds. And, even better—every seminar was followed by a wine and cheese open house where the graduate students were actively encouraged to interact with the visitors as well as faculty members from other departments. Many of my graduate student peers from this era have reflected that our fledgling professional network took flight as a result of our contact with QRC visitors. And, many of us used the QRC model as we took on academic leadership positions where we sought to foster interdisciplinary collaboration and engagement."

Returning to a more personal side, Estella Leopold, who had been hired with the "daunting" job of following Linc as Director of the QRC, offered these reflections.

"If ever there were two persons perfectly attuned to each other, it has got to be Linc and Tahoe! While I had met Linc at Yale where he was teaching and working in the late 1950s it was not until later in Seattle when I was fortunate to get to know them both. I had been hired with the daunting job of following Linc as Director of the QRC. In those first years after Linc's retirement, I was to discover how beloved and respected they both were among the diverse faculty and administrators on campus. Linc had personally designed a full-blown part of the University's proposal to NSF (National Science Foundation) for building the QRC facilities and hiring a number of faculties. Both Linc and Tahoe were incredibly helpful in orienting me to the campus and Linc to the job. It was their habit for several years to throw a beautiful dinner party at their home for visiting academic celebrities, which gave the faculty a real chance to talk with them socially. Linc always wanted to bring University people together. Tahoe carried these dining efforts out with perfection, and she was always full of joy! Tahoe was a giant of a person well matched with her beloved Linc.

Linc's staff and close associates clearly had enormous respect and affection for Linc, and he seamlessly turned over his editorship of *Quaternary Research* to Steven Porter, who eventually succeeded me as Director. I will always remember that it was Linc's model to have special luncheons regularly on campus … and invite all the faculty who were loosely connected with the QRC activities…. 25 or so colleagues he had

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drawn into the work of the QRC, from Anthropology, Chemistry, Botany, Forestry Geology, Atmospheric Sciences, Oceanography and Zoology. In later years I tried to continue the habit of entertaining seminar speakers at my home mingling diverse faculty with wine and cheese events. It was very Washburnian and helpful for graduate students.

Each summer, of course, for years Linc and Tahoe would migrate northward to Resolute in the high Arctic to continue Linc's field measurements and observations. Tahoe was always right with him and sharing all these experiences for years after his retirement! Tahoe always had a special attachment to Canadian geese. She told me once that she and Linc had been living for months in the Arctic without meat, and one day Linc thought he would bring in a goose with his shotgun (to put meat on the table). She said it was the hardest thing they ever did, because the mate of that goose was out there at the site mourning the loss of her mate for days. They were heartbroken, and she sent Linc back out to shoot the goose's mate to put it out of its great mourning and sadness."

Link also inspired, stimulated, and encouraged researchers worldwide. He and Tahoe aided and guided numerous young investigators. They accomplished this through their exceptionally warm and encouraging personalities, their kindness, as well as their passion for, and deep commitment to Arctic science, landscapes and people. Their incomparable hospitality was renowned worldwide. Their love of the far north was also clear from their calendar, which revolved around a northward migration each summer to carry out field research; these sojourns to the Arctic continued well into their eighties (Fig. 8).

This love pervades Tahoe's own insightful account, *Under Polaris: An Arctic Quest*, of their life among the Inuit based on her journals written during their fieldwork on Victoria Island from 1938 to 1941. According to Nuna, it "was a great Labor of Love for the North and the people they knew there, and an achievement of no small magnitude, when highly reticent Tahoe became the published author of *Under Polaris* at the age of 88." Nuna kindly offers the following few lines to provide a glimpse of Tahoe's experience in the Far North, and one of the striking aspects of her character, being "ready for whatever came at her in life, which she faced either with embracing enthusiasm, [or] stoic Downeast Yankee determination." The following lines are taken from a letter by Jasper Andreasen from Richardson Island in the middle of the winter 1941 (February 9): "...These last few days we have been surprised watching how Mrs. Washburn is getting on in the North. She wears all deerskin clothes. She's able to live comfortably in a snowhouse. She travels in both bad and good weather. She scrapes all kinds of skins and sews them. She's the most able white lady we have ever seen in the Arctic...Amos Cockney left with Mr. Washburn yesterday morning and his wife [Amos'] had a little daughter in the afternoon also yesterday..."

We end with a few of Estella Leopold's kind words that aptly distill much of what Link and Tahoe were all about. We hope that they will resonate in the hearts of most individuals who have read this far, especially the readers who were fortunate to cross paths personally with the Washburns. "It was with the greatest sadness that we as a Quaternary community lost first Linc and then our dear Tahoe, who had been great academic and social leaders among us. Our fond memories of them burn brightly in our hearts. They each left a great legacy."

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Figure 8. Tahoe and Link Washburn in their element, near their field camp at Resolute, Cornwallis Island, NW Territories in the mid-1980s. Wherever they lived, from Montreal to Seattle, the Washburn home "came to be a natural Mecca for arctic people going through the city; a sort of unofficial hostelry of infinite hospitality." (Dunbar, 1952).

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