This chapter is based on my fieldwork with Gwich’in who live in the Mackenzie Delta region of the Northwest Territories, near northern timberline (Figure 7.1). This is a region of taiga and big rivers, peatlands, lakes, low rounded mountains and permafrost (Figure 7.2). Consistent with Dene notions of learning, much of my research has consisted of shared experience on the land, in different places and in different seasons.

The highly seasonal landscapes of the North require constant adaptability of the people who live there; creative improvisation and the ability to make the best of the opportunities at hand are essential. Life is like a dance over the land as it changes through the seasons: all of the plants and animals that live there have their cycles, and interact with others in a vast complex net through space and time, through place and season. Knowledge of the land in the North is an engaged ethnoecology—the understanding of landscape involves an active human community in interaction with other species who are active agents, and an awareness of how everything is spatially and temporally in motion, including people. Survival in the North is based on the skill and subtlety with which one can assess risks, dangers, and possibilities, and proactively respond.
For northern Dene peoples, as for many Native North Americans, the land is still seen as the root of identity, culture, and health, despite the changes in daily life brought about by wage employment and year-round permanent residence in village settlements or in towns.

When I began ethnoecological research in the North, I initially thought in terms of a seasonless landscape model, with repeating units—landforms, substrate types, vegetation communities, places where particular types of resources are found. My model was based on terrestrial ecology and vegetation studies. I quickly learned that in the North, season was paramount. I also began to get a sense of a net of pathways, rivers and trails, and nodes of
Figure 7.2 View of Peel River and low Arctic landscape looking downstream from Shiltee Rock (Shíldii)
memory. My conception of ethnoecology had to be broadened to include
movement, in the form of the wind, the weather, and the flow of the rivers.

The land is constantly changing, and requires the humans who make it
home to be constantly responsive, continually reevaluating plans and possi-
bilities and adjusting action to match. Alice Vittrekwa said, “Our old people
used to tell us not to make plans. Because you never know if it’s going to
work out.”

This sense of motion, transformation, and relationship is encoded in
Athapaskan languages with their rich set of relational prepositions and verbal
structures, as earlier detailed by Basso (1996) with reference to the Western
for Ahtna. Coming from a noun-centred Indo-European linguistic tradition,
I tend to conceive of the world as a series of things with discrete names. If I
want to view things from a perspective of interaction, I can, but my language
allows me to conceive of temporally frozen immutable objects, without
consideration of change, relationship or context. When I asked my friend
Bertha, Elder and Gwich’in language teacher, what you would call those
hills across the river in Gwich’in, she hesitated. Where I anticipated “hills,”
“upland,” or some term such as “pediment,” she answered, “I could call it
‘under the hills’ nan t’ee or ‘under the mountains’ ttha t’ee.” One of the main
channels of the Mackenzie Delta, called Husky Channel in English, is called
T’ha t’e di’ (“river under the mountains”) in Gwich’in. Specifying
relationships among places is required in Athapaskan languages.

For Gwich’in, even place terms such as “Road River” or “Tree River” des-
ignate a complex of places in an area linked by a web of seasonal activities;
the fish camp, the winter camp, spring and fall camps within an area (Figure
7.3). Indeed relational terms in Athapaskan languages carry connotations of
“area of” as well as referring to points (Kari 2008). Rivers are routes of travel
into and between areas. I came to think of the rivers as highways, where
travel is by boat in the summer and in the winter by snow machine and sled,
or sometimes by truck where an ice road has been graded. The main rivers
are the arteries of the transportation net. From these, trail form networks up
valleys and ridges, into the high country where one may encounter caribou.

My Gwich’in teachers have also taken me on journeys that reflect their
understanding of the land. I spent time with William and Mary Teya from
Fort McPherson is their summer fish camp on the Peel River in 1999, during
the Midway Lake festival in 1999 and 2000, and in their winter camp at
Road River in February 2000. I also spent time in the fish camp of Noel
and Alice Andre on the Mackenzie River in August 1999, and travelled with Alestine Andre to her family’s traditional fishing site at Tree River on the Mackenzie in August 2000.

When I was with William and Mary, I spent a good deal of time observing and helping, allowing Mary or William to determine both activities and verbal content. A great deal of the learning was practical: how to set net, how to cut dry fish and dry meat, how to set tent. We went for yellow berries on the highway, and drove up to James Creek (Figure 7.4) for water. Mountain water is good. James Creek is also a place where Mary’s Aunties like to camp in the late summer and fall, picking berries for a month or so. The cranberries...
Figure 7.4  James Creek area in the Richardson Mountains, July 2000

Figure 7.5  The summer fish camp and winter trapping camp at Road River, July 1999
and blueberries are good there. The mountains around James Creek are a place one may encounter early-migrating caribou in August or September, and much of the attention of people from Fort McPherson is focused on this place when caribou are anticipated. Sometimes Mary talked about the misadventures of Crow (Deetrin) the trickster/transformer. Sometimes she told tales about her youth and how her parents and grandparents had lived. Mary’s family maintained a seasonal complex of sites by Road River, about 50 miles by river south of Fort McPherson. In the summer, we made a day trip by boat to the area, and Mary talked about the land there. Travelling with William and Mary and their grandson, I learned about the Peel River as trail, the portages (winter dog team cutoff trails), and the hazards of the different seasons in different places. I heard about whose camps were in which places, where moose had been seen, and where you could hunt. I learned where the different trails to get to the caribou ran up into the foothills and mountains. As we approached the winter cabin site or the summer fish camp, tales of family history emerged, about moose shot, bears seen, or porcupines (Erithizon dorsatum) clubbed (Figures 7.4, 7.5 and 7.6). We saw where Mary’s grandparents had had their winter and summer camps, their spring camp and their fall camp. On the way up and back, Mary commented about Shiltee Rock, a sacred site above the Peel River that commemorates an event of long ago, when a girl violated her puberty seclusion, and looked at her father and brothers returning from a long trip—and they turned to stone. Mary casually mentioned the place the family had been camped when the girl had looked on her relatives, as we went by in the boat on our way back down the river.

When I came back in the winter, we travelled the same trail by snow machine. I learned first-hand about travel hazards such as overflow (Figure 7.7), and about the wind. At the Road River camp there was a homemade wind meter that showed the direction and strength of the wind. When a chinook or west wind blows, lenticular clouds form (Figure 7.8). The west wind is warm. Usually it is followed by a north wind, which is cold and bad for travelling. We stayed in the winter camp, and I learned about winter skills such as setting rabbit snares, cutting dry wood, and maintaining the camp. Double ice on the river prevented us from being able to fish. William hunted for moose—not an easy thing for a lone hunter. There were moose around, but they became aware of William and he was not able to shoot one. They made a noise at him. Finally he was heading downriver to take a load of things to a halfway camp, when he saw something. He quickly returned with the dogs
Figure 7.7  Overflow on river ice, a challenge of winter travel  Travelling to the Road River winter camp in February 2000, we encountered overflow under deep snow, forcing us to turn back to Trondii to wait for colder weather.

Figure 7.8  West wind with typical lenticular clouds at Road River, February 2000
and tied them up, then went back with the snow machine. After a while he returned, exultant. He had been able to shoot cow and calf at the edge of the willows along the river. They had not been aware of his presence, and he was able to drop both. The next three days were devoted to processing the meat, which turned the inside of the cabin into a place to hang dry meat. Although caribou were not around, and the snow was too deep to bother with marten trapping, the journey had been successful. We had obtained a good supply of meat.

The following summer I returned to the Mackenzie. Alestine Andre, Gwich’in ethnobiologist and linguist who is about my age and was then Director of the Gwich’in Social and Cultural Institute, took me to her family’s fish camp on the Mackenzie about 40 miles east of Tsiigehtchic. Working with Alestine was interesting, because she is articulate and conversant with Western knowledge and perspectives as well as with those of her people. At times Alestine would turn to me and put into words some of the things she thought I should think about. At one point Alestine said, “Our relationship to the land is not something I can talk about. I have to show you . . . you are experiencing our relationship to the land.” On another occasion she stressed the importance of being constantly aware of your environment, of looking up river, down river, across, and all around, and to be aware of what animals might be there. She also stressed the importance of paying attention to the wind, to the rise and fall of the water, to the sounds of the birds, and to the dogs. Discussing this chapter, Alestine painted the classic image of the Indian standing on a hill, shading his eyes, looking all around. This image is a good metaphor or symbol of the Dene relationship to the land: to be constantly aware of everything, attuned, she said. The people know where the animals are. Alestine commented about lookout places, “In our country, people situate camp along the river, where you can look up river and down, and be constantly aware.” Her camp at Diighe ‘tr’aajil is just such a place. Mary commented too about the fish camp at Road River that you could look down the whole stretch: nothing came up the river without people seeing it a long way off. Travellers were spotted as soon as they rounded the point, and were welcomed, fed, and given warm tea when they arrived.

People watch and listen to the birds and animals. When loons call, they are wishing for a wind. When the geese fly high, that tells something about the coming weather. And, as Alestine said jokingly, when they land right in front of you, that means dinner. For Gwich’in too, observing all animals in the environment and attending to signs of their presence is important. Mary
and her grandson spotted a swimming moose by the twitch of its ears, virtually the only part of it not submerged in the river. After a long while I saw it too. When it came out of the water and stood up on shore, William and Mary decided not to shoot it, because it was a cow and might have a young calf. Noel and Gabe Andre (Alestone’s oldest brother and her uncle) spotted a swimming bear in the current at Tree River in summer of 2000 while we were having tea; I would have thought it a floating drift log.

The landscape and all the beings that dwell on the land have sentience and agency, and are worthy of respect. People hunt, but they appreciate the necessity to respect the animals they hunt. If the gift of their flesh is not respected, the hunter will not be successful in the future. Using all parts of the animal is one way to show respect. Leaving a clean camp is another way of living properly and being respectful. People believe it is wrong to bother an animal if it is doing you no harm. You should never take the kill of an animal or bird of prey; it’s their food and they need it to survive, Gwich’in elder Pierre Benoit told Alestone (pers. comm. August 2000). And the sometimes annoying seagulls, whisky jacks and ravens are not molested. Instead, people leave food for them.

The northern Dene view contrasts with the bounded, fixed tract of land typical of settled, agricultural traditions, and which forms the basis of understanding of land in the Euro-North American tradition. This realization has implications for the intersection of northern indigenous peoples with government policies and land managers. There has been in recent years a great romance with GIS as a tool for organizing and presenting information about land. It is a powerful tool, but is built upon some key assumptions about the nature of land and space (in contrast to place) which may not fit well with traditional knowledges, as Craig Candler eloquently detailed in a presentation at the Canadian Anthropology Society meeting in June of 2000. It is difficult in GIS to render shifting, fluid, unbounded and temporally changing distributions of resources and people, or the nature of the northern land itself, given the magnitude of seasonal change. In the northern Athapaskan world, places are loci of the potential intersection in time, space and probability, and of potential encounter, rather than unchanging things whose characteristics and potential can be simply and unambiguously recorded. I address these themes in more detail in Chapters 10 and 11.

“Land,” or nåñh in Gwich’in, is a key concept for people who make their livelihood from the land, a rich and evocative concept with many layers of meaning. The land is fundamental to northern Athapaskan culture and life.
Land has also been politicized through interaction with the rest of Canada via the land claims process, and resource exploration and development activities. New discourses around land as identity and as economic opportunity are now being elaborated, as hearings and preparation to construct major oil and gas fields and pipeline complexes are heard in the North at this writing in 2007. Because the Gwich’in were highly nomadic peoples, travelling to take advantage of seasonal resources and responsive to the changing patterns of weather and abundance of animal and plant resources, movement was pervasive in the lives of Gwich’in until recently. This perspective of motion still forms the foundation of understanding of the land. Ethnoecologies of northern Athapaskan peoples are engaged rather than theoretical ecologies. Adaptability to real-world situations, and practice, are key to northern Athapaskan understanding of the land. As Alestine said while we worked together in the fish camp at Tree River, “Now you are actually learning our relationship to the land.”

Alestine’s description of the essence of knowing the land as an engaged awareness, of watching, and seeing what is on the land, is very much what Tim Ingold described in his 1996 paper “Hunting and Gathering as Ways of Perceiving the Environment.” Ingold talks about engagement and “enskillment” in learning to see, especially learning to see with a hunter’s eyes (Ingold 1996a:142).

Richard Nelson in *Make Prayers to the Raven* (1983) eloquently describes the ethnoecology of another northern Athapaskan group, the Koyukon, in ways that emphasize skilled movement and perception, and attention to the other beings that share the landscape. He writes:

> The Koyukon homeland is filled with places . . . invested with significance in personal or family history. Drawing back to view the landscape as a whole, we can see it completely interwoven with these meanings. Each living individual is bound into this pattern of land and people that extends throughout the terrain and far back across time. (Nelson 1983:243).

Ingold (1996:149) comments “that the activities we conventionally call hunting and gathering are forms of skilled, attentive ‘coping’ in the world, intentionally carried out by persons in an environment *replete with other agentive powers of one kind and another*” (emphasis added). Nelson (1983) entitles one of his chapters “The Watchful World,” prefiguring David Anderson’s (2000) phrase “sentient ecology,” which emphasizes the perspective of
moving in a world “replete with other agentive powers”—all of the animals, plants, the winds, waters and land itself.

Ingold’s (1996) remarks on the Pintupi apprehension and interaction with landscape in Australia and his analysis of Hallowell’s (2000) presentation of northern Ojibwa (Saulteaux) ontology in Canada lend weight to the notion that significant commonalities exist among peoples who are not cultivators and have special relationships with their homelands. Describing Ojibwa ontology as presented by Hallowell (1960), Ingold writes:

And these movements, of the sun in the heavens of trees in the wind, of animals and human beings as they go about their everyday tasks, do not take place against the backdrop of a nature that is fixed, with its locations and distances laid out in advance. For they are part and parcel of that total life process, of continuous generation, through which the world itself is forever coming into being. In short, living beings do not move upon the world, but move along with it. (Ingold 2000, emphasis added)

This fluidity and flexibility in a world that is not fixed, either spatially or temporally, is equally applicable to the world experienced and described by my Gwich’in teachers and that I experienced. Ingold further comments that Ojibwa world view is,

to envisage the world from the point of view of a being within it, as a total field of relations whose unfolding is tantamount to the process of life itself. Every being emerges, with its particular form, dispositions and capabilities, as a locus of growth—or in Ojibwa terms, as a focus of power—within this field. Mind, then, is not added on to life but is immanent in the intentional engagement, in perceptions and actions, of living beings with the constituents of their environments. As such primary engagement is a condition of being, it must also be a condition of knowledge . . . (Ingold 2000:108)

When I began my fieldwork with Gwich’in, I was told that I needed to go on the land with knowledgeable people to act as guides in all seasons, that is to learn by experiencing, in order to gain skills. I was admonished to make sure the tea was on and to fetch water. I helped with getting firewood. I tried my hand at cutting dry fish, at cutting the meat off a moose skull,
and at checking the fish net solo (and once nearly went backwards down the Mackenzie). I was told how to collect the right snow to melt for tea water, and scolded for inadvertently stepping over meat, a serious act of disrespect. My eyes were guided to see things I would have missed. I was taught to listen and to watch rather than actively question. These elements of “engagement,” as Ingold suggests, are conditions for knowledge.

Part of the title of this chapter, “Envisioning Ethnoecology,” was drawn from my effort to communicate my experiential learning through use of image, to impart a sense of the land and life on the land through a collage of images, as frozen icons of moving and learning on the land, and to guide my listeners on a journey of virtual understanding of place. Some of those images accompany this chapter, and show the “same” place in different seasons, the clouds to represent the wind, places of good water and berries, and places of power and learning. All of these are important places to understand, requiring respect in Gwich’in ethnoecology. More abstracted images are also included; a map of the Gwich’in settlement region to show where we are in the world, a map showing trails and summer and winter camp locations within an area used by Mary Teya’s family, and information about where resources are located. These are the kinds of places referred to in Richard Nelson’s quotation above.