

BOUNDARIES OF HOME:

MAPPING FOR LOCAL EMPOWERMENT

Edited by
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THE NEW CATALYST BIOREGIONAL SERIES



NEW SOCIETY PUBLISHERS

Gabriola Island, BC

Philadelphia, PA

1993

Acknowledgments

This book is the collective work of many people who share an equal dedication to maps and the sense of place they can evoke. All contributors freely donated their writing in the hope that cartography and the bioregional vision would be better understood as a powerful tool of empowerment. Their assistance is appreciated beyond measure.

There are others I would like to thank for their contribution to seeing this work into print. Chris Plant patiently helped to suggest and evolve the contents of this book, while New Society Publishers in general approved support of a rather different type of volume than usual. Tony Pearce, Ken Hoke, Henry Lipsett, and Dr. Jeremy Raemaekers assisted with references. And, finally, thanks to Amandah, Christine, and Megan who have lived for months with maps everywhere.

Mapping is a deceptively complex topic that has been more difficult to describe than anticipated. As I have tried to weave many disparate pieces together into a whole, responsibility for errors or omissions is mine.

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For illustration credits, thanks to the British Museum for permission to copy an image of a Marshall Island sea chart (Ref. 1904-6-21.34); the Kitimat-Stikine Regional District and Dr. Tom Richards for their map of the Hazelton area; David McCloskey for his image of Cascadia; and Paul Jance of the University of British Columbia for permission to use his "Pacific Northwest" base map. Illustrations in articles by Angela King, Seth Zuckerman, Kirkpatrick Sale, and George Tukul were kindly supplied by the authors. The remaining illustrations are the work of the editor.

This volume is dedicated to the future of Caledonia — old and new.

Doug Aberley
Edinburgh, Alba

1

The Lure of Mapping: An Introduction

Doug Aberley

If you gather a group of people together and ask them about maps you will always get a lively response. Like the universal fascination with moving water, or the dance of a fire's flame, maps hold some primal attraction for the human animal. For some, it is the memory of a treasure map followed in youth, or a scramble to a mountain vista etched forever in personal memory. For others, it is an almost magical chance to see what otherwise is hidden: the relationship of hill to forest to settlement to ruin. And, for yet others, maps unravel the mysteries of the present and future of place through the depiction of fixed and flowing energy layered in patterns of opportunity. Whether in our minds, or printed on paper, maps are powerful talismans that add form to our individual and social reality. They are models of the world — icons if you wish — for what our senses "see" through the filters of environment, culture, and experience.

When the fundamental importance of perceiving real and imagined space is compared to what passes for most mapping today, a huge separation is apparent. In our consumer society, mapping has become an activity primarily reserved for those in power, used to delineate the "property" of nation states and multinational companies. The making of maps has become dominated by specialists who wield satellites and other complex machinery. The result is that although we have great access to maps, we have also lost the ability ourselves to *conceptualize, make and use* images of place — skills which our ancestors honed over thousands of years. In return for this surrendered knowledge, maps have been appropriated for uses which are more and more sinister. Spewed forth from digital abstraction, they guide the incessant development

juggernaut. They divide whole local, regional and continental environments into the absurdity of squared efficiency. They aid in attaching legitimacy to a reductionist control that strips contact with the web of life from the experience of place.

The illusion persists that maps still play a vital part in our lives. There exist thousands of atlases, posters of Earth viewed from space, and books on cartographic minutiae. We see endless television flashes of maps showing the location of the latest war, or plane crash. Images of the planet lend credibility to the selling of insurance, pop drinks, and other "important" things. Maps have become popular investments to be hoarded, and under no circumstance used for any practical purpose. Yet amongst this avalanche of geographic blather, there are only two types of maps that most people really seem to use: the ubiquitous highway or tourist map that guides us ever onward to the next consumer experience; and the useful sterility of the topographic sheet which allows us mild adventure in the guise of tourism.

If you were entirely cynical, you could view the appropriation of mapping from common understanding as just another police action designed to assist the process of homogenizing 5,000 human cultures into one malleable and docile market. As a collective entity we have lost our languages, have forgotten our songs and legends, and now cannot even conceive of the space that makes up that most fundamental aspect of life — home.

Realization of this sad condition can breed two reactions. The first is to be defeated by forces which seem too powerful and amorphous to change. But this book is about an opposite response, an understanding that no imposed homogenization can succeed against those who wisely evolve culture and technology connected to the womb of all human endeavor — the flats and folds of thousands of niche ecosystems.

In direct opposition to the paradigm of the single global market, people are articulating a competing vision in a healthy variety of ways. Aboriginal peoples are courageously defending themselves against cultural and physical genocide. Societies swallowed in the last two hundred years of industrialization are awakening from a slumber imposed by promises of the nation state. And, perhaps most important, people of many origins who find themselves newly planted in city or in country are asserting their aspirations for political and economic regimes that mix the best of all their origins. In all three movements there is a joyful relearning of what has been taken, lost, or forgotten. At the same time, the ways of the past are being adapted to a present that offers challenging opportunities for the use of technologies which allow self-reliance and

interdependence. The common element is that of reinhabitation — of place, of traditions old and new, of a future based on local aspirations for stability, quality of life, and interconnection.

Many movements and philosophies have tried to organize the indefatigable human will for positive social change into a coherent doctrine. There are reasons why they fail — physical defeat, false leaders, co-option by media or money, lazy disregard for lessons of the past. Aware of these lessons and pitfalls, the reinhabitant movement has been almost invisible as it spreads its quiet logic across continents. As befits the awkward confidence of this new path, it has chosen a name that does little to attract new adherents: "bioregionalism." This utilitarian mouthful of syllables conveys the task at hand — to wed dynamic human populations to distinct physical territories defined by continuities of land and life. The promise is that these bioregions will be inhabited in a manner that respects ecological carrying capacity, engenders social justice, uses appropriate technology creatively, and allows for a rich interconnection between regionalized cultures. This is no utopia; it is simply an evolution of the best of human society as it has been practiced over the millennia. Our bioregional future is based not on what has never been, but on that which is most familiar to our species.

Bioregionalists have been meeting in North America and Europe for nearly twenty years. We come from all walks of life and have typically evolved through a succession of activist movements organized around the achievement of civil rights, the end of war, the elimination of sexism and racism, and the protection of local and global environments. To place our activism in context we visited, and sometimes created, many philosophies — existentialism, social and deep ecology, Eastern and evangelical Christian religions, and more. Our search for alternatives led in scores of directions, the result often being individual growth on the one hand, but, on the other, the lack of even a loosely-conceived, shared purpose. For all our struggles, there remained a lack of some unifying vision that would tie all our efforts into some organic whole. The quest for this synthesis led to the origin of the bioregional ideal. It remains a delicate notion — rooted in tribal traditions, and able to adapt to the world of technology, limits, and interconnection. Bioregionalism is about bringing that which has been separated back together. We do not surrender affiliations to other causes, we simply share an understanding that our actions bear most fruit when interrelated in an ecologically- and culturally-defined place.

The purpose of this small volume is to describe the use of mapping as one of many tools bioregionalists can use in reinhabiting place. This

is an ambitious assignment, but the type of challenge that must be met if we are to take our aspirations for social justice and ecosystem continuity beyond the realm of desire and philosophy into the terrain of empowerment and practice.

MAPS AS VISIONS

There are steps that all reinhabitants must take in the struggle to reclaim the commons. First, comes the perception that we are indeed living in a time of crisis, that the status quo must be reformed and ultimately replaced. Second, it is important to clearly understand the forces which subjugate land and life. Third, evolving a vision of the "new" reinhabitant culture is crucial. And fourth, the diverse talents of reinhabitants need to be loosely organized to both resist the intrinsic evil of the status quo, and concurrently to build the parallel reality of culture tied to finite and complex ecosystems. The goal of all this is not the imposition of some pre-ordained future, but a world where thousands of vital cultures can evolve within a spectrum of diversity bounded only by ecological limits and the right of all humans to enjoy social justice.

Mapping can play a useful role in all of these steps. The destruction of land and culture caused by big business and centralized government can be displayed visually with great effect. The wrong of clearcuts, suburbs on farmland, or toxic dumps which, in isolation, may seem unassociated, begin magically to communicate a larger evil when shown in graphic relationship. The cruel division of classes and the allocation of poverty based on race, sex, or age by the present political economy cannot be hidden when charted across our urban neighborhoods.

Maps can show a vision for the future more clearly than thousands of words. Cities envisioned as clusters of villages where the impacts of human concentration are offset by maximizing self-reliance and proper respect for supporting rural ecosystems; dispersed settlements interspaced in a web of wilderness and linked to sustainable sources of food and energy; or a community forest linked to a value-added sawmill, and powered by a hydro-electric plant that is located above restored salmon runs — such images begin to demonstrate the practical logic of the futures we see.

Maps can also depict strategies of resistance: where to block further unwise development, to identify landscapes that have been damaged, to describe alternatives to the incremental destruction of sustaining habitats. Urban development that fails to follow the laws of environmental protection can be shown via maps which focus knowledge of injustice into a persistent and powerful anger. Images that show how

resistance is organized will likely make it easier for people in other regions to equally embrace the challenge of rooted defiance.

And images of place can make the actual building of an alternative a possibility. A bioregion-based culture will be grown in thousands of small and interrelated actions, the more coordinated in space and time, the better. Build a trail for access to a stream restoration project, extend it to take in a scenic vista of your valley region, construct a base camp for watershed guardians and outdoor education programs, use the trail to aid selective logging and wild food harvest. Chart patterns of urban creeksheds and open space, link them together, and use the emerging green web to define new villages whose stewards have more autonomy rather than more freeways as an agenda. Mapping, whether pencil- or computer-generated, becomes a graphic tool that allows the complexities of ecologically integrated societies to emerge in stable increments.

REDISCOVERING THE LANGUAGE OF TIME AND SPACE

It is one thing to agree that mapping can play an important role in social change, it is quite another to actually feel empowered to add mapping as a tool of everyday action. To nudge you to just such a confidence, here is some final advice — exhortations that even the most timid reinhabitant will not easily be able to ignore.

It is important to repeat over and over that there is no "good" mapping or "bad" mapping. Leave the need for perfection to the scientists; what you are being encouraged to do is honestly describe what you already know about where you live in a manner that adds momentum to positive forces of change. There is a learning curve that everyone goes through but, with experience, every region has the potential to be represented by as many unique interpretations as it has citizens. Reinhabitants will not only learn to put maps on paper, maps will also be sung, chanted, stitched and woven, told in stories, and danced across fire-lit skies.

No map shows reality perfectly. A map is an icon — a potent representation — but only a skeleton of what is real. The mistake of science is that its goal is to describe the world as a complex machine, and to replace the vagaries of nature's chaos with "management." Bioregional mapping is about something else: processes and relationships rather than disembodied facts. The notion that only experts can map is the type of disenfranchisement that reinhabitants confront and nullify. If it doesn't matter how well you draw, or that you have the "best" pens, or that you don't have a college degree in cartography, then what *does* matter? Simply the ability to try, to fill the world again with personal and

communal descriptions of time and space.

Reinhabitants do not have to reinvent the craft of mapping. It is perfectly alright to use existing topographic, local government, or other maps of your home region as a fundamental resource. By sifting through maps that meticulously divide the world into pieces, and then layering this abstraction back into descriptions of whole ecosystems, you will spare yourself great energy and expense. Imagine the horror of government agencies who are inundated with people who want access to the knowledge their taxes have provided. And imagine if map-borne information generated for exploitation of land and life is redirected to an equally proficient quest for social justice and integration of human cultures with place!

It is also acceptable that not everyone will want to become absolutely skilled in the making of maps. But with no voice in the evolution of alternatives that maps can potently represent, images of the present industrial tyranny can easily be replaced with some different tyranny. So what *is* essential is that the *language* of describing time and space be regained so that we all can feel comfortable with a pencil in hand, tracing the aspirations that define self, family, and community. There will always be those among us who have an avocation to map, just as there are those who have a passion for dance or for welding. If we all become generalists, then at minimum we will possess the common language to contribute our vision to the images of bioregions that will emerge in more artistic form.

The final exhortation is the most important. Just *do* it! Go out and buy enough 1:50,000 scale (one mile to one inch) topographic maps so that the place where you live is in the center of a region of approximately 50 miles in diameter. Tape them together and use marking pens and colored pencils to highlight flows of water, changes in elevation, and the boundary of your neighborhood or small community. Buy some multicoloured adhesive "dots" and use different hues to show where you live, where your water comes from, and where your waste goes. In the map margins, note the dates of the hottest and coldest days, and list the birds and animals you see. In these many simple steps you begin to layer a customized understanding of part of a bioregion. Pin the map on your kitchen wall and marvel at the focus it will become for new insight and old debates. If entire communities were to embark on this "seeing" just think of the strength all the disparate perceptions could have when woven together!

Do you feel encouraged enough to wade in? The remainder of this book is organized to take you through a wide terrain of mapping lore.

Aboriginal mapping is evoked as inspiration. The experience of reinhabitants who are actually mapping in their home bioregions is described. A range of thought on current mapping issues follows. Step-by-step guidance is then given on a technique that can be used to identify and map your own bioregion. And, finally, an access section provides information on a wide range of additional mapping-related resources. Inspiration by example, inspiration by introduction to the frontiers of debate, the gift of a mapping primer — the next steps are up to you.

2

Eye Memory: The Inspiration of Aboriginal Mapping

Doug Aberley

Western society tends to be entirely preoccupied with the relatively narrow history and opinions of European culture. Unfortunately this chauvinism also holds true with most writing on mapping. In a number of volumes reviewed as sources for this chapter there is little mention of maps made by any other than those with European origins. There is a standard method to this exclusion. An initial chapter begins with the acknowledgement that aboriginal cultures used mapping, usually under the pejorative heading of the word "primitive." Several very scant examples are given, usually including pictures of the same two or three surviving cartographic specimens. In some volumes there is mention of Chinese and Islamic mapping, possibly because these sources mimicked the imperial goal shared by European colonizers. That's all! There then follow scores of pages elaborating in great detail how Greeks, Romans, Catalans, Dutch, English, and scientists in general have all pushed mapping technique and precision ever onward.

This volume breaks such tradition. Mapping as conceptualized and executed by aboriginal peoples is at the heart of what reinhabitants need to rediscover. How did societies that were rooted in place, that were wedded irrevocably to the land, use perceptions of time and space to provide order to their actions? Owing to the relentless subjugation of aboriginal cultures, it is difficult to find the answer to this fundamental question. Thankfully, there remain several paths of investigation available. This chapter looks at how aboriginal maps were physically made, how the environment was conceptualized, and then how contemporary

aboriginal cultures are using maps.

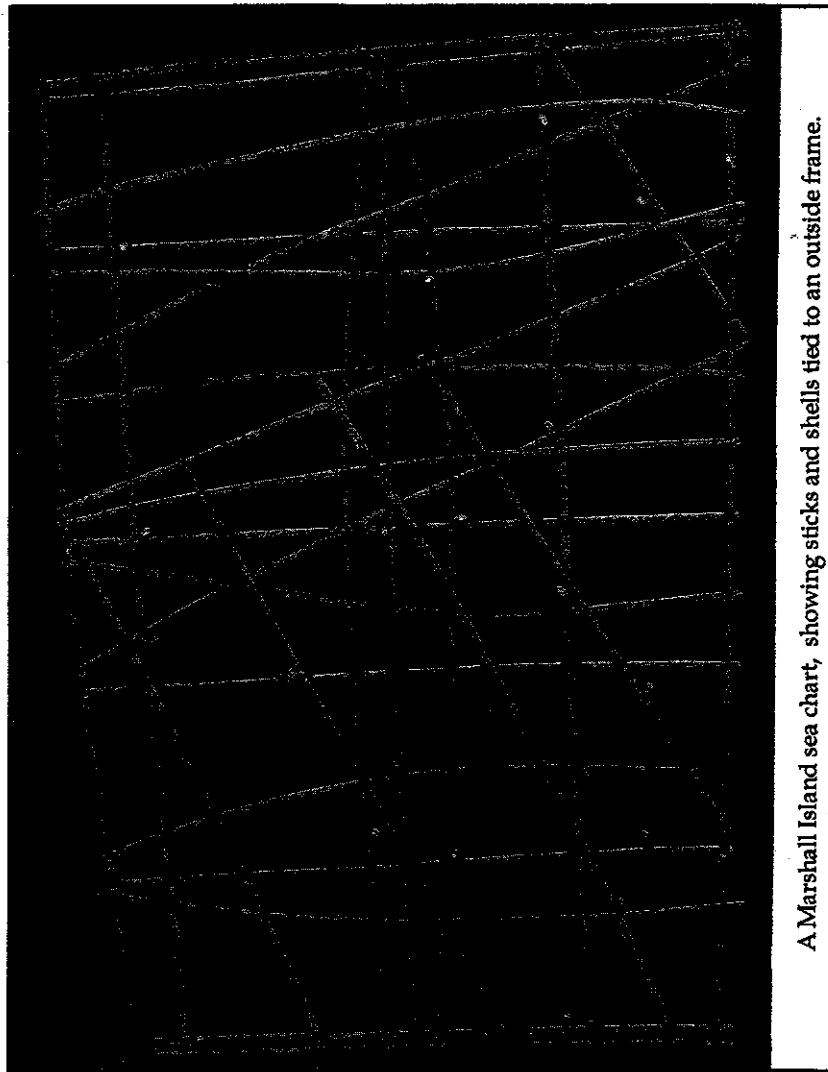
Before proceeding an important assumption should be made clear: all humans originate from aboriginal cultures. In all of us is some remnant of an ability to understand relationships of physical space to survival and the evolution of stable community life. In admiring the mapping of aboriginal cultures, the goal is not to copy others, but to rediscover in ourselves a genetic memory of ancient skills. This is no romantic quest. What we seek is inspiration from the best attributes of those who remain close to the land — rootedness, spirituality, and the ability to live in complex harmony with other life.

STICKS AND STONES

As just mentioned, most books on mapping give the same two or three examples of aboriginal maps. The most quoted example is of the sea-charts used by Micronesians living on the Marshall Islands in the north Pacific. Islanders construct these maps from pieces of the narrow center rib of a palm leaf tied together with coconut fiber. Grids are thus formed in distorted geometric patterns, depicting the curve, refraction, and intersection of wave patterns caused by prevailing winds. They tie shells to the frame to represent the location of islands. The sea-charts are made for differing uses. A *mattang* is made for instructional purposes, showing only examples of wave patterns that would be represented on a working sea-chart. A *meddo* depicts islands that form parts of larger archipelagos. A *rebbang* represents an entire island chain.

Usually only a physical description of this remarkable type of map is included in books on cartographic history. The fascinating cultural setting that has created the use of such images is left unexplained. Micronesians live on very small atolls scattered in four major clusters across a vast ocean — the Gilberts, Carolines, Marianas, and Marshalls. They face the frequent threat of devastating storms. They have needed, therefore, to devise reliable navigation techniques for moving humans to-and-fro for social purposes, for locating and harvesting resources, and for reciprocal trade. To accomplish these cultural goals, they faced two tasks. First, they had to invent a technology that enabled navigation across vast distances with the benefit of no typical landmarks; and, second, they needed a method of teaching that allowed this knowledge to be passed on. Each of these imperatives deserves further exploration.

How do you cross huge distances with no obvious physical guides? Oceans are a complex interaction of tides, currents and wind-driven wave patterns that are replicated in cycles over time. The steepness of waves, their pattern of refraction, or the amount of cresting can all



A Marshall Island sea chart, showing sticks and shells tied to an outside frame.

indicate location. Star configurations and their movement are markers that can be used with equal reliability. Species of birds that nest on land fly at a variety of distances from shore. Birds also fly at altitudes that make them visible to the human eye far more easily than a low atoll invisible over an unmarked horizon. Sea colors, sounds, water temperature, and phosphorescence change with depth, as do the type and variety

of sea creatures that can be observed. Floating debris and smells travel in predictable patterns. Speed can be marked by the time a sail keeps a certain shape matched with the memory of how fast a particular canoe travelled in an equal breeze. Clouds form over land in a manner different from over the sea. This listing could go on at great length. The point is that people living "in place" have the ability to customize a worldview that allows the physical world to become alive with nuance and opportunity.

The way in which Micronesians teach this knowledge of time and space to succeeding generations is embedded deeply in their culture. Most Micronesians navigate, but they possess greatly differing levels of skill. Those invited to learn deeper levels of mapping skills are chosen for their aptitude or interest in the craft. Many are simply relatives of master navigators, steeped from early years in the complex mental mapping required. Micronesians pass on knowledge and the power it gives by a number of methods, all connected by the need to layer information in memory. Mapping lore is preserved verbally in stories, poems, chants, and through rhymes. It is shown physically in stick charts, in dwellings whose rafter patterns depict segments of the night sky, and in imaginary canoes surrounded by stones which mark tell-tales of distance and location. In these and many more ways, Micronesians weave information on navigation into their daily lives. The point is that mapping skills are not only for experts, and not just for scholarly reference; they are an everyday part of a society that is inextricably linked to its environment.

Books which provide a far more comprehensive description of Micronesian mapping include: *East is a Big Bird*, by Thomas Gladwin; *We the Navigators*, by David Lewis; and *A Song For Satawal*, by Kenneth Brower. A volume which relates Micronesian navigation to the concept of "knowledge as power" is *Unwritten Knowledge: A Case Study of the Navigators of Micronesia*, by Lyndsay Farrell.

PLANKS, BLOOD AND BARK

The second example most quoted is of the maps made by various tribes of Arctic Inuit. "Eskimos" of Kotzebue Sound near the Bering Strait would use beach sand and rocks to build scaled models of their territories. The map would be proportioned first by using a stick of random length to represent how far could be journeyed in a day. Based on this scale a coastline or interior landscape would be traced, with relief shown by mounded sand or piled stones. Sticks were placed upright in the sand to show locations used for fishing and other activities. When such maps

were made there was much participation by those present. Greenland Inuit used driftwood planks to carve renditions of shoreline indentation and relief. These maps curved continuously around the plank, allowing the longest possible distance to be shown on the smallest map. The eloquence of this method is hard to fault. Travelling by kayak, what could be better than to have a waterproof guide that floated if dropped overboard?

There are only a very limited number of other sources of additional information on historic uses of mapping by traditional cultures. In 1910 a Russian cartographer by the name of B. F. Adler compiled a 350-page text titled *Karty Piereobytnyh Narodov* — “Maps of Primitive Peoples.” This volume represents what is regarded as the best attempt to compile maps originating from aboriginal societies that were drawn prior to contact with European explorers. Adler assembled fifty-five maps from Asia, fifteen from the Americas, three from Africa, forty from Australia, and two from the East Indies. Although this volume is rare, and written in Russian, it was partially translated by H. De Hutorowicz for review in a 1911 edition of *Bulletin of the American Geographical Society*. It is from this source that the following additional examples of pre-industrial mapping are noted.

Tchuktchi (Siberia) people made maps drawn in reindeer blood on wood planks. These maps were illustrated with scenes of hunting, fishing and village life. Splashes of blood were used to show the elevation of hills. Another Siberian people, the Tungus, drew maps on birch bark. The information on their maps was not oriented to “north” or “south,” but to the direction of flow of the dominant river artery. Aztecs made extremely accurate maps of their territory that were painted on a variety of materials, including fabric woven from agave fibre, skins, and fig bark paper. Because of the destruction ordered by Spanish military leaders, there are only two examples of this type of map still in existence. Maps from Africa, North and South America were traced on bark, skin, and bone, usually with water and shoreline as the central orientation.

In addition, there were many other methods aboriginal people used to bound and navigate their territories. Stone cairns, carved trees, painted rocks, and natural landmarks guided movement or identified places of particular interest or use. This marking of the physical world made the whole of a tribal territory a map, a complex pattern of markers and identifiable features that allowed replication of human activity with some guarantee of outcome.

MAPS IN MIND

There were also the images of space that were marked in the *minds* of a people — what today we call “cognitive” maps. Beyond static recreations of place, beyond the marking of a physical place, cognitive maps were at the very heart of aboriginal cultures. People who lived in place required a mental system that ordered information about an incredible amount of physical and ecological detail: where to hunt; where protection from invaders was best found; what plants were edible or medicinal, and where they could be reliably located; the location of trails, dens of dangerous animals, fords, lookouts, places of protection from weather, and fuel for heating. This purely spatial dimension of knowledge was made even more complex by the need to perceive how the element of time affected each phenomenon. Hunting varied with seasons and the longer cycles of a species’ decline and rise. Plants are in varied abundance at different times of the year. Trails and fords are closed in certain types of weather.

Yet another dimension to this knowledge is that many aboriginal peoples were extremely mobile, migrating across huge physical and psychic distances. The ability to map territory into a sustaining familiarity was thus not just the work of sedentary folk. People in new surroundings had to evolve techniques of observation and learning that provided immediate sustenance from new environments. This ability to know a new place quickly and well, and to adapt to its circumstance, may be the most important unique attribute of the human animal.

Imagine a world where your people have lived for scores of generations. You know where every source of sustenance is, in what quantities, and in what season. You travel widely to make this annual cycle of harvest. Paths are etched on the ground. Places which best offer shelter in different seasons are worn hard. There is a rhythm to the seasonal round, predictable as much as circumstance allowed. And occasionally there would be exploration of new territories, journeys empowered by the honing of skills that brought confidence to go beyond the purely familiar.

The process of relating time and space in a defined territory created a potent coevolution. From what were at first purely the needs of survival, there grew a primal need to somehow understand why and how the world “worked.” Myths, legends, religions, philosophy and science all evolved from skills learned in relating perceptions of time and space to the needs of region-based human populations to survive.

It is in the realm of cognitive knowledge that true bioregional map-

ping dwells. For the primary defining factor of a bioregional culture will be the understanding that individuals, and larger associations of humans, must evolve an acute understanding of the nuance and supporting capability of place. This understanding, or rediscovery, of what was the standard way of human life for thousands of years affirms the power of the bioregional vision — it is not a new invention, but a memory that has only been briefly tranquilized.

The key to building empowering cognitive maps of bioregions is based entirely upon experience in the landscapes and ecosystems of place. If we cocoon ourselves in hermetically-sealed homes and offices, travel in locked cars at speeds that blur sight, turn culture into “input,” and trade growth and harvest of food for the unwrapping of packages, we also atrophy an understanding of the forces which support us. When land and ecosystems and weather become invisible abstractions, we tolerate the destruction of these essential webs of life much more easily. It is through this spiral of dissociation that the planet has been plundered.

SONGS, DREAMS, AND GENERATIONS ON THE LAND

It is perhaps fitting that surviving aboriginal peoples are in many ways in the forefront of contemporary bioregional mapping. Cognitive knowledge of place preserved in language, myth, legend, and experience is being translated into graphic map images. The Inuit, already mentioned as having a long cartographic tradition, continue to be the focus of some of the most innovative contemporary mapping. In the mid-1970s two extraordinary studies were undertaken to graphically describe the spatial distribution of Inuit land use. *The Inuit Land Use and Occupancy Project* and *Our Footprints Are Everywhere: Inuit Land Use and Occupancy in Labrador* describe how teams of researchers interviewed Inuit people so as to understand their concept and use of their Arctic territories. What emerged from these studies is a glimpse of traditional cultures perhaps never before achieved. Instead of Western interpretations of Arctic society, the studies present scores of maps which simply show patterns of land use — etchings which together mark the truth of a magical adaptation to place. In the 1990s, innovative mapping continues to originate in the Arctic. The Tungavik Federation of Nunavut has published the *Nunavut Atlas*, a comprehensive series of land use maps which played a critical role in the creation of Nunavut, Canada's newest territory.

Prominent in the earlier Inuit studies is the work of Hugh Brody, an English polymath who understood that the best way to augment the

map images was to use quotes from the Inuit themselves. Brody was obviously moved by this experience, and has continued to work on behalf of aboriginal peoples. His *Maps and Dreams* is an excellent introduction to the challenges of achieving cross-cultural understanding using maps as a focus of contact. *The Songlines* by the late Bruce Chatwin is another book that chronicles this type of adventure, as a gifted narrator moves into the spiritual and spatial dream worlds of Australian aborigines.

In a small region of northwestern British Columbia, an equally impressive range of bioregional mapping is in progress. The Nisga'a people have located the boundaries of extended family territories and, with a team of trained local interviewers, have marked hundreds of place names in the Nisga'a language. More recently, the Nisga'a purchased state of the art Geographic Information System (GIS) computer software and are now digitizing satellite images of their territory to defend sovereignty, and aid in the stewardship of locally controlled forests, fisheries, and other resources.

The Gitksan and Wet'suwet'en, neighbors of the Nisga'a, have also recorded traditional knowledge of their territory by interviewing Elders. The geographic information collected was eventually used as a primary source to make an atlas representing a collective image of how Gitksan and Wet'suwet'en people inhabit and steward their territory. The maps, created with the assistance of one of Canada's most skilled cartographers, Mr. Louis Skoda, were put on public display in Hazelton, British Columbia, in November 1990. They were an immensely popular attraction: for once here was an atlas that didn't represent a government or corporate scheme to pillage the land. Instead, a beautifully crafted set of images described home: how people migrated to their present territories, the meaning of ancient place names, where berries grow, and where to catch salmon.

The atlas and place name research done by the Gitksan and Wet'suwet'en is being used as an underpinning for a legal challenge against imposed Canadian control over their territories. Although this court challenge is still being fought, the Gitksan and Wet'suwet'en atlas hints that its outcome is perhaps not critical. Sovereignty is not entirely a commodity that is returned by a court of the usurpers. Those who know the land, who live on the land, will ultimately be its stewards.

This evolution of goals, from simple challenges to the assertion of control regardless of sanction by centralized government, is a lesson for residents of all bioregions. The Nisga'a and Gitksan and Wet'suwet'en have always known more about their territories than government or

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business interests. With the artful mix of cognitive and "modern" mapping techniques, they are now able to use this knowledge in a manner which absolutely confounds the juggernaut of civilization. The efficient deployment of rootless capital simply cannot adapt to an environment where an informed and confident non-transient culture demands that local limits and potentials be respected.

AN EVOLVING ATLAS OF HOME

This is only the barest of introductions to the lessons that aboriginal mapping can have for reinhabitants. If you read some of the books that have been cited, you'll get a better idea of the power that maps have in rooted societies. The next step would be to investigate the aboriginal peoples who have lived, or who still do live in your bioregion, and to find out how they conceptualized the folds and flows of your territory. You may seek out information through books, or if you are fortunate, it may be an incentive to speak with people you otherwise may not likely meet — those who never left.

Imagine this. In the town hall of your community a large atlas that describes "home" in a great variety of ways is prominently displayed. It has several hundred pages that depict layers of biophysical and cultural knowledge: climate, soils, flora and fauna, historic places, wind patterns, how much food was harvested by place and year, plus a summary of a host of related community experience. It is a well-worn tome, referred to continuously by local citizens. In the margins are pencilled notes, adding new information to that which is already shown. Every year or so, your community updates the atlas, growing another layer to the collective understanding of the potentials and limits of place. On the evening that each new edition of the atlas is unveiled, Elders are invited to "speak" each map, adding stories to further animate the wisdom that the flat pages tell. There are songs, dances, and ribald stories, all relating to the occupation of a well-loved territory. It is entertainment and celebration on one level; on another, it is an absolutely critical validation of larger community potential and purpose. This is the role mapping plays in the bioregional vision.