

# The Revival of Traditional Animal Tracking

## A Sensory and Spiritual Homecoming

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## **Abstract**

Drawing upon scientific data, personal experience, existing tracking knowledge, and historical references, I present an adaptable model from which to learn traditional animal tracking in a wholistic fashion. This guideline can be applied to much more than just learning about mammals. It provides a foundation to experience and understand any element of the natural world. Unlike most models, this one is based on two years of intense tracking experience, as well as on the advice and evidence left by traditional trackers who came before me. This paper proposes that to animal track wholistically, a person must first question, test, and then break free from cultural, linguistic, professional, and religious misconceptions which contradict a tracker's sensory experience with nature. The willingness to experience nature with an open mind cultivates an atmosphere for unlimited potential and creates heightened awareness, empathy, spirituality, intelligence, and connection to that which is non-human. Wholistic tracking provides one of the most comprehensive routes toward this state of mind and spirit.

# Introduction

Hunter/gatherers survived to pass on their genes, knowing that we must continue to speak to the animals, earth, and sky in order to survive as a healthy part of this world. Traditional animal tracking is one way to effectively carry on that tradition. With the disappearance of native cultures and the rise of industrial societies, our minds, bodies, and spirits have grown weak and docile. The beauty, mystery, and magic in nature still surrounds us, yet few of us recognize their existence. This numbing of our senses is invisible to billions of people because it has become the norm, in most cases the norm for many generations. Accepting this norm with complacency and denying the signs of our deteriorating way of life, most people arrive on this planet and depart from it without ever having smelled the air, heard a loon, or seen the foxes living in their backyard. It is not that the earth has stopped speaking to us; on the contrary, we have stopped listening. For those who have not been content with an “average” life, there is hope, if we can step outside of our habits, our culture, and our technology to communicate with nature in a pure, simple, and ancient way.

The ancient art of tracking evolved out of necessity, providing early people with food, clothing, and a spiritual relationship with the earth. Hunger and self preservation motivated the first trackers to notice subtle clues left by animals, human beings, insects, and the wind., but these people took tracking farther than survival demanded. Hunter/gatherers turned tracking into an art from that was interwoven into every aspect of their culture. They took pride in their exceptional tracking abilities and enjoyed the challenges nature set before them. These skills involved routine balance between the right and left brain, thereby tapping into their full sensory potential.

The traditional art of animal tracking has existed for thousands of years, but it has recently undergone significant changes (I use the words “traditional” and “wholistic” interchangeably to describe ancient trackers in the text). Nature forced these people to use their entire potential in order survive, a law of nature modern societies no longer follow. Modern versions of tracking incorporate excessive amounts of logic, math, and tunnel vision, lacking crucial elements that enable a traditional tracker to be complete. Also, modern tracking tends to be specialized and segmented, concentrating solely on such skills as animal population counts, radio collar tracking, fugitive recovery, and nature center identification programs. Each of these examples provides a valuable service to the community. In my discussion I refer to contemporary trackers as specialists, who are often times narrow-minded in their pursuit of tracking knowledge from an exclusively linear perspective. These labels are not judgments, but rather an accurate description of how the modern world view has compartmentalized and tried to formulate a clear, irrefutable picture of what tracking is, according to specific agendas. Each modern discipline in tracking has the potential to be approached wholistically. However, few attempt to do so. The elements and characteristics that profile a well-rounded tracker are thoroughly defined in this paper.

Western society desperately needs to learn, imagine, and communicate with nature on a personal level. Generally speaking, this thesis is a blueprint for wholistic, nature-based learning, what I believe ancient people practiced for thousands of years: the maximum use of every sensory organ to live in and comprehend a complex world. I discuss the physical, mental, emotional, and spiritual benefits gained from wholistic tracking techniques, which cannot be achieved through contemporary teaching methodologies. A large portion of the text covers the forgotten right hemisphere of the brain, and many of its unique functions such as: emotion, intuitive recognition, musical thinking, empathy, spirituality, kinesthetics, non-verbal/non-linear thinking, envisioning, accurate spatial perception, aesthetics, and

imagination. Utilizing personal experience, research, and historical passages about tracking, I explain how ancient animal tracking can influence individuals through their personal learning style, by reawakening a universally nature-based language in students of all ages.

With everything in life, there is a beginning and an end. However, upon closer examination, all ends turn into new beginnings. Tracking is no exception. From the first day a tracker steps into the woods, he will begin to learn about countless physical and spiritual mysteries in the natural world. This learning occurs simultaneously on both levels. As he matures, the nature of tracking simply involves more of the spiritual, reflecting his vast knowledge and reverence for the physical aspects of nature he has grown to know so well. In writing this thesis, I mimic such a progression, by discussing the physical dimensions of tracking, while adding an increasingly spiritual essence to the topics.

Chapter one, Nature's Language, deals with the misconceptions and myths surrounding language and its cultural limitations. The root of many fears, the destruction of entire ecosystems, and narrow definitions of nature can all be traced back to the development of written language. It has separated a large majority of the world's population from direct contact between the body, mind, spirit, and earth. In this chapter, the origins of modern language are contemplated in an attempt to understand how a universally nature-based language could once again be used by society to facilitate discovery, imagination, and growth in a sustainable and healthy manner. This language does not involve the utterance or scribbling of words. It is the most primitive of languages, a language rooted in experience, emotions, and art.

Chapter two, The Left Brain: Friend or Foe?, is a close look at the usefulness of logic, reason, and math in tracking, as well as the pitfalls that ensue from the left brain hemisphere's overuse. In addition, methods are discussed to help beginning trackers avoid becoming too dependent on their left brain, which likely has been dominating their right hemisphere since early adolescence.

The art of Seeing, chapter three, gets into the nuts and bolts of vision. I open the chapter with a brief introduction about the eye's anatomy and then move into areas dealing with variations of eyesight such as peripheral vision and image searching. In addition, I shed light on presumptive opinions erringly perpetuated by non-wholistic tracking instructors.

In chapter four, Rhythms of the Landscape, auditory and visual pattern recognition is covered. Technological addiction, human hearing, and concentric rings in nature are thoroughly discussed within their context associated with tracking. A five step outline to develop sensitivity to these natural rhythms is laid out in a simple-to-follow format, leaving the reader with a valuable learning tool.

Chapter five, Sensory Reawakening, covers the senses of touch, taste, and smell. Using animal trailing and mimicking techniques in conjunction with all of the senses, produces a bond between the tracker and animal that is hard to duplicate any other way. The benefits of these techniques are mentioned in detail.

The last chapter, The Mirror of Nature, is a short introduction to envisioning methods and to the realms of tracking made available to those who diligently practice them. Incorporating all of the physical aspects of wholistic tracking to finally reach a spiritual level of understanding about the natural world and ourselves is the end result of a beautiful learning process that continually unfolds.

Enjoy.

# Chapter 1

## Nature's Language

Many types of language are at our disposal, especially when dealing with nature. However, communicating with nature on its terms often involves the surrendering of our own methods of expression. It was commonplace for the most skilled hunters and trackers to become shamans in their later years within hunter/gatherer societies. These people possessed the ability to communicate with the natural world, in an unbiased and unrestricted way, removed from their culture:

It is this, we might say, that defines a shaman: the ability to readily slip out of the perceptual boundaries that demarcate his or her particular culture-boundaries reinforced by social customs, taboos, and, most important, the common speech or language – in order to make contact with, and learn from, the other powers in the land (Abram, 1995, p. 307).

The concept of language is an interesting subject, surrounded by many theories concerning its origin, definition, and limits of expression. An ability to shed one's cultural restrictions is essential to effectively converse with the environment, using alternative forms of communication found in nature and dormant within ourselves. To awaken this connection, cultural and self-imposed, linguistic definitions need to be removed. Once this is accomplished, the primal languages of nature can be resurrected in each of us.

Webster's Dictionary states 13 different definitions of language. One version, "The body of words and systems for their use common to a people who are of the same community or nation, the same geographical area, or the same cultural tradition" (*Webster's Encyclopedic Unabridged Dictionary, 1996, p. 806*) is a reasonable and culturally accepted explanation of language. However, many other definitions exist which have been banished to the periphery of mainstream society, §the means of communication by animals: the language of birds" and "communication of meaning in any way: the language of flowers; the language of art" (*Webster's Encyclopedic Unabridged Dictionary, 1996, p. 806*). As with any point of view, there are many opposing opinions. Unfortunately, whether those opinions are correct or incorrect does not matter. If the majority of society clings to a belief, it will be perpetuated, even while more rewarding and grander truths sit steadfastly evident before their eyes.

Hidden within the popular narrow definition of language lurk numerous assumptions which place limitation upon languages of any kind. First, the definition makes the assumption that language can only be produced by human beings. Don't dogs let their owners know when they are hungry, don't plants wilt when they are thirsty, and don't thunderstorms command respect for their power? How can we bear witness to countless similar examples of alternative forms of language, yet us a culture, refuse to accept their significance? Constructing the illusions of order and hierarchy out of apparent chaos comforts those who willingly choose not to view the world with an objective mind. The world appears chaotic because people living out of touch with nature have forgotten how to hear the subtle voice of the earth. For example, the belief that animals do not feel pain like human beings is a common myth. If someone is capable of believing in this fallacy strong enough, they will undoubtedly not regret kicking a dog, wounding a deer, or using animals for experimental research. Arrogantly

asserting our dominion and imposing our will upon the world's life forms is an easier and less painful world view to live with.

Second, the definition assumes that words or a system to utilize words is necessary for language to exist. Body-language, emotion, and rhythm all convey distinct meanings without the use of words. Linear schools of thought have made the distinction between words, language, and communication a gray area. With the help of narrow-minded thinking, language has become encapsulated within a cultural box, strangled by strict definitions and the fear of greater understanding.

True language can take any shape or form. For example, some refer to the "language of love" to describe the irrational behavior of a young couple on their second date. Nonverbal communication has few restrictions, while a word's usefulness declines without the context of culture. The modern definition of language lacks flexibility when dealing with cross-cultural communication or inter-species communication due to its shallow parameters. Another more substantial language could take its place which fosters nature enriched communication, thought, and empathy that extend beyond words. Languages like this do exist, but are fast disappearing.

People such as the Cherokee, Inuit, and Australian Aborigines have languages uniquely different from contemporary English. The foundation of the Cherokee language is based upon the tribe's relationship with the regional environment. Every language originally sprung from an intimate relationship with the plant life, weather, animals, and soil. The very interaction between human beings and their environment provided the first essence of linguistic meaning. Tomas Tranströmer thought the same thing when he poetically wrote his feelings on the subject of language, quoted in David Abram's book, *The Spell of the Sensuous*:

Tired of all who come with words, words, but no language I went to the snow-covered island. The wild does not have words. The unwritten pages spread themselves out in all directions! I come across the marks of roe-deer's hooves in the snow. Language, but no words (Abram, 1996, p. 137).

Most Cherokee words are highly descriptive, similar to those of other indigenous tribes. The Cherokee language forms a strong bond with nature by utilizing vocalizations that mimic sounds, visual association between objects, taste, touch, smell, kinesthetics, and concrete examples to describe abstract concepts. For example, in English the word, "wolf", does not have an adjective or verb to describe characteristics of a wolf's appearance or behavior. Without having previously encountered a wolf, the student of English learns nothing from his utterance of the word (Worsham, 1996, p. 5).

A few English words have retained illustrative meaning which depict physical or behavioral qualities such as, the white-tailed deer or snowy owl. In Cherokee, the word "wolf", *wa-hya*, is an oral imitation of the wolf's howl. This provides the student with an auditory cue to aid in the retention and significance of a word. In addition to learning the word, a Cherokee child would grow to understand a portion of the historic Cherokee landscape (C.E. Worsham, personal communication, 1998).

Another example of Cherokee language can be found in the word, *a-hwi-ak-ta*, or black-eyed susan. The word for black-eyed susan literally means "deer eye". The Cherokee people saw a resemblance between the eye of a white-tailed deer and the color of a flower. Using visual association between plant and animal species further reinforces the connection between language and the environment (C.E. Worsham, personal communication, 1998).

To describe a concept such as direction, the Cherokee use verbs, or action, to define a noun. For example, the Cherokee word, *wu-de-li-gv*, translated into English means "west".

However, in Cherokee, the word literally means, going out of sight; referring to the disappearance of the sun, moon, and stars. In English, the nature-based root word of “east”, has long been forgotten by most people. Therefore, retaining the word becomes difficult due to its lack of context in nature. Cherokee words often ignite visual images within a person who understands the literal translations of Cherokee, adding to the power of the word (C.E. Worsham, personal communication, 1998).

There are many dimensions to language. Some remain intimately bound to the land using multi-sensory descriptions to articulate their sentiments. Other contemporary languages, such as English, have become cold and lifeless, failing to reinforce the connection with the land, which fostered the creation of words.

Moving beyond physical descriptions, native languages have a unique approach to describing abstract concepts. In Cherokee, intangible traits were formed through concrete examples (C.E. Worsham, personal communication, February 19, 1998). The qualities perceived in certain plants and animals are borrowed and used as examples for human beings to follow. For example, in English, the lone wolf, the wise owl, and the sly fox all possess noble qualities which people wish to attain. Unfortunately, people lacking experience with the environment will have regrettably few images or environmental experiences to draw upon to make such associations. Taking the time to observe these animal and plant teachers is important. With time a tracker will witness and then recognize the unspoken complexity of nature through its many tongues.

Each method of Cherokee speech that I have discussed could be classified as a language unto itself. Within nature, smell, taste, touch, abstract thought, auditory mimicry, visual association, and kinesthetic properties are each a separate language that takes patience and an open mind to understand. Pooling the seemingly separate languages together into a comprehensive picture is one of the cornerstones of a traditional tracker’s abilities. Sadly, our language is lacking even in the category of abstract thought. English no longer associates abstract words or ideas directly with the natural world. The student of language, or any other course of study, is left with a tremendous collection of hollow words to memorize.

In Cherokee, language is not the articulation of environmentally disconnected sounds, but a method of reciprocal communication with all of nature through every human sense. Michael Cohen, an environmental educator, found that many more senses exist, we have simply dismissed them as a society: “ For the past 50 years, researchers have clearly established the existence of at least 53 natural sensitivities in people and nature” (Cohen, 1997, p. 30). Some examples of these senses include love, time, humidity, stress, ethics, moods, sense of season, reasoning, domineering, play, fear, pain, and the sense of spiritual conscience. True communication is reaching out beyond ourselves. By communicating with an entity in nature this way, we get pulled into its world of understanding, leaving behind our cultural roadblocks. Up to this point, we have discussed several types of language. In broadening the definition of language to include all sensory stimuli, we have returned to the world of the ancient trackers, filled with mystery and wonder. Jim Corbett, a famous tracker from India, also believed in communicating with the wilderness in this manner:

The next step was to make myself familiar with the language of the jungle folk, and to learn to imitate the calls of those birds and animals whose calls are within the range of human lips and throats. All birds and all animals have their own languages and though-with few exceptions-one species cannot speak the language of another species, the jungle folk understand one another (Corbett, 1953, p. 53).

David Abram (1996), a well-known philosopher, speculates that sensory communication with the environment evolved into what we now call modern language. The first written texts were symbolic scribbles on the ground that represented natural events. The sounds associated with symbolic markings were highly animated, pointing out subtleties of an animal's color, size, location, and seasonal patterns of behavior central to a traditional tracker's life. Abram went on to claim that animal tracking was possibly the root of all language:

Our first writing, clearly, was our own tracks, our footprints, our handprints in mud or ash pressed upon the rock. Later, perhaps, we found that by copying the distinctive prints and scratches made by other animals we could gain a new power; here was a method of identifying with the other animal, taking on its expressive magic in order to learn of its whereabouts, to draw it near, to make it appear. Tracing the impression left by a deer's body in the snow, or transferring that outline onto the wall of the cave: these are the ways of placing oneself in distant contact with the Other... (Abram, 1996, p. 96).

Language may have been brought forth through the necessity to survive. The desire to explain the world would have aided tribal people in hunting, gathering, and avoiding danger. Descriptive words turned into symbols, providing strong, physical reminders of game, game trails, and seasonal migration routes. The symbology whether verbal, visual, tactile, or abstract was in a sense alive, alive with the delicate, subtle characteristics that made it unique to the observer. The symbol or sound used to identify an animal was the physical manifestation of a tracker's accumulated knowledge.

Recognizing the complexity of sensory communication with the environment does not give someone the wisdom that accompanies a lifetime of practicing its use. How then did our ancestors communicate with their surroundings and how many we develop such balanced abilities today? The answer may lie within their beautiful, simple lifestyles connected to the land.

Prolonged, intense periods of time thoroughly in nature must be sought to properly communicate with the physical landscape. It requires that a tracker pay attention with a mind that is quiet, focused, and open. Through intense observation and individual interaction, the student of nature learns to painstakingly comprehend small pieces of the grand puzzle. Learning this second language, like many things in nature, is a slow process which evolves over years. Hannah Nyala, a former search and rescue tracker, spent enormous time observing the age of tracks, in order to reach greater levels of literacy in the languages used by the wind and rain:

Now as the downpour subsides and the water hurries away from the desert again, the outlines of the track are slowly reemerging. A little worse for wear, with rather rounded edges and its Adidas brand name no longer visible, but still maintaining its distinctive shape ....this time it taught me more about aging tracks in changing weather conditions.

Two hours later—after ninety minutes of a warm, drying wind—the footprint remained visible, even from thirty feet away. The wind dried me too, enough that the poncho could return to my pack, but still I sat, changing positions periodically, watching the track, and making mental notes of the subtle color shifts it went through while drying out (rather like a cotton shirt on a clothesline). I watched two beetles and one cactus wren lay their own tracks across its surface, while tiny leaf pieces drifted in and were trapped by the ridge of sand around the track's heel (Nyala, 1997, p. 33).

Traditional animal trackers spent their entire lives observing nature. The ancient tracker had one additional advantage to learning nature-based communication. For the most

part, he spent his life outdoors. He hunted, slept, played, ate, and worshiped outdoors. From the moment he was born, the wilderness was his home, separated only by thin, permeable walls, allowing the melody of the world to constantly reach him. The ancient tracker's very survival depended upon his ability to accurately interpret and communicate with his surroundings, using every faculty available to him. He watched the sky for approaching weather changes that would affect animal behavior, he routinely tapped his storehouse of botanical knowledge to analyze a piece of scat, and he knew animal physiology well enough to assess an animal's injury. These are all forms of language, a method of communication that involved the actions, reactions, and feelings of the entire forest community and beyond.

Time spent in the woods alone cannot teach a person to hear the language of the animals, plants, and insects. Many people work, recreate, and even study the environment; yet they never seem to consciously distinguish its voice from other man-made noises. They enter a wild place with a schedule, a specific purpose for being there, and an occupied mind. Nature must be allowed to communicate through its many channels at its discretion. The resting beauty of a monarch butterfly cannot be appreciated from a speeding car or thrashing mountain bike. How could someone hear the voice of a red oak tree if he is still wrestling with problems at work? He may be in the woods, but his mind is not. It is important to enter a natural area with an open mind, open heart, and child-like curiosity. Quality time outdoors outweighs quantity. Taking a few deep breaths and leaning against a tree can help to slow down our minds and bodies. After relaxing, the forest forgets we are there and will begin to share its hidden secrets.

Many trackers liken the communication while tracking to that of an attraction, awareness, or rhythm they feel in the woods. Their vast knowledge of the woods combines with a rhythmic flow which they follow and react to freely. Surrendering to this attraction without hesitation allows nature to work through the tracker, permitting him to comprehend on a grand scale. To reach a proficient level of communication with nature, the tracker must still his mind, spend time alone in nature, and openly accept guidance from the landscape.

Recently, I had an extraordinary experience while spending time in a local state park near my home. The sun was getting lower in the sky as I drove toward the park four miles from my apartment. The weather had been strange this winter. It was unseasonably warm for February; everyone blamed it on El Nino. As I entered my in-laws' driveway I parked my truck and decided a short walk was all I had time for.

Slowly strolling down the dead end road, I began to unwind. I readjusted my sight to include my entire field of vision. Creeping along, I stopped to study some opossum tracks that entered a culvert along the road. The birds were busy composing their evening songs, while a group of mourning doves flushed from a white pine tree not forty yards away, some juncos scolded the disturbance. I thought it was my fault at first, but to my delight, a great horned owl had caused the ruckus and was now perched in the mourning dove roost. It quickly recognized me and silently glided ahead to another favorite haunt

The chick-a-dees, juncos, and cardinals didn't mind my passing. However, they sent out a tidal wave of alarm-calls about the owl perched nearby. The entire 20 acres surrounding me screamed at the owl's presence. When I approached the owl again, it left, along with the cries of agitation. I decided to stand and observe a grassy marsh at the end of the street. The wind was calm and the temperature was near freezing, perfect conditions for silent observation.

Within a few minutes the rapture of silence was broken by another great horned owl's call in the distance. Then, shortly after the owl, I heard a faint whisper of footfalls breaking through the crusty snow pack. Emerging from the red dogwood and marsh grass was a whitetail doe. As gracefully as possible she made her way through the icy ground cover. I had my binoculars and watched her with excitement. I heard another disturbance puncturing the hard snow. It was coming from the woods moving toward the deer; a red fox emerged at the marsh edge.

The fox paid little attention to the deer. Like a statue, the deer attentively watched the fox go about its business. They were no more than thirty yards apart. The fox slowly walked across the marsh. Its nose and eyes were attracted to a sound from beneath the snow. Pausing with its hind quarters in a squatting position, with one great leap, the fox pounced at a vole beneath the snow, wagging its tail in anticipation. Without a success, the fox casually moved on to find food elsewhere. The deer, no longer paying attention, strolled toward the woods for an evening of leisurely browsing.

To my amazement, the great horned owl returned and was perched off to my right in a large green ash tree. It had born witness to the magical events that unfolded before me, probably noticing nothing out of the ordinary. School was dismissed. With the departure of the owl, I too left, with a deeper understanding of the language of the wild, thankful for the unexpected gifts (Gaulke, 1998).

Some disciplines scoff at the idea that tracking is anything more than following footprints in the snow. The narrative of my experience revealed that there is indeed more to tracking, communication, and language than people, dissociated from nature, care to admit. When practicing traditional tracking techniques, the tracker must open himself up to limitless possibilities, even when not following an animal. Nature never puts on the same show, at the same time or same place.

Literature abounds with documented experience like mine. Some of the most famous naturalists sought to learn the language of plants and animals. John Muir wrote in his journal about plants:

They tell us that plants are perishable, soulless creatures, that only man is immortal, etc.; but this, I think is something that we know very nearly nothing about. Anyhow, this palm was indescribably impressive and told me grander things than I ever got from a human priest (Muir, 1992, p. 92).

The idea of a language that transcends species and culture is not a new one. It has simply been lost and forgotten, awaiting to be rediscovered. John Muir was obviously aware of its existence and importance.

Many tracker's have referred to a sense of spirituality after years of communicating with earth's creatures. This is not uncommon among spiritual texts that refer to isolated retreats alone in the wilderness. Countless spiritual leaders sought out the solitude and silence of wild places, to be alone with the animals, trees, and rocks. Such mystical individuals believed that volumes of wisdom could be gained through contemplation and communion with the elements. One particular Biblical verse says:

But now ask the beasts, and let them teach you; And the birds of the heavens, and let them tell you. Or speak to the earth, and let it teach you; And let the fish of the sea declare to you. Job 12:7-8 (New American Standard Translation).

Modern trackers have a great deal to work on in order to compensate for the traditional knowledge that has been lost. How can they do it? The answer cannot be found in books, but rather within the tracker himself. To become a wholistic, traditional tracker, a person today must reeducate himself. This includes attempting to recreate the necessary supportive

environment that will foster wholistic tracking skills. To quiet the mind, meditation may be in order. To move effortlessly on the trail, a balanced diet and exercise plan may prove beneficial. Residing near a wilderness area would also prompt more outings for discovery. The mind of a traditional tracker today must make continuous, conscious decisions to improve his living environment and skills. We are not blessed with the luxury of an unobstructed life within the loving arms of wilderness. Consequently, a tracker in contemporary times must take advantage of any modern convenience that may enhance his skills such as natural history resources, exercise equipment, organic foods, and the ability to communicate with other trackers living elsewhere.

Language has been misconstrued to symbolize the narrow use of a culture's alphabet. Contrary to popular belief, historical language (nature) incites sensory stimuli as well as spiritual revelation to communicate its desires. These ancient, forgotten methods of listening to the earth created the foundation for every modern language and alphabet. Trackers knew this primitive language and surrendered to its guidance and wisdom. It is up to the tracker to accept these messages. If the tracker refuses to listen, he will not hear. If the tracker refuses to look, he will not see. If the tracker refuses to reach out, he will not feel. Failing to communicate with any one of these subtle languages in nature, a tracker will be ecologically illiterate and fail to live a whole, balanced life.

## Chapter 2

### The Left Brain: Friend or Foe

Following the continual shift toward a left brain dominant society, tracking has unfortunately been recreated by our culture into an exclusively analytical and logical manifestation of science. The most common stereotype circulating about tracking today is of a naturalist identifying and measuring crisp tracks in a mud puddle. Equally as common is the stereotype of the tracker as a “flake” spending all of her time in the spirit world, completely rejecting the left brain. Dwelling somewhere in between these two extremes is the traditional tracker.

The depth and complexity of logical and mathematical analysis involved in wholistic tracking has been exaggerated, reflecting the personality of our modern cognitive imbalances. Logic, reason, language, and math are all associated with the left brain hemisphere. Far from being left brain dominant, traditional trackers excelled at the interpretation of miniscule amounts of information. Given a scuff mark in the sand and a piece of scat, the tracker could reproduce a magnificently accurate story about an animal, by drawing upon all aspects of her brain.

The possibility may also have existed that trackers not only maintained balanced brain functions, but had greater access to the brain’s entire spectrum of resources. Jon Young, a respected naturalist and tracker has said, “human beings are the only mammals that use less than 100% of their brain’s potential” (j. Young, personal communication, February 28, 1998). Children maintain symmetrical brain activity until roughly the age of ten. Sadly, near that critical age, language and symbols become dominant over spatial, wholistic perception (Edwards, 1989, p. 59). Most ancient trackers, did not participate in a written language and may have maintained childlike brain symmetry throughout their life.

The power of a traditional tracker’s math, reason and logic skills may have stemmed from her ability to draw on other active and highly developed areas of the brain, areas modern society has let atrophy in the wake of written language and technology. Today, logic is a discipline within itself. In a way that sounds foolish, due to the small amount of brain matter that is appropriated to carry out this function, “reason and language are only 4% of our inherent means to know and love nature, life, and each other” (Cohen, 1997, p. 47). How can someone be taught to reason if she refuses to utilize the fundamental right-brain skills that gather information for the left brain to interpret? The historic trackers lived within their environment, immersed 24 hours a day. They studied every inch of their region, using the right and left brain. Drawing upon that knowledge, the tracker could deduce logical conclusions based on her intense exploration of the landscape using pattern seeking eyesight, discriminating listening skills, and intuitive insights. Mistakenly, contemporary trackers hope to reach the same level of expertise while tracking on weekends, or for short data collection safaris. Separating logic from its right hemisphere counterparts would only render it useless. Logic and math are powerful tools to interpret what all the other senses and cognitive abilities have gathered.

Studies on African Bushman children versus American youngsters reveal disturbing, yet unsurprising, results about the effects of nature upon their cognitive and physical development. In the 1960’s scientists studied the development of San !Kung children of the

Kalahari Desert in Africa. The sensory motor data collected included sitting, walking, and rising to an erect posture. In all three categories, “it seems reasonable to conclude that !Kung infants are advanced in motor development in general as compared with their American counterparts” (Devore & Lee, 1971, p. 231). In the categories of walking and rising, the !Kung children reached these sensory motor achievements of development more than 50% faster than American children.

When comparing cognitive development among the same populations, “it seems reasonable to suggest that !Kung infants are advanced with respect to a cognitive development factor (in the first six months) which is separate and distinct from their advanced neuromotor maturation” (Devore & Lee, 1971, p. 237). Included within the study was a genetic test to determine whether or not the !Kung infants possessed these qualities according to genetic information in their DNA. The findings were negative. This study provides sound evidence that children reared with repetitive environmental exposure during early childhood received physical and mental benefits. Tracking provided the necessary stimuli to perpetuate these benefits directly into adulthood. The heightened sense of infant’s mind benefited from such a childhood, the strength of the body would follow, fulfilling her preconditioned natural potential.

Tapping the potential of the brain, trackers were capable of deciphering the most complex scenarios. A study completed by the Harvard Kalahari Research Group found that !Kung hunters were equally as proficient at nature interpretation as scientists who studied ethology, the scientific study of animal behaviour in relation to habitat: We conclude from this summary of !Kung observational method that their efforts resemble the methods of modern-day Western ethology; as regards (1) attention to detail, (2) distinguishing data from hearsay, and (3) general freedom from inference. In these respects their observations are superior to those of naturalists such as Gilbert White and Aristotle, and very sophisticated indeed when compared with the legions of animal behaviorists among [Western] hunters, game keepers, and pet owners (Devore & Lee, 1971, p. 333).

The fact that !Kung hunters are more competent observers than Western scientists is also not surprising. The scientific method advocates and insists that ethologists objectively observe “the subject” they are studying in nature. As much as an ethologist would hope to understand animal behaviour as well as a !Kung hunter, they never will. To reach that level of understanding, an observer would have to come out of her camouflaged blind and live within the system which she is “objectively” studying. The !Kung tracker is totally dependent on his surroundings for existence. That simple fact alone sets his knowledge apart from anyone else’s concerning a biologic region. Therefore, it is logical to assume that the knowledge and wisdom of an observer can never fully equal that of a participant with nature. This distance between these two worlds is too vast.

The constantly changing variables of the environment would restrict an observer’s understanding of the big picture. Logic has limits, based upon the amount of sensory experience an observer has collected through her time spent in nature. For example, tracking has quickly become popular to assist state agencies in population counts of rare mammal species. Riding in a car, the volunteer tracker searches dirt roads for animal crossings, and then proceeds to identify specific tracks. Once the direction of travel, species, number of animals, and dimensions are recorded, the tracker hops back into the car. It has been a cost effective method to retrieve invaluable information, which lead to the recovery of more than one North American species. What is missing in this equation are the countless other variables that trackers overlook on their checklist. Substrate conditions, gaits, moods, prominent injuries, speeds, weights, weather conditions, terrains, and the surrounding habitats would all

become increasingly important in a tracker's interpretation if she were to spend an extended period of time living in close contact with the animals she is studying. The volunteer tracker would become empathetic to the pain, joy, and sorrow felt by the animals. Imagine a tracking report that could reflect such depth. Taking into account every nuance would lead the tracker to move beyond logic to a place of understanding that involved the entire wildlife community.

Reflecting on native cultures, it became apparent that they were mainly an oral tradition. The written word was not used. The closest representation to the written word in native culture was nature-based symbology. Native people saw honourable qualities and characteristics in the life around them. They paid attention to the cycles, rhythms, and patterns that occurred during the course of a year. Instead of expressing all of these natural processes with words, they used artistic expression to communicate meaning through graphic symbology. Therefore, the left brain was used to verbally express the right brain artistic symbology, replacing the need for a modern alphabet, while at the same time balancing the brain's functions. Painting, weaving, and carving all incorporated symbols of animals, stories, hunts, seasonal cycles, and plants into many of the meager material possessions they owned, reminding them of their bond to the earth.

Having small populations, tribes and bands of hunter/gatherer communities maintained communication networks that were relatively slow. This isolated the culture and traditions of regional tracking practices. For example, a tracker living in New York could not pick up a telephone and discuss animal behaviour with a tracker living in Idaho. Each region developed its own tracking intricacies based upon differences encountered with the landscape, weather, plants, animals, soil, etc. While each tribe developed specialized tracking techniques for their area, they maintained a common bond with nature: they were able to read its language. Because of this they could easily adapt to new terrain by applying their expertise in universal commonalities within the many languages of nature. Moving to a new region only meant that the tracker would have to learn a new dialect instead of an entire foreign language.

Tracking for less than two years, I have begun to touch upon the subtleties of nature's language. It has taken this long for my left brain to become accustomed to natural patterns, shapes, and sounds. Measuring tracks, strides, and gaits, was used by trackers past and present to familiarize the brain with these shapes through careful observation and scrutiny of the spoor. After compiling enough measurements, or data, about an animal, the subconscious tends to interpret tracks without great effort. Jim Corbett noticed the same phenomena happening to himself over 60 years ago:

When looking, with a trained eye, at tracks on a road or game path, it is not necessary to stop at each track to determine the species, size, movement, and so on, of the animal or animals that have made the tracks, for these details are noticed subconsciously (Corbett, 1953, p. 76).

A tool useful to traditional trackers around the world has been the "tracking stick". This stick could be made from a piece of grass, a shrub, or a tree. Approximately 2-3 feet long, the tracking stick acted as a ruler. These sticks could be used to track animals or people. Every species of mammal has an average stride length while walking in a peaceful state of mind. However, as the speed, terrain, and physical conditions fluctuate, the strides will change accordingly. To help the tracker in a difficult situation, the stride would be marked on the stick, measuring from the right heel (or toes) to the left heel (or toes). If the tracker is unable to locate the next track, the stick could provide a precise indication of where it might be.

The tracking stick held a dual purpose. In addition to a track locator, the tracking stick was used to measure the length and width of a track. Using a rock or some dirt, the

measurements were clearly marked, starting at one end of the stick. This helped the tracker in frequently used corridors to differentiate between tracks found in the chaos of a trail. After comparing a few measurements, the tracker could easily locate her animal.

Another common historic method to measure tracks is as follows: “The Koals of Mirzapur when asked the size of a tiger measure the pug mark with a blade of grass and then laying the blade down measure it with the width of their fingers” (Corbett, 1953, p. 151). Rather than writing down the measurement made with sticks and blades of grass, the dimensions were recognized and added to the on-going file kept in the tracker’s mind. Eventually, the tracker could shed these crutches and estimate track sizes at a glance, with her large subconscious warehouse of information.

A third method was used to make mathematical calculations concerning animal tracks. In tracking deer, elk, or wolves the wholistic tracker may be interested in determining the number of animals that belong to the group. After trailing these animals for many seasons, she becomes familiar with their average stride of lengths while using any gait. When following a herd of deer, the tracker would know that the average stride of a walking deer falls around 21 inches. Keeping that in mind, she would draw two lines across a game trail, approximately 21 inches apart. After counting the number of tracks within that area, the number would be divided by four to arrive at an estimated number of deer in the herd. This appears overly simplistic, but when looking closer, the process is highly complex. This basic calculation took many long, attentive hours to develop. Knowledge of anatomy, animal behaviour, track aging, and mathematics was involved to arrive at an accurate number. A historic quote from *The Tribes of The Southeast United States* beautifully illustrates the ability of wholistic trackers to blend math, logic, and knowledge of behaviour:

Their sagacity in tracing the footsteps of one another is no less wonderful: on a dry surface, where none but themselves are able to discern the least impression of any thing, they often make discoveries; but on moist land that is capable of impression, they will give a near guess, not only of the number of Indians that have passed, but the make and stitching of their Mockasins [sic], will know what nation they are, and consequently whether friends or enemies...(Swanton, 1979, p. 311).

With the advent of technology, came increasingly complex methods to measure tracks. Trackers were no longer satisfied with a tracking stick. Their obsession with linguistic descriptions and increasingly complex measuring devices grew inversely to their direct knowledge and experience with the land. The old languages of nature were quickly replaced exclusively with quantitative data. Distancing themselves from the roots of tracking, specialist trackers developed their own languages, unfamiliar to wholistic trackers, who still approached tracking with a balanced mind. After narrow-minded trackers represented the majority, specialization within the languages of tracking became popular. In the minds of the fugitive tracker, animal tracker, research tracker, and military tracker, each of their disciplines were seen as tracking realms unrelated to the traditional whole, which in truth encompassed them all. Ancient tracking methods were written off as outdated and incapable of meeting the needs and agendas of the specialist. Unfortunately, the specialist has forgotten her roots, traditional tracking, the most advanced expression of the human mind (J. Young, personal communication, February 28, 1998).

When embarking upon the path to learn tracking, it is important to keep in mind the previous context when deciding how to approach the process of measuring animal tracks. I prefer to use a simple 10 foot tape measure or my arm (exactly 20 inches from elbow to finger tips) when I forget my tape measure at home. Many brilliant tracking authors outline and suggest competent measuring methodologies. Some of the most recommended authors are

Tom Brown Jr., Paul Rezendes, James Halfpenny, and Olaus Murie. Most of these authors provide detailed methodologies on how to measure different aspects of tracks and track patterns. For the most part, measuring tracks is somewhat universal. The only differences lie in the authors' preferences and past experiences. It would be wise for a tracker to borrow from many authors' styles at first. However, over time the tracker should grow and refine her own measuring style. As the tracker matures, her field notes should change, reflecting a shift in her attention toward different areas within the realm of wholistic tracking such as bird language, plant identification, weather prediction, insects, soils, and mammals. Those trackers who stagnate after the first six months of tracking usually suffer from a lack of adaptability, creativity, and diversity of study. Journals are meant to change and mirror the growth of a tracker, who is to remain flexible and open to all trails, literal and figurative.

To illustrate my point about the differences among field guides that deal with measurements, I've listed an example. Tom Brown Jr., a recognized authority in the field of traditional tracking describes trail width as, "simply the distance between the outermost prints in any one pattern" (Brown, 1983, p. 131). James Halfpenny, a well-known research tracker, states straddle is "the line of travel at the widest point of a trail or group pattern. The straddle is measured to include the width of the tracks" (Halfpenny, 1986, p. 13). Both of these definitions describe the same measurement.

Tom Brown Jr. uses the term straddle to describe the distance between the front or rear feet, a much more logical choice (Brown, 1983, p. 132). Halfpenny fails to list this measurement in his book, yet straddle can tell a tracker a great deal about an animal, indicating injury, pregnancy, or anxiety. The differences are huge when comparing measuring tactics. Words are used interchangeably to describe the same characteristic and tracking instructors often disregard certain measurements entirely. A tracker must pay close attention to vocabulary and definitions which authors have created to describe personal tracking experiences. Definitions must be approached cautiously due to a ambiguity that exists among words and teachers.

In my experience with tracking, I've found myself creating words to describe certain attributes of tracks, or measurements. This creative surge comes from a force in tracking that prods me to sum up complex, nonverbal traits. It helps me articulate the process unfolding within myself. However, these words read by someone else, carry little or no meaning beyond the ink used to print them. Only after having a similar experience can a tracker appreciate my words relating to an experience of her own.

After the basics have been ingrained into tracking students, it is important for them to develop their own approach to measurements, field notes, and hypothesis generation. During my initial months of tracking, I used small notebooks to compile measurements, draw tracks, and record conclusions. I was following the suggestions of numerous trackers concerning my notes. After about six months, I decided my notebooks were not sufficient; I had outgrown my first approach to note taking. I designed a form on my computer for all quantitative data and used the reverse side for travel patterns, pressure releases, feelings, track aging, or any other comments.

I abandoned or acquired measurement styles, proving or disproving their importance, by allowing the tracks to guide my study habits. For example, I had wholeheartedly attempted to measure the pitch in every animal's track that I encountered (pitch is the angle, splayed inward or outward, that a track displays). Over the months I became increasingly troubled attempting to measure pitch in such small animals as the white-footed mouse and red squirrel.

One day I decided to do things differently. I moved beyond the field guides and into uncharted waters. Instead of measuring the angle of pitch, I represented pitch with a center line that ran through each foot of the animal, heel to toe. That way, I was still noticing the pitch, but it was no longer slowing me down with difficult measurements. Measuring tracks was only a tool that forced me to pay attention. Once I realized that attention and appreciation were more important, I could express it in my notes using any creative method that worked for me (Gaulke, 1997).

Traditional tracking remains one of the last great forms. It cannot be taught, it cannot be learned quickly, and it cannot be dismembered. Tracking must remain whole, keeping in mind that logic, reason, and math are a part of it, not its fundamental expression. These powerful tools should be balanced with right brain activities such as drawing, dance, visualization, empathy, and non-verbal communication. If contemporary, traditional trackers hope to attain even a remedial level of traditional wisdom, they should take the silent advice of our ancestors and approach tracking as they did, with a balanced heart, mind, and spirit.

## Chapter 3

### The Art of Seeing

There is, “absolutely no doubt that an overwhelming majority of adults, way over 90 percent, cannot see except in the most primitive sense, such as identifying a neighbor’s dog or a traffic light” (Nelson, 1977, p. 2). When peering out into the world, even most children appear to have a bag over their heads. Why is this? Did we all receive defective parts? That would be hard to believe when observing the beautiful physical abilities we are all born with. Historically trackers were in touch with what was happening around them at all times. They were not visually challenged; instead, awareness was their trademark. In this chapter, reasons will be examined and discussed for the existence of a visual perception gap which separates a large portion of modern society from traditional hunter/gatherer levels of sensory acuity. The focus will center around vision, due to its commanding role in 50% of the tracking process (Brown, 1982, p. 11).

The mechanisms behind eyesight are far more complicated than people realize. For the most part, scientists have only been able to unravel the basics, frequently admitting ignorance concerning the more complex aspects of vision and the brain. Understanding the basics of vision is a good place to begin, for this is where the inner and outer world become inseparable. A quick review of the eye’s anatomy will prepare readers more thoroughly for this chapter’s content.

As light moves through the air and comes in contact with the eye it passes through the cornea, the outer most membrane of the eye. Next, light filters through the iris, the portion of the eye associated with eye color. The iris expands or contracts depending upon the intensity of the light, only allowing an appropriate amount to enter the eye. The hole in the center of the iris is called the pupil. Intense light makes the iris contract, altering the diameter of the pupil. After the light has passed through the pupil, it permeates the transparent lens, which is essentially the eye’s focus mechanism. Tiny muscles on either side of the lens adjust its shape and distance from the retina to maintain clarity of vision (Hubel, 1995). Regulating the eye’s shape, a vast sphere of fluid exerts pressure on the cornea, much like water in a water balloon. Up to this point, the eye has been preparing the light to be received by the brain, it has not yet stimulated any brain activity or neural responses. Scientists understand all of these mechanisms very well.

At the rear of the eye is the retina. It is a thin layer of receptive optic cells that line the back of the eye. The retina gathers light stimuli and sends signals through the optic nerve, transferring messages to visual parts of the brain. The center of the retina houses millions of specialized cells called cones. Cones are responsible for the detection and absorption of color, as a result color vision is possible. Moving away from the center of the retina, rods become more numerous; they are cells which enable us to see peripherally and at night. These are the basic mechanics behind the initial visual process. However, from here the anatomy of vision rapidly increases in complexity as the light stimulates deeper and deeper visual components of the brain.

Repeated experiments on the retina have concluded that the retina reacts to contrasts of light above 2% in difference, whatever the light intensities are to begin with. With a large

uniform light, we only see the outer edge and border, not the middle (Hubel, 1995). This fact may contradict what most people believe about vision due to their stunted visual abilities. Our eyes have developed over thousands of years, growing sensitive to minute contrasts of color and shading. Endowed with such magnificent visual equipment, to perceive micro changes in color contrast, why is the average person incapable of consciously recognizing these patterns and images in the forest?

The answer may lie in the following story. Twin brothers were separated at birth. One grew up in a family that maintained a poor diet, frowned upon exercise, and abused alcohol and tobacco. That child developed into an overweight, malnourished, and physically weak individual. Unlike his brother, the second twin was raised in a family that fostered healthy eating habits, routine physical exercise, and time outdoors. This twin grew into a strong, confident young man. On their twentieth birthdays, the two brothers were reunited. At first glance they appeared unrelated, but looking more closely, there was a resemblance. Asked to jog six miles with their biological father, the strong brother smiled, knowing he would succeed. The unhealthy brother grimaced, certain he would fail, to the disappointment of his father.

Being genetically identical, each brother possessed the same potential at birth. However, choosing how to use that potential during the course of twenty years, was in the end, the only factor that set the twins apart. The same holds true for all people. If a narrow-minded tracker refuses to acknowledge the existence and power of his right brain hemisphere, qualities such as empathy, awareness, non-verbal communication, vision, and kinesthetics, he will pale in comparison to an open-minded equal who develops his tracking potential as an all encompassing art form.

To develop any ability takes determination; changes in people simply do not just happen. To grow as a wholistic tracker, a person must make decisions that affect his perceptual evolution and subconscious mind. Deciding to see more, the mind consciously works toward that goal. The brain seeks out new information as it scans the landscape, under the guidance of a mindful consciousness. This is an aggressive activity that never stops. In contrast, a woman sitting on a couch watching television is passively allowing her mind and eyes to receive images. The individual is reacting to stimuli that she did not seek. As a result, the visual system atrophies by feeding upon repetitive flashes of light from the two dimensional screen of a television. Howard Gardner, a Harvard educator, believes that, “exposure to the same or similar stimuli eventually results in a loss of interest” (Gardner, 1991, p. 44). The difference in stimuli recognition is subtle, yet it has the power to create a vibrant or stagnant world within the mind of every human being. Ion Idries, a long time member of the Australian military, promotes the practice of this type of active vision: The more you keep your wits alert the safer you are, and the better your eyesight becomes both by day and night. That is a fact. For your eyes are merely specialized organs that react the more you call upon them. The wild aboriginal possesses truly wonderful eyesight both by night and day. His eyes are exactly the same as yours, but their power of sight by constant use is developed far more. Those eyes know they must work; must ceaselessly be on alert to warn the boss of danger, and to help him see everything that can be seen in his struggle for existence.

Call on your eyes similarly and they will react similarly; their keenness of vision will only be limited by the amount of practice you give them (Idries, 1982, p. 108).

Without the conscious discretion of our minds to guide vision, poor visual habits take root and impede the progress toward maximum visual awareness. If that weren't enough, the very nature of our brain's visual circuitry is an obstacle if left unattended. When a person

looks at the woods from a hiking trail, his eyes will fixate on prominent objects. The fixation only lasts less than a second, before his eyes jump to another element of the object, or to a different object altogether. This darting back and forth to new points of interest is done unconsciously by the observer. If the eye were not to jump, the object viewed would fade from existence. The fading occurs because as light is absorbed by the retina, rhodopsin, a chemical found in each retinal cell, becomes beached out and used up. Therefore, the eye must continually move to replenish the levels of rhodopsin in the retina to continue seeing. However, between each successive jump by the eye, the observer fails to see the space in between due to complex circuitry in the brain (Hubel, 1995, p. 79). By instituting visual mindfulness into the modern tracker's practice regiment, he will resist allowing this involuntary response to control his realm of vision.

To assist a novice tracker in maintaining a mindful disposition, imagine a lion waiting to pounce on you from above in every tree, from below in every patch of grass, and from behind every shrub. To continue the lion theme, lions don't hide behind the occasional tree on the African savanna, they become the grass in between. Within artistic circles and the wholistic tracking community this area of space is known as negative space, or the space between prominent objects the eye naturally overlooks. Trackers, scouts, warriors, and hunters have all historically used this dead space to hide from animals and other people. Wearing a color that fades into the hazy collage of background colors is often the best way to deceive another's eyes using negative space. To see animals and birds while moving through the woods, proper clothing can be as important as a tracker's state of mind. It not only conceals his physical position, but it also adds to his feeling of unity with the landscape. I prefer wearing dark greys, earth-tone browns, and hunter greens. Solid colors, like those I have mentioned, appear to blend with negative space more effectively than sharp camouflage patterns.

Another reflex component of vision, used in tracking, is called image searching (Lowery, 1988, p. 1). Everyone does it. Gazing across a prairie, this visual part of our brain incessantly searches for the memory of a symbolic image to present our consciousness. Without prior intent or concentration, this rolodex of images will quickly replace the real landscape with a landscape of memories, lacking any similarity. The difficulty with this cerebral phenomena surfaces when trackers take a pool of correct natural history images to draw from. Instead of recalling the detailed images of a cottontail from childhood observations, the closed-minded tracker sees the cartoon image of Bugs Bunny with long legs, excessive ears, and exaggerated incisors, deficient of all real features. If a tracker cannot relate to a visual scene in any way, the brain will reject the images altogether or alter them in some way (Hubel, 1995, p. 155). The specialist only sees the tracks he is interested in, passing by countless interconnected stories. This tunnel vision inhibits a non-wholistic tracker from grasping the story told by nature on a grand scale.

To avoid the trap of incorrect image searching, a tracker must consciously spend time delicately studying the subtle patterns, shapes, textures, colors, and odors of every object in his bioregion. When a tracker becomes puzzled by an unfamiliar piece of sign, he should search his image rolodex and locate a suitable match. In combination with his exemplary observation skills, he can note the difference from his search image, mentally log another entry, make an interpretation, and move on with one more piece of invaluable information at his disposal. Charles Worsham, a noted tracking authority, describes the image search dilemma by comparing our stored images to a file cabinet:

In its struggle to control perception, the file cabinet may feed the tracker false information. The file cabinet is persistent, even desperate, in its need to dominate the physical eye. Even when the file cabinet does not possess information on a subject, it will conjure up something

in an attempt to block visual perception. The file cabinet is willing to become a liar in its quest to rule the physical eye. Time and analysis...and knowledge of the file cabinet's deceitful schemes and tricks are the best weapons against a domineering file cabinet (Worsham, 1996b, p. 3).

The last major obstacle to accurate spatial perception of the environment is speech. Speaking or thinking in words is predominantly a left brain function. Seeing correct spatial representation and detail remains a dominant feature of the right brain hemisphere, although both hemisphere's are wired to each eye. If attempting to talk while tracking, the eyes are literally incoherent to detail. In order for an individual to verbally interpret information gathered by the right brain, it must be sent across the corpus callosum to the left hemisphere, and be interpreted there (Hubel, 1995, p. 144). Further evidence of this visual process is found in left hemisphere stroke victims who are no longer able to communicate what they see with the right hemisphere. An old Zen saying provides an adequate summary of sight, "if you want to see, see. Once you think, you have missed the point" (Musashi, 1982, p. XXII).

One visual technique that is common among wholistic trackers is the use of peripheral vision. In consciously utilizing peripheral vision the entire field of vision is always working. Peripheral vision can be maintained, even while studying a small object by simply moving one's attention to that object, at the same time remaining aware of the scene beyond the object. Eventually, continual practice using peripheral vision should become habit and second nature. A return to tunnel vision may occur less and less frequently. Jim Corbett described the benefits of what some trackers call "wide-angle" vision:

A human being has a field of vision of a hundred and eighty degrees.... It is necessary to train the eyes to cover the entire field of vision. Movements straight in front are easy to detect and easy to deal with, but movements at the edge of the field of vision are vague and indistinct movements that can be most dangerous and are most to be feared (Corbett, 1953, pp. 88-89).

In addition to detecting danger with ease, this form of visual training allows the tracker to detect movement, recognize patterns, see at night, and be more open to the consciousness of the forest. All animals view the world in this manner. Human beings alone refute their visual potential due to a preference toward sensory deprived lifestyles. If people were forced by necessity back into the arms of mother nature to survive, they would certainly rediscover how useful this method of perception is once again, if they survived long enough.

The development of peripheral vision must be done deliberately in the beginning while sitting, riding in a car, or talking on the telephone. To properly investigate nuances in the forest, it is important for the novice and experienced wholistic tracker to carefully move through the landscape while stopping to scrutinize each new discovery. Competent speed at seeing with wide-angle vision works best in combination with a crawling pace. It forces the mind to become quiet and calm, channelling even more attention to the task of visual awareness.

Drawing, a second spatial tool, can help to rewire undeveloped right brain neural constellations, making the entire brain more balanced in these activities. The physical act of drawing brings our eyes and minds closer to seeing with precision. Taking the time to physically recreate an object through art, contains a mysterious power. A person will not forget something he has drawn. The image and its features are burned into the short and long term memory. For example, last winter I made a sketch of a wolf track. To this day, I can close my eyes and visualize almost every detail associated with the track including the location, substrate, and weather. The sketch will be with me forever. Realism doesn't matter when learning to draw, it will come with time and patience. What is important, is the neural

rewiring that the act of drawing imposes upon the brain. Eventually, the act of seeing or drawing becomes less arduous, after reinforcing the necessary visual circuitry that promotes accurate spatial perception.

Seeing with the eye of an artist was common among traditional trackers. The ancient trackers passionately appreciated and loved all of nature. Through that love and appreciation the tracker could see more deeply into the object, bonding with its essence; capturing what leaves countless analytical-minded specialists dumbfounded today. Wholistic trackers were more involved in the creative arts which fortified and indirectly exercised tracking abilities. All ancient trackers came from groups which used dance, song, painting, drawing, sculpting, and storytelling as a part of tracking and communication. To work with art is to work with the universal language of Nature (Worsham, 1996a, p. 4).

The importance of artistic Pursuits are grossly devalued in today's culture. Art programs are among the first to be cut from school budgets, along with environmental education, and athletics. Ironically, our physical health, environmental kinship, and personal creative expression are essential for a society to remain healthy. Tracking specialists are usually products of these educational systems, unknowingly ignorant of their deficiencies and unable to balance their skills as wholistic trackers due to lop-sided schooling. This can be remedied. Drawing classes, music lessons, meditation, and symbolic dance could all illuminate the faded spectrum of right hemisphere abilities. It is not a coincidence that famous naturalists such as John Muir, Olaus Murie, and Aldo Leopold all repeatedly sketched what they were studying: whether animal tracks, plants, or clouds. They knew the secret to seeing, to observe as an artist.

Through my studies and observations I've noted at least four types of vision. The first vision is passive by nature and requires no effort from the participant. It is basically action/reaction oriented, mental "tunnelling" in on the object. Similarly, the second method does not use the entire field of vision, but does employ intense concentration. For example, skimming a book for a test the following morning. This remedial visual technique is left brain oriented, aggressive, and bullies peripheral vision into submission. Sadly, numerous trackers don't reach their potential and stagnate at this point for the remainder of their years, failing to recognize variances in their eyesight.

Utilizing the full field of vision is the third category of seeing. This method is passive by nature. Passive peripheral vision requires concentration, but does not aggressively seek out patterns, disturbances, or contrasts. The tracker focuses upon a relaxed state of mind, allowing the forest to direct his attention. A fourth realm of vision utilizes the active side of peripheral vision and requires a similar relaxed openness, but it used in situations that necessitate speed and timeliness: for example, tracking a wounded animal before a blood trail is washed away, or finding a lost child. The primary mechanism and focus are the same, yet the circumstances dictate the pace. In both peripheral vision examples, the traditional tracker seeks an ideal state of mental stillness to see with an artful eye, allowing the forest to speak to him through any physical entity that attracts his attention.

Using wide-angle vision was not uncommon even in non-hunter/gatherer societies. A fifteenth century Chinese Samurai, Miyamoto Musashi, described two ways of viewing the world, kan and ken. Ken corresponds to tunnel vision, while kan was the sought after visual discipline, similar to peripheral vision: Make kan primary ['profound examination of the essence of things'] and ken secondary ['observation of the movements of surface phenomena, insignificant actions, what your

opponent wants you to see’]. Accurately understanding the state of affairs in the distance and grasping the general situation from the movements near you is most important from the standpoint of Heiho.... It is also important to observe both sides without moving the eyes (Musashi, 1982, pp. 35-36).

Keeping the mind and eyes open to the entire field of vision is important. It could save the life of a tracker, especially if he deals with criminals or combat situations. Maintaining a narrow visual approach to tracking promotes dangerous situations that could be avoided. Wounded animals such as cougars, bear, and moose also provide an extreme level of danger to the pursuer. An unaware tracker, using tunnel vision, may pass over vital information that could save his life. Paying attention to the large picture surrounding the tracks can tell the tracker just as much as the tracks themselves. Failing to follow these clues, using peripheral vision can lead to an incomplete story, or worse, death. The Sioux were great trackers and depended upon these visual skills for survival. Documentation has been preserved, illustrating their marvellous skills at interpreting the landscape visually:

A young man learned to tell a great deal from the tracks and other evidences of animals, and he was taught to put the same principles to work on the natural objects. If he saw a rock moved from its regular place, he could tell when it was moved by the edges of the dirt, for the wind changed these hour by hour. If he saw a broken twig, a broken blade of grass, or a bit of weed cut off by a horse’s hoof, he was able to tell exactly how long it had been withering (Mails, 1972, p. 539).

As the skills of a traditional tracker improve, he will at times slip into fleeting moments of rapture: sensing, knowing, or feeling things beyond himself and the “ordinary”.

I was tracking one day when something similar to this occurred to me. I had been working hard for hours tracking a skunk across a wheat field. The ground was soft when the tracks were made, but a skunk doesn’t weigh much to begin with, making its tracks hard to find. The skunk went fairly straight across the field, heading toward a corner. Reaching the edge of the woods, it slowed down to a diagonal walk, meandering left and right, probably smelling the ground. Then it was off again at a lope and into the grass, I lost its trail quickly in the young mattress of stalks. It was a convenient time to take a break.

As I looked up my vision changed, the landscape shifted, turning into one complete life form. The breeze tickled the wheat and it appeared to sing with excitement. I saw large patterns formed by the wind rushing over the green field, I saw the roots of the plants drawing life up into their leaves, and I saw the soil, rocks, and insects in the earth, all at the same time. The young leaves on the trees and shrubs were not separate from the whole, I perceived the energy behind them, forcing the buds to open. At that moment it all made perfect sense, every bug, breeze, and bird. Each entity had a personality, complexity, and sustaining energy behind it. This flash of insight happened within a few seconds, yet it spoke to me with the depth of millennia. The only emotion I felt was a content happiness, I simply smiled and said, “thank you”. It was like getting back stage passes to the best show in town, if only for five seconds. I don’t know what it was or why exactly it happened. I only know it is a state of mind that I would love to be in every day of my life (Gaulke, 1998).

Erroneously, a myth about tracking has shrouded the tracking community for many years. Students tend to believe, through their own misunderstanding or the incorrect guidance of a teacher, that tracking can be taught to them like a three credit college course. Interested folks have sought out traditional tracking teachers, having heard of their abilities to see the seemingly invisible. Unfortunately, students approach these teachers expecting that their words of guidance and advice alone will grant them the ability to see and understand what has escaped them their entire lives. Most teachers explain to the student that a level of mastery cannot be attained through a teacher, but must be earned through enormous amounts of time

spent alone with the real teachers: the animals, the plants, the rain, the wind, the tracks, and the dirt. Falling upon deaf ears, the teacher's words are usually not heeded. Next year the student appears once more, this time frustrated at his inability to see tracks and sign. The teacher asks, "Did you spend a lot of time tracking since you were last here?" The student usually responds, "No", and the cycle repeats itself. Learning to see the subtleties of tracks does not come with a certificate from a weekend tracking class. These delicacies are reserved for those who spend the time developing an intimate relationship with the landscape and their own visual perception of the world.

Many non-traditional tracking instructors persuade students to believe that seeing the essence of a track or landscape is a myth, a skill unattainable by any tracker. Sadly, these role models suck the mystery from life by spreading their limited belief systems and toss countless energetic, would be, wholistic trackers, back into the barren and lifeless world of linear thought. Most individuals, on some level, can intuitively smell the smoke, hear the flames, and feel the heat, but the non-wholistic tracker keeps telling them, "There is no fire!" A traditional tracker is humble and does not exhibit such arrogance, for he knows that the world holds far more truths than he is aware of. When in doubt of a technique or ability, the ancient tracker would test the skill until it proved or disproved itself. The Kalahari Bushmen knew of these pitfalls and had a simple answer, just do it:

A !Xo tracker explained that if a young man does not learn to think for himself his 'head will only be half full,' that is, he cannot simply be told how to track, he must discover it for himself. It is not just a question of practice and experience, but involves the cultivation of a creative way of thinking. Furthermore, it is not possible for his elders to teach him everything he needs to know, since he must continually acquire new knowledge and solve unique problems in a never-ending process of discovery (Liebenberg, 1990, p. 70).

Non-traditional trackers have refused to open their minds and hearts to learn and experience on their own. An open-minded tracker never stops learning, exploring, or experiencing, always accepting another's beliefs until proven unworthy of pursuit. On the other hand, specialty trackers maintain a rigid belief that there is only one way to see, one way to learn, and one way to track; usually its their way.

Wholistic tracking was historically an expansive art. Its ingredients included smell, touch, taste, hearing and vision supported by dance, song, sculpture, painting, or drawing. Contradicting traditional beliefs, tracking specialists believe that tracking is only a visual, logic talent, while failing to see the limitations they have imposed upon an inexhaustible learning process. The gap between the traditional and contemporary worlds of tracking is large. Repetitive misguidance and the perpetuation of misinformation by non-wholistic trackers have smeared the clarity surrounding historic practices, especially how to see with passion, intent, and depth. Teaching someone to see tracks would be as easy as teaching someone to feel emotions, define the universe, or comprehend death. It cannot be done. Gentle encouragement, a caring attitude, wisdom from experience, and a finger pointing the way are the traditional tracking instructor's only real tools to pass on this wonderful form of living art.

## Chapter 4

### Rhythms of the Landscape

It is the sounds of earth and sky, of tides and storms. It is the echo of a train in the distance, the pounding reverberations of a carpenter at work. From the first cry of life to the last sigh of death, from the beating of our hearts to the soaring of our imaginations, we are enveloped by sound and vibration every moment of our lives. It is the primal breath of creation itself, the speech of angles and atoms, the stuff of which life and dreams, souls and stars, are ultimately fashioned (Campbell, 1997, pp. 1-2).

Don Campbell, an auditory expert, wrote this passage in an attempt to describe the vast domain of musical rhythm and order in the universe. His point is well taken. Each particular atom in the cosmos emits a certain level of vibrational energy. I suppose if we had equipment sophisticated enough, we could hear the musical emissions of an oxygen atom. Regardless of whether that is possible, it is important to realize that even the smallest element does have a distinguishable rhythm of its own. The music of life encapsulates us wherever we are.

Like other languages, music's definition has been confined to cultural limitation in the modern era. Moving beyond narrow parameters, into the world of nature, music takes on countless forms and expressions. Poets, writers, artists, naturalists, and hunter/gatherer societies have all referred to the music of mother earth. The ancient tracker saw rhythms in everything. The smaller rhythms flowed into larger rivers of confluence, called cycles. Each creature, plant, rock, or cloud on earth was perceived as an individual link that bonded together the web of life. Schooled exclusively in linear thought, anthropologists were inadequately prepared to comprehend the depth of knowledge traditional trackers held. Currently, anthropologists struggle to grasp environmental intimacies that extend beyond the boundaries of words (J. Young, personal communication, April 18, 1998).

Musical thinking involves the ability to see, hear, feel, smell, and taste rhythms and patterns found in nature. Each of these sensory receptions is capable of receiving countless stimuli. Given the infinite number of variables involved, it becomes clear that personal experience and interaction with nature is necessary to become proficient at such perceptually demanding tracking skills.

The human auditory system, similar to the visual system, has both active and passive components. To distinguish the two categories of hearing, the passive recognition of sound will be referred to as hearing and the active recognition of sound will be referred to as listening (Campbell, 1997, p. 44). The main difference between these two categories is the intentional effort involved in listening versus the lack of conscious effort to listen while hearing. Unlike listening, hearing, takes no effort, no skill, and no stamina.

The average person hears 100% of the time, even while unconscious and sleeping, yet she will not hear the wind, the birds, or crickets just outside her window. It is impossible for facts about the human auditory system, something else must be influencing people's hearing, inhibiting their responsiveness. Walking through a shopping mall in an urban environment, it becomes clear why the auditory system has the ability to filter out noise. There is so much happening to stimulate our ears that the brain may grow calloused to the traumatic urban world. It doesn't come as a shock that "noise-induced hearing loss is the most common kind

of hearing disability in the United States” (Campbell, 1997, p. 36). If people couldn’t filter out the onslaught of sounds, the brain would be over-loaded with stimuli. Instead of remaining open to all sound, sensory stunted people recognize only familiar, profound, and threatening noises because of their loud lifestyles. The wholistic tracker’s goal is to expand her current range of consciously recognized sounds to include natural rhythms and noises. Many trackers disdain loud music, crowded restaurants, and busy public settings as a result of their training; such places overwhelm their senses.

Sounds, shapes, textures, colors, and feelings abound in the wilderness. Each of these characteristics make up the fabric of natural stimuli that animals and human beings encounter. To the newcomer, the forest appears chaotic and in disarray. It harbors no familiar sounds, patterns, or shapes to which she can compare. But, as a tracker learns to see, listen, touch, and smell, over time the landscape turns into a mosaic of memorable musical patterns.

Many physical, dietary, mental, emotional, and spiritual activities play a vital role in determining the tracker’s level of skill. Often, a tracker must say no to things which she knows would curtail her growth, awareness, or sensitivity to the natural world. Loud sounds, excessively large groups of people, alcohol, tobacco, and low quality foods should be avoided or at least approached with moderation. The tracker should strive to free herself from as many forms of gluttonous behaviour as possible, allowing none to be her master. With a free mind and body, she can surrender more completely to the gentle guidance of nature’s hand.

Practice of any art also requires forbearance, which means the ability to say no to things that diminish the object of love or our capacity to work artfully. And for the same reasons that it limits the exploitation of persons, forbearance sets limits on our use of nature (Orr, 1994, p. 144).

Every aspect of a tracker’s lifestyle must reflect her goals. Televisions, radios, the internet, traffic jams, and VCR’s all rob a tracker of inner and outer sensitivity to the world by overwhelming her delicate senses and leading the unaware person down a path toward a self inflicted form of sensory autism. Ancient trackers did not have to resist such temptations, since their culture was devoid of perceptually distorting technology. The regional environment was their cyberspace, work, classroom, and video rental store. Time was not wasted surfing the internet; the entire world was at their back door. The environment still beckons people today, but they refuse to turn the television off and listen to the non-stop, action-packed drama of nature.

Modern trackers are faced with making seemingly drastic lifestyle decisions to maintain a balanced perceptual view of the world. Most individuals could not imagine a life without computers or televisions. They do not realize that these technologies can have a negative affect on the brain’s neural pathways. On the other hand, some trackers go to great lengths to restrict their contact with technology.

Rationing technology is just as hard as taking cigarettes away from a smoker; it doesn’t happen without resistance. People view technological advances as infallible rights of citizenship, rather than tools and entertainment to be used in moderation. The first few weeks of withdrawal are tough on the addict, but as time passes, the harmful effects of the drug (technology) wear off. Each day the recovering addict grows stronger, as the world takes on new life, free from the effects of the perceptually inhibiting agent. Eventually the technology junkie comes to enjoy her silence and peace of mind.

For example, five months ago I cancelled my cable television service. The first two weeks of “technology detoxification” were awful; I continually grabbed the remote control to turn the television on and then would realize that the little black box didn’t work anymore. I

found myself using this added time to exercise, read, and spend time with my wife. If it was possible, I'd agree to discard 60% of the information in my head, filled with childhood images of commercials, songs, and cartoons which did nothing to aid in my development as an adult. Now, I couldn't imagine listening to the constant drone of a television for days at a time.

Catching the news at my parents' house, I realize not much has changed since I stopped worrying about the global economy, world catastrophe, and the hole in the ozone layer. On the other hand, my awareness has heightened, my stress level has been reduced, and my passion for tracking and natural history has accelerated. Worrying about enormous, gloomy issues, only influences a person negatively, at times preventing her from living in the moment.

In addition to the negative influence of many distracting, modern conveniences, several cultural values contribute to an inability to feel, recognize, and distinguish natural rhythms. Our culture and educational institutions advocate left brain listening and learning above all else because of its quick, clever approach to reasoning. This counter-productive habit is instilled in children at a very early age, continuing through higher education, it short-circuits auditory, visual, and tactile neural pathways. For example, the very design of grade school playgrounds are hard, cold, and prison-like. Trees are scarce, grass is rare, and wildlife is non-existent in these sterile environments. From the beginning of their lives children have no choice, but to play meaningless games at recess, cut off from the soil beneath or in curriculum. Sometimes they are subtle by-products of an institution's actions prompted by irresponsible public opinion, fear of liability suits, and economic issues rather than the unanimous concern for student's sensory development.

Our ears are wired to both brain hemispheres. However, vibrations intercepted by the right ear travel directly to the left hemisphere. To listen to a conversation with the left ear, the information must pass through the right hemisphere before entering the left brain, where verbal language and speech is located. This wiring causes a lag time in listening and makes the observer appear inattentive and distracted (Campbell, 1997, p. 50). To hear intricate rhythms and disturbances within the symphony of complex sounds. This involves setting aside periods of inactivity for the left brain, in order for the right hemisphere to exercise its muscles at seeing and hearing animal travel patterns, insect disturbances, the area's emotional status, and hourly shifts in the weather.

A delusional, mental wall of separation forms a prominent obstacle to the traditional tracker. For generations, the Western mentality about nature and human beings has been founded upon the principle that civilization is somehow detached from the world, a product of some elusive, disconnected power. This mass denial has fuelled a torrent of crude world views throughout Western history, adding to our sensory deprivation and lack of empathy for other species. Our progression from hunter/gatherers toward information age yuppies has systematically deafened us, over a relatively short period of time. With each physical step away from the forest, came a reduction in people's ability to distinguish natural patterns and rhythms. Some illustrate this progressive sensory degradation as, hunter/gatherers lived in the forest, agriculturalists lived near the forest, and urban people live away from the forest (Gadgil and Guha, 1992, p. 52). A tracker cannot experience what is in front of her, if her mind is somewhere else. To develop the ability to perceive the world for what it is, a contemporary tracker may find herself redefining her definitions of reality, moving away from mainstream thought.

All of our senses developed through continuous contact with the environment. Cut off that contact through inordinate amounts of repetitive technological exposure and the senses will refrain from performing their functions:

Eliminate an animal's muscles and you cut it off completely from the rest of the world; equally, eliminate the input and you cut off all outside influences, again virtually converting the animal into a vegetable. An animal is, by one possible definition, an organism that reacts to outside events and that influences the outside world by its actions (Hubel, 1995, p. 22).

David Hubel, a renowned neurologist, displayed this understanding of how animals were shaped through an evolutionary process of environmental sensory stimulation. Living alongside the animals, we developed complex abilities such as the ability to communicate with the plants, animals, and water, sense the earth's magnetic field, and intuitively identify danger. However, these abilities have vanished from entire societies. To regain their lost heritage, tracking students must return to the earth and open up to its primordial creative forces by surrendering their cultural identities and enter the woods with a mind that has been cleansed of its cultural restrictions. Learning alongside the plants, animals, and natural forces could reinstate their abilities of perceiving the world with native eyes.

Each plant, animal, bird, and forest has a resting equilibrium point when undisturbed. This relaxed feeling of tranquillity is commonly known as baseline (T. Brown, Jr., personal communication, May, 1993). It can be applied to any pattern in nature: animal tracks, sounds, vegetation colors, and the moisture content in dead leaves. Tracks can be defined simply as disturbances to a natural baseline. Tom Brown Jr., a well known traditional tracker, describes baseline disturbances of sound as concentric rings that radiate throughout the forest, as an animal reacts to the local landscape and other wildlife (T. Brown Jr., personal communication, August, 1994). Trackers are faced with a problem: how can they learn about baseline in the forest without prior experience, or without a teacher? The answer is, they can learn from the animals, just like ancient trackers did. They incorporated the observed behaviour of predators into their own hunting routines. Coyotes, cattails, chickadees, and cumulus clouds do not have the option of behaving in unnatural, inefficient ways. Where could trackers find better role models to teach them nature observation and the language of the wilderness?

I've noted five beneficial habits that can help any tracker expand their skills into the realm of pattern recognition, using any sense. First, the tracker should find a location outdoors that she can return to daily, without being disturbed by other people. It may be a clearing in a forest, or a wooded backyard, as long as it is isolated from constant eruptions of disturbance. The tracker's training location will be her base of operations. This is where she will learn to recognize and read the sublime harmonics of the forest (J. Young, personal communication, April 18, 1998).

In the second step, the student will schedule a specific number of hours per week that are set aside to visit her learning area in the woods. I would recommend no less than six hours every week. Numerous small time slots are more beneficial than large six hour blocks. Repetition and frequency are the backbone of this learning process.

Stilling the mind, the third technique, is the first exercise that a tracker would engage in at her spot. Arriving at her practice location, the student should find a comfortable place to sit to practice one of many forms of meditation/relaxation. Numerous meditation and relaxation methods have produced the best results: concentration on the heartbeat, focused attention on breathing, noting bodily sensations, the expansion of hearing and smell, and

detailed visualizations of the surrounding landscape all work well. Reading a book about various meditation techniques, and choosing one of those techniques, may prove helpful prior to making an attempt at meditation. This exercise can take anywhere from 20 to 60 minutes, depending on the individual's ability to relax the body and mind. These exercises are extremely important. Quieting the logical/analytical left brain, unlocks a doorway to accurate perception. Without the balanced contribution of the right brain, meaningful sensory interaction is at best impossible, thereby inhibiting the speed of a tracker's cognitive development. In addition, calming the mind brings the observer into the present moment, releasing her from all outside obligations and distractions.

Following a relaxation technique, the senses are open and receptive to many new stimuli. To perform the fourth technique, the tracker should remain seated to concentrate on maintaining a state of eyesight using peripheral vision, using 360 degree hearing, noticing bodily sensations, all the while remaining open to any stimuli that guide her attention. Initial attempts at this form of sensory mindfulness should be done while stationary.

At first remaining motionless and attentive will be difficult, but with practice it will become easier, and the observer will graduate to moving slowly through the woods while surrendering to the attractions guiding her movements. Eventually, the tracker will be able to analyze a track and identify the disturbance made by a Cooper's Hawk flying overhead at the same time. At this point the tracker has learned to move within the rhythms of the forest, without creating concentric rings of disturbance of her own. Tom Hanratty, a veteran tracker and author, speaks of people's inability to decipher the complex natural world in his book, *The Art and Science of Tracking Man and Beast*:

The chickadee sees the wolf and tells the stone. The stone tells the pine who talks to the caterpillar sitting on her branch. The crow knows of the wolf when he eats the caterpillar. The crow tells the man, but only a few men listen to crows (Hanratty, 1997, p. 63).

The lessons learned at a tracker's place of refuge can be enhanced by the further study of natural history in reference books, which is the fifth and last technique of pattern recognition for a tracker to practice. Background knowledge about every aspect of the natural world will help the traditional tracking student learn at a faster pace. Books can never replace a childhood spent in the woods, or the guidance from a woods-wise elder. However, they can enhance the time spent alone in the wilderness, or reinforce the advice from an elder. Books cut the tracker's interpretation time in half, enabling her to understand what was observed during a particular outing. However, beware of the traps books can set. Relying on books too heavily, or as a primary source of knowledge, will retard a tracker's growth, making her believe she knows a lot, when in fact she knows very little. The authors of the first field guides were themselves awesome observers and naturalists. Using their experience to highlight one's own is wise, but using their experience in place of one's own is the act of a fool. A strong background in natural history is a wonderful tool that will help any tracker discriminate between the insignificant and the important signs in the forest.

John Muir, a famous naturalist of the 19<sup>th</sup> century, kept extensive journals of his travels and experiences. Living alone in the wilderness, for days at a time, he witnessed the infinite number of musical compositions nature was capable of orchestrating. Muir appreciated these symphonies and went to great lengths to seek them out. Immersing oneself in the wilderness, as John Muir did, a place is reached in one's heart where identity, time, and space does not exist. The rhythms of the earth are capable of transporting a tracker beyond the physical, into the realm of the sublime and blissful. Muir recorded one such experience that he had while tasting the music of a meadow lark:

Music is one of the attributes of matter, into whatever forms it may be organized. Drops and sprays of air are specialized, and made to splash and churn in the bosom of a lark, as infinitesimal portions of air splash and sing about the angles and hollows of sand-grains, as perfectly composed and predestined as the rejoicing anthems of worlds; but our senses are not fine enough to catch the tones. Fancy the waving, pulsing melody of the vast hollow flowering from myriad voices of tuned petal and pistil, and heaps of sculpted pollen. Scarce on note is for us; nevertheless, God be thanked for this blessed instrument hid beneath the feathers of a lark (Muir, 1992, p. 199).

Learning to hear better and with greater understanding is not the only application listening serves. Tracks can literally make noise and speak to the tracker. Every substrate in the world has a particular baseline density, texture, and adhesive quality. The sound each substrate can make is different. Tapping the hard surface of dry clay will reveal different pitches and qualities of sound. Due to the compression an animal exerts upon the ground, the density of the substrate will change directly underneath the animal's foot. The same rule applies to leaves and grass, except that in leaves and grass, the noise is created by friction between the plant material, producing changing levels of pitch.

Moving away from practical tracking exercises, hearing with greater understanding can simply add to the quality of life. Taking a walk, waiting for a bus, or painting the house all become less monotonous while the ears tell a dozen other stories. An example of the universal applications of these auditory training techniques became evident one day as I took a long walk with my younger brother.

My brother and I were at my parent's farm along the Rock River. Late in the afternoon we decided to take a walk along a set of railroad tracks that traversed the edge of our land. We were looking for fox and badger dens. It was a great place to search, being elevated and away from the river. There was a light snow cover and more was beginning to fall as we walked the edge of a field our family had previously planted with trees. I caught the glimpse of some red fox tracks, faintly present in the snow. I said, "look at the fox tracks!" My brother replied, "what tracks?" I pointed them out and we moved on.

We arrived at the railroad tracks and decided to split up. I walked the tracks while my brother moved along the edge of the tree line. We were confident about spotting a den. Just as I reached the tracks, a group of juncos chattered in protest. Unconsciously, a voice inside of me said, "it's not you they're frightened of." I swivelled my head around, scanning the landscape using peripheral vision. On the other side of the railroad tracks, beyond the treetops, a red-tailed hawk glided down to perch in an elm tree only 100 yards away. I got my brother's attention and pointed at the hawk ahead of us. He didn't know what I was talking about. As we neared the powerful bird, it took flight and let out a beautiful scream while soaring away. My brother didn't see the hawk, however, I saw my improved skills in action. We never did find an active fox den, but we did enjoy the company of the land and each other.

The story about my experience with the red-tailed hawk illustrates another important aspect of learning to read patterns by sight, sound, or touch. With practice, musical thinking becomes unconscious. The developing neural pathways become stronger and will fire with less and less concentration; what was difficult, becomes habitual behaviour with practice. Instead of repeating old, unproductive behaviours, I managed to replace them with positive new ones. My skills are still hit and miss, but I'm beginning to feel "on" more often than I feel occupied and distant. The practice never gets old and always keeps me on my toes.

Sceptics scoff at the idea of reading the patterns of the forest like notes on sheet music. However, traditional trackers are capable of this. I've been granted glimpses into their world. Sadly, the ancient tracker's world remains elusive to most of the population because people have an incorrect concept of what nature is and do not know how to listen to it. Jobs, technology, housing, and lazy perceptual habits are all hurdles placed in front of the modern traditional tracker. Overcoming these hurdles is possible by altering lifestyle ruts, approaching nature with a quiet and open mind, and spending quality time outdoors at regular intervals.

“When a man no longer experiences, the organs of his inner life wither away. Alone or in herds he goes on binges of violence and destruction” (Franck, 1973, p. 4). Looking at society today, this raging phenomena is out of control with millions of people indulging in drugs, alcohol, sexual abuse, and war. All of these problems are a result of our inability to look, listen, touch, love, and communicate. Isn't it time to wake up and start finding out how to truly listen to the earth, each other, and ourselves? Imagine the world if this were reality; it would be a much different place.

## Chapter 5

### Sensory Reawakening

Like autistic children, who do not seem to hear, or see, or feel their mother's presence, we have become blind to the physic presence of the living planet and deaf to its voices and stories, sources that nourished our ancestors in preindustrial societies (Metzner, 1995, p. 59).

Working to remedy this problem, the complex senses of touch, taste, and smell involved in tracking form information retrieval systems that work simultaneously in a tracker's body and mind. Using these three senses, in addition to listening and seeing, a tracker can utilize his body to solve intricate tracking problems through animal imitation and trailing. Imitating an animal may offer the traditional tracker insight that is beyond the reach of non-traditional methods of observation and interpretation. In addition, physically trailing an animal brings the tracker into synchronicity with that animal faster than any other method.

Two common obstacles to experiencing nature with the body are a fear of relatively uncomfortable sensations and the misplaced emphasis of technology in environmental education. Failing to subject the body to a multitude of stimulating situations is debilitating to the senses. The human body was designed to withstand enormous fluctuations in temperature, taste minute amounts of flavour, and detect faint scents captured by the wind. Every sensation has levels of intensity, yet many people living in modern cultures choose to remain in the middle ground, rather than experience the beauty of extremes. Children are taught to avoid situations of wet and dry, hot and cold, soft and coarse, blunt and sharp, and light and dark. Information age societies prefer experiences that are explicitly pleasurable, highly mundane, and incredibly impractical. Being confined to limited comfort zones, people only experience half of what life has to offer. As for the traditional tracker, it is a prerequisite that he relish and experience the vast spectrum of stimulating opportunities present in nature at every moment.

While attending college, I witnessed a disturbing trend developing in the biology department. They were using CD-ROM programs as part of the lab portion of the course curriculum. To make matters worse, we never went outside, and we newer learned about the local environment. Animals like monkeys, exotic frogs, and elephants were common species listed on the interactive computer programs.

Computers are clever tools, but only as clever as the people who know when and how to use them. All semester I watched as dozens of college students got turned off to the environment. They were studying another continent's fauna and had to walk home through their own niche, which was as wild as any African savanna they would never see. Learning from immediate ecosystems should take precedence over exotic locations in order for students to learn from and appreciate their small corner in the world.

Children and adults have a natural attraction toward living organisms, as do all people. Working in tandem with the fear of uncomfortable bodily experiences, the unnecessary use of

technology robs children of their childishness. Trackers seek to develop natural child-like abilities, thriving in human DNA from the moment of conception. They place these qualities on a pedestal, nurturing inner creativity, wonder, compassion, enthusiasm, curiosity, and aesthetics without questioning or doubting the power of such inherent wisdoms.

Almost two years ago I was led by my inner curiosity to feel the immense power of a thunderstorm and witness its effects upon the landscape. Approaching me from the west was a black mass of clouds with a towering anvil peak, topping out in the upper layers of the atmosphere. I raced to the state park near my home, just beating the thunderbeings arrival. I parked my car and positioned myself in the woods between two trees, a relatively safe place where I could enjoy the storm.

As the air became still, my heart pounded with anticipation, fear, and humility. The entire forest was holding its breath, fully aware of what was about to happen. With a surge of wind, the storm arrived. Low flying pannus clouds skirted the bottom edge of the storm, while a more threatening wall of cumulonimbus was just above them. The color of the sky took on an eerie shade of yellow and orange over Lake Michigan; I had never seen anything like it.

The rain was cold as I reached out with my arms, trying to encounter every drop with my body. Lightening accompanied the wind and rain, displaying its awesome power. It illuminated the sky and lake water, as crackling shock waves echoed through the heavens. The wind became so strong that tree limbs splintered and fell to the ground. Taking heat from my wet body, the wind sent chills down my spine. I took deep breaths, expanding my chest to inhale the very essence of the storm.

As the storm passed, I began to head back to the car and noticed that the land had been dramatically altered. Nothing appeared the same: colors were more crisp, scents were more pungent, and the birds were more vocal. The landscape itself seemed to celebrate the storm and its passing. Slowly, the baseline rhythms returned, signalling the end of a spectacular display of cycling strength, ancient wisdom, and timeless power. I departed wet, but full of an electric excitement. Nothing could have been more stimulating than the rapture of complete participation in one of nature's most invigorating performances.

Seeking to experience sensory extremes, a tracker does not have to sit through a raging storm. He can begin on a smaller scale, taking the time each day to walk through a lawn with his shoes off, noting the differences in grass texture during changing weather conditions. The attentive act of communing with nature will naturally progress into a continual quest. Each encounter builds on itself, motivating the tracker to constantly search for increasingly variable circumstances to explore with the body.

Active touching, tasting, smelling, listening, and seeing should not be turned off during the doldrums of everyday life away from the woods. Using senses is an on-going process that never stops. Stimulation should be constantly sought: drive with a car window open to feel the breeze, watch for birds during a trip to the store, or study a handful of snow on the way to the mailbox. People completely absorbed in their own perception of the world find such behaviour childish, too playful, or "weird" for their taste. They have been deprived of stimulation for so long that it has become alien to them. Growing older should not prevent anyone from enjoying the landscape with childlike enthusiasm. Habitual interaction with the environment turns the ordinary world into an extraordinary world.

At any moment, there is something stimulating the skin of our bodies. However, the stimulation is not always recognized due to a preoccupation with internal, mental noise. A sweater may be pressing against the body and the rough fabric from a couch may make an

impression on the forearm, but the mind may be numb to it all. Most individuals pass through life not paying attention to the input their bodies are receiving. Michael Cohen, an environmental educator, has generated a list of 22 different categories of touch (Cohen, 1997, p. 30). Cohen's list could even be expanded to include more subtle areas of touch, taking into consideration alternate definitions of touch. Many trackers would argue that an object can be touched through eyesight and hearing as easily as being caressed with a fingertip.

A traditional tracker dines on earthly stimuli, using different aspects of touch to experience the landscape. Sitting against a tree, a tracker notices the rough bark pressing against his back, the cool breeze swirling around his ears, and the warm sun upon his shoulders. He is not actively engaging the environment with his body, but instead he surrenders to the moment, perceiving a myriad of gentle influences upon his flesh.

A more interactive touch involves the mental and physical participation of the tracker. Moving within the landscape, he rediscovers his world every day, aggressively consuming each experience to which his body is exposed. Finding an unfamiliar plant, he touches, smells, tastes, and listens to it. Encountering a stream, the tracker may spontaneously disrobe and float with the current, using the entire body as a receptive tool, until his stimulated curiosity is satisfied. Touch moves beyond observation and into the deeper realms of nature immersion, interaction, and self-identity, increasing the intensity of each experience.

One specific application of active touch relates directly to determining the age of a track. Using the fingertips, a tracker may gently stroke the floor or wall of a track to mentally inventory its unique texture. Making a mark in the substrate next to the track, he can compare miniscule differences in soil texture, color, moisture content, and elasticity. Repeating this procedure over the span of years, a tracker learns to distinguish the small differences, between tracks.

Tracking in Arizona during a mandatory university seminar, I found a string of coyote tracks at the edge of town. It looked like it had rained recently, the tracks were obviously forged when a greater amount of moisture had been present. The track didn't look much different than one I made right next to it, but upon closer examination with my fingers, the coyote tracks were rock hard. Being unfamiliar with desert climate and soil, I guessed they were 36 hours old. To my amazement a local waitress told me the next day that it hadn't rained in two weeks. Soils can deceive the eyes. Manipulating the substrate, vegetation, and snow cover in this manner, the tracker can continually conduct track aging studies wherever he is.

Concealed beneath the track's skin are many secrets. Most people look at a string of tracks on the ground and only see the scuff marks. The tracks go deeper, they are three-dimensional works of art, formed through complex exertions of force. They radiate out from their point of origin, impacting the substrate in all directions, inches into the earth. To receive the most accurate information from a track, especially in snow, it may be necessary to investigate more thoroughly. The tracker may slice a track in half, to better understand it through cross-sectional analysis. The Apache tribes of the Southwest were well known as some of the best trackers in the world, they studied horse dung using this same technique:

The moment such a trail is fallen in with, they follow it eagerly, having nothing else to do, until they find some of the dung, which is immediately broken open, and form its moisture and other properties, the date of travel is arrived at nearly to a certainty, while the constituents almost invariably declare the region from which the party came. This last point depends upon whether the dung is composed of grama grass, barley and grass, bunch grass, buffalo grass, sacaton, or any of the well known grasses of the country, for

as they are chiefly produced in different districts, the fact that their presence in the dung shows precisely from what district the animal last came (Cremony, 1983, p. 185).

The sense of touch is vital to the traditional tracker, but the art of imitation can give insight into an animal's behaviour that exceeds any other method of interpretation. Imitation involves every part of the body and unravels mysteries in the interpretation of unfamiliar animal gaits. Using the body to mimic each gait scenario is effective, it helps to eliminate uncomfortable, unnatural, and seemingly impossible foot placement sequences of the animal. When I stumble upon a difficult gait pattern, one of the first things I do is imitate each possible movement in an attempt to recreate the pressure releases found in and around the tracks. Pressure releases are the physical manifestations of forces exerted upon the ground by the body's pressure, or the release of that pressure when the foot is moved (Brown, 1983, p. 209). Each movement creates distinct impressions, no matter how subtle they are. By doing my best to recreate what I believe an animal did, I can check my accuracy by comparing my pressure releases with the animal's.

Imitation has also been used by trackers to foster compassion and empathy toward other species. An emotional connection to fellow life forms is one human characteristic that will determine the survival of other species. The Inuit people of the Arctic are gifted seal hunters and imitators. They know all the seal postures for feeding, sleeping, breeding, and smelling. The Inuit believe that if hunters did not know these postures and watch the seals carefully, the seals would leave (Guss, 1985, pp. 231-233). Failing to learn such imitations may not immediately force seals to become extinct. However, learning a seal's behaviour through imitation may enhance the tracker's skill as well as force him to better understand the animal in its entirety. Lacking this connection, insensitive people find it easy to displace their emotions and reject the pain, significance, and beauty of other species, to the detriment of us all.

Imitation is not limited to physical movements. While mimicking an animal, it is important to imitate its mood. If a set of tracks indicates a startled movement, with a swift head turn, the tracker should mimic according to this interpretation, feeling the fear, muscle tension, and anxiety of the animal in his own body. The tracks, landscape, birds, and weather conditions all provide additional clues to draw such subtle conclusions. This role playing helps the tracker reach a deeper level of understanding as well as build a strong bond with each species.

Animal vocalizations should not be overlooked as another form of imitation. Having the time to study the calls of each bird, mammal, insect, and amphibian is time consuming. However, technology can be a supplement for busy schedules. Many cassette tapes and CD's are available that give precise auditory examples of numerous animals. Practicing the calls of different species can imprint verbal patterns into the tracker's mind. Interpreting vocalizations in the field can provide huge amounts of information to a tracker within a few moments of listening. To supplement audio tapes, I have begun to occasionally capture small creatures. Before attempting to catch something, I will sit near its home range and explain my intentions to it; asking it to help me learn. I believe that the animal kingdom understands the emotions and appreciation behind the words I speak. Usually I fail to have any difficulty locating a new, willing participant. I place the animal in an aquarium located in my living room, feeding it, watching it, and drawing it, keeping in mind that captured animals never behave naturally due to the stress of imprisonment. Listening to the species while asleep and awake tattoos the vocal pattern into my memory. At the end of the week, I release the animal where I found it and repeat the process.

Trailing remains one of the most powerful tools available to a tracker, yet few trackers attain the ability to follow an animal for any significant distance. To become competent at trailing takes tremendous practice and patience. Time spent tracking in varying terrain, substrates, and weather conditions is absolutely necessary. The wholistic tracker can extract a lot of information from one track, but he can learn much more from following tracks over great distances. The personality, intended destination, mood, and uniqueness of an animal come to light after it has been trailed for a considerable length of time. To first learn how to trail I suggest that a beginner should find a set of clear tracks providing him with a confirmed gait pattern. These tracks should end up meandering off into a more difficult substrate such as leaf litter. Deciphering the gait pattern before entering debris provides a tracker with a firm foundation with which to stretch his abilities into more difficult ground covers. In winter, all that is necessary is a fresh dusting of snow. Tom Hanratty, a local tracking expert, believes that trailing has even more benefits to those who pay attention:

For many days I tracked the weasel. One day, I followed the weasel to her home. Each day after that, I watched her with her family. When she came home to rest, and when she was out hunting, became known to me. For a long time I followed the weasel on her hunt. I saw her swing her head from the tracks she followed to sniff the air around her. She would swing her head in all directions. She knew where the sun sat, when the breeze walked, and where each bird flew. She did this while tracking the jumping mouse. Because I studied her so carefully, her gift for awareness became my gift (Hanratty, 1997, p. 72).

Tom Hanratty's remarks bring up an important point. Trailing an animal for long periods of time opens the tracker's eyes to the animal's world. The tracker begins to see nature through the eyes of that animal, assuming its personality, habits, and awareness. Whether tracking a bird, a mouse, or an eagle, if a tracker pays attention long enough, its secrets will become his. All traditional trackers, past and present, have known this secret. Specialized trackers could benefit from such wisdom.

After trailing an animal, a tracker's perspective begins to change. Using every sense at his disposal, the tracker has expanded his consciousness to include the animals, plants, wind, sun, moon, and earth. Through time the boundaries between the tracker and the earth dissolve, shattering the illusion of a partitioned world. The tracker sees the creature for what it truly is—beautiful, emotional, and aware, much like himself. At times the tracker will surrender his identity, forgetting that he is not a bear, butterfly, or dandelion. Trailing an animal in this way allows the tracker to touch it in a manner that defies time, space, and distance. It connects the tracker with the inseparable oneness in all of nature.

The sense of smell, our most under-rated sense, is far more useful than people think. For a family living in suburban America, smell plays little or no role in their survival needs. Being exposed to the same repetitive odors, people become accustomed to them. Without exercising the nose, it atrophies like any muscle that leads a sedentary existence, condemning an individual to a world without the sweet smell of a rose, the robust aroma of red fox urine, or the musky scent of a cattail marsh. Animals and traditional trackers are the exception; they depend on smell more heavily. A bear depends on his nose to find food, detect danger, and locate a mate. Like bears, traditional trackers use smell to find game by estimating the age of a track by its fragrance, as illustrated in this passage about Australian Aborigine trackers, written by Carleton Coon, an authority on hunter/gatherer culture:

In the open desert of western Australia, the hunter comes upon a set of kangaroo tracks, leans over, and smells them. Whether or not the aborigines [sic] possess an unusually keen sense of smell is a moot point that can only be settled by experiments. In either case it is

well trained. With it a hunter can tell how fresh the tracks are. When he finds kangaroo droppings or places where the animal has urinated, he has a still better test of the passage of time (Coon, 1971, p. 83).

The mechanics behind this amazing ability are extraordinarily simple, high levels of moisture present in a track or scat, allow odors to escape. Compressing any moist soil forces of color molecules. With age, the track dries out, diminishing the release of detectable scent. Tracks and scat always dry from the outermost point, inward. Given experience, a tracker learns to approximate the time it takes for tracks and scat to dry under variable weather conditions, based on the remaining intensity of scent. Escaping most peoples' observation, each substrate smells differently due to its basic composition. Sand, clay, leaves, grass, and rich loam each has a specific odor.

The entire world is full of vegetation almost anywhere on earth. Moisture within the vegetation provides the tracker with a helpful source of track aging information. The rate at which moisture moves from a level of high concentration toward a level of lower concentration is one indicator that aids in the determination of a track's age. Whether that moisture is found in the ground or in the twig of a damaged birch sapling does not matter. If a plant is damaged, it will immediately begin to heal its wound. But before that happens, the broken cellulose material of the plant dries from exposure. The tracker's job is to identify the subtle changes in odor, color, and flexibility that occur over time to plants, soils, and rocks. Learning these differences through continual nasal exploration is the only way to become a wholistic tracker, literate in the earth's language.

Taste, an ability closely linked to smell, plays a less significant role in tracking. However, it does provide useful information. Taste is a remarkable exploratory activity used to identify plants, rocks, trees, and shrubs. Each plant, like vegetables in a grocery store, has a distinct flavour. Learning the plant preferences of each animal species can help locate animals at any time of the year (caution must be used exercising this sense, for sampling the wrong plant species could induce sickness or death). The Akoa Pygmies of Africa live in the marshes and forests of elephant country. They used to hunt elephants several times per year. When hunting such large animals they would track using their tongues:

The hunters then left the camp, followed by their women and children. When the scouts found elephant tracks, some of the men laid their tongues on the compressed earth to taste how fresh the tracks were, and by close observation of the tracks themselves, they could tell its maker's sex and estimate its age and stature (Coon, 1971, p. 115).

I would not recommend this behaviour in the wooded eastern forests of the United States. Parasites and disease saturate most animal feces. Such intimate contact could be a health risk to the unwary tracker. However, the Pygmies found their tongues to be extremely accurate indicators of a track's age. The tongue is a sensitive muscle capable of detecting a particle the width of a hair. I would assume that the Pygmies were checking the moisture levels within the tracks, similar to the Australian Aborigine method of smelling track impressions. Neither method is more reliable. The primary element that determines a level of mastery in any tracking skill is practice, practice for long hours at regular intervals. Only after this is accomplished can a tracker determine what works best for him.

Touch, taste, and smell are all neglected senses taken for granted by the majority of people in information-age societies. Their lifestyles, habits, education, and desires all conspire to impede their sensual abilities. Participating in a traditional tracking class, most adults become child-like with the rediscovery of their dormant potential. At other times, this awakening confuses, angers, and frustrates a tracking student, who becomes aware of all that he has missed. Learning to trail or imitate animals using the body is not a science, discipline,

or department. It is an art from which awakens the mind and soul to the world. However, “awakening doesn’t necessarily mean arriving at full consciousness,” it is just the beginning of an infinite road to greater understanding (Mitchell, 1991, p. 40).

## Chapter 6

### The Mirror of Nature

Sitting against an old stump, I could feel the bite of the frozen ground. The light canvas of snow had not yet received its first brush marks from the residents of the forest. It had only stopped snowing a few hours earlier, the forest was still in a state of magical suspension. However, I needed to interrupt the magic and find some tracks to follow.

I decided that practicing a meditation technique would provide the quickest solution to my problem. Closing my eyes, I took two deep breaths, expelling tension, expectations, and worldly obligations, freeing my mind from distraction. Working from head to toe, I focused my attention on each body part: the position of my hands, the chill in my feet, and the stiffness in my back. While pretending to step out of my body, I envisioned light radiating from my hands, forming a large bubble around the entire forest. The bubble was an extension of myself, I was reaching out to everything inside of it. Relaxed and receptive, I moved on to find an animal that would teach me.

Seeing the landscape with my mind’s eye, I silently asked the forest to send me an animal teacher. Instantly, a raccoon appeared and beckoned me to follow it. Again, I left the confines of my body and moved with the raccoon through the woods. We walked across a road and into the next section of forest. My friend stopped next to a patch of ice, and I knew it had brought me to its tracks. After thanking the raccoon, I returned to my body. Ending the meditation, I stood erect and physically walked to the place I had been shown. With a smile and some astonishment, I saw one set of clear raccoon tracks trailing off into the snow. The raccoon taught me more than tracking that beautiful winter day, it taught me that any secret in nature can be ours, if we ask in the right way (Gaulke, 1998).

My story illustrates the knowledge accessible to those who practice meditation using visualization and envisioning. Other forms of self-guided imagery are less effective in tracking because they approach meditation in a passive manner and neglect to incorporate most of the senses. A tracker needs tools which can stimulate the mind’s eye and evolve into mobile and practical applications. These methods are powerful tools of communication when applied to tracking; they provide trackers with a profound sensory connection to their surroundings. A strong ability to visualize was common in most hunter/gatherer communities. Traditional trackers bring forth highly developed mental images from tracks to see what the animal looked like, how it moved, and what it felt. Visualization is so powerful that internal reality can become external reality. Some traditional trackers see the animals they are tracking as three dimensional holograms superimposed on the landscape. They view these images as being just as real as images in the “physical” world (Worsham, 1996a, p. 3).

Meditation has many forms, with visualization and envisioning being the most common in tracking. It is important to make a distinction between visualization and envisioning: they each have unique characteristics and applications. While visualizing, images are generated and viewed like a movie, yet the tracker does not interact with them. The tracker observes these images which could best be described as being projected onto a “movie screen” in her head.

In contrast, envisioning generates images that are three dimensional and provoke all of the internal senses. The tracker can touch, taste, smell, see, and hear everything about a situation at any point in time, appearing real in every respect. The tracker interacts with an envisioned world as intimately as she does with the physical. An amazing example of the power of envisioning was written about in the *The Mozart Effect*, by Don Campbell. Putting electrodes on leg muscles while a person was told to envision walking, revealed that only the muscles related to walking were stimulated (Campbell, 1997, p. 165). Taking this example of envisioning one step further, it becomes less difficult to understand how envisioning techniques could be used to communicate with animals, plants, and clouds. What would the electrodes have shown if the person was asked to envision running like a coyote?

Envisioning doesn't always have to be performed from the perspective of a human being. Envisioning oneself to be a tree, frog, or mosquito would be just as easy. Fools Crow, a famous spiritual leader of the Lakota Sioux Nation, practiced “becoming” and advocated its use. For example, he spoke of becoming a rock:

I talk to it like I do a person, and I let the rock talk to me. It tells me where it comes from, what it has seen, what it has heard, and what it feels. We become friends. When we are finished, I have a whole new picture of that rock. Doing this expands the way I behave toward rocks and toward other things, and my mind grows. The more I do “becoming,” the wiser I become about everything (Mails, 1991, p. 64).

To accomplish what Fools Crow did, envisioning was involved. He used many senses to describe the interaction that took place between himself and a rock. This method of communication and learning can be applied to anything in nature. Afterwards, the tracker has a more complete picture and healthier appreciation for that object. In a sense, the tracker becomes the object, exhibiting its posture, movements, behaviour, level of awareness, and emotional status. When observing an entity, the entity can never be fully understood. Observation implies separation: “becoming” removes this illusion. This technique literally allows people to walk in someone or something else's shoes. To begin envisioning, a tracker should learn to develop her skill while sitting still. Later, as focus and clarity improve, she can attempt to envision while tracking. Recently, I attempted this very thing.

It was March; I was tracking wolves alone for two days in central Wisconsin. The first day I spent a large part of the afternoon driving dirt roads searching for tracks. At four o'clock I found a set; they were skirting the edge of a secluded road. I didn't have much light left so I decided to measure, diagram, and make plaster casts of the tracks. I slipped in a short envisioning exercise at the end.

The next morning I set out again, combing the area for fresh tracks. Two hours into my search, I got lucky. I came across a small pack that had crossed a recreational trail intersecting the road. In the middle of the road were two large piles of wolf scat that were not present the night before. I parked my truck and walked on foot, approaching the area with caution; I didn't want to destroy any tracks.

Circling, I realized they had crossed the road twice. The wolves must have turned back after investigating the area. Then, I noticed a deer carcass in the brush; the wolves had come

to feed. I spent the next three hours piecing together the story: how they approached, how they ate and carried a part of the carcass deeper into the woods, and how they dispersed back into the landscape like a whisper. There was perfection in every movement and beauty in every mark. At times I was fixated on the motion picture that was developing in my head. I could see each of them, effortlessly carrying out their duties, I wanted to know them better. I started trailing the wolves through the woods. At times they would merge into a single set of tracks, following each other with perfect synchronicity, then spontaneously fanning out into an intricate hunting machine.

After about one half hour, I decided to rest on top of a hill. Taking two deep breaths, I relaxed, releasing the tension and distracting thoughts from my body and mind. Replacing the rush of my mind and stiffness in my muscles was a white light, filling my body and mind with a soothing tranquillity. Focusing back on the wolves, I asked them where they had gone. An image quickly appeared in my mind's eye: three wolves moving downhill, toward the southeast. I decided to incorporate "becoming" into my search. Again, I took two deep breaths, this time focusing on the image of wolves moving down the trail. I began to trot like a wolf, acquired the awareness of a wolf, and moved with the image of a pack in front of me. It was difficult at first, but with time I slipped into a different realm. I was tracking a trot, but not always seeing the tracks, just the wolves ahead of me in my mind's eye. It was like watching a nature documentary and becoming part of it at the same time, on a flickering television screen that could not hold its picture. The boundaries between inner and outer worlds were dissolving. I felt like a wolf, graceful, fluid, and strong, knowing where they were headed without having to see the tracks. Nearing twilight, I stopped following the wolves and thanked them for teaching me. Walking back to my car, I was exhausted. I must have run over two miles around brush, over hills, and through snow, but I never grew very tired. Maybe I was part wolf before I quit trailing that afternoon (Gaulke, 1998).

James P. McMullen, a tracker in Florida, knows this bond well. He was determined to "become" a panther named Shakespeare:

Who better to track a panther than another panther? Only another supreme natural tracking machine could track the supreme tracking machine. It is time for this breakthrough to happen, to jar loose still another path to my goal, to lead me to the soul of Shakespeare (McMullen, 1984, p. 251).

Having such experiences or even entertaining the possibility that they exist brings personal identity into question. Voluntarily reaching out to other creatures with every ounce of passion softens the walls erected between nature and our egos. During childhood and adolescence most children are taught outright that nature is separate from human beings. Breaking through these fallacies, trackers have trouble at times dealing with their expanding self identity. Becoming sensitive to the rest of the world can be overwhelming. Doubting themselves and everything they do, sometimes wholistic trackers compromise their beautiful lifestyles, bending from the strain of unsupportive and disinterested social, religious, and family environments.

Wholism must be sought, for without it, the traditional tracker is incomplete. Limiting oneself to a narrow focus of tracking is counter-productive. The world is too fast and complex to fit neatly into any single perspective. With an open mind, trackers can continually absorb knowledge at a feverish pace, discounting information that proves fallible. In this manner, a tracker never cuts herself off from ever expanding horizons of understanding.

During my first year of tracking, I refused to trail deer, purposefully disregarding the fact that deer are where many beginners start, their hooves leave sharp impressions, even in

leaves. Spotting deer tracks, I would walk passed them. I did not want to become more aware of deer habits or personalities.

Every November since I was twelve, I had gone deer hunting with my brother and father. I had already noticed my increasing attentiveness to other species. I did not want my sensitivity to include deer. However, I didn't understand one important thing, my empathy toward fox, raccoon, rabbits, and squirrels spilled over into the rest of my life. Refusing to physically track whitetail deer only put off the inevitable.

After 10 months, I decided to break my deer tracking boycott. I was hung up on feeling the good emotions emanating from nature, refusing to experience the pain and sadness many animals carry. I tracked deer periodically through the summer and into late fall. I came to love them through understanding their moods, habits, and weakness. I learned a great deal from the deer people.

In late December, I received a call from my mother-in-law. My wife's brother had gut-shot a whitetail doe near their house. A gut-shot animal meant trouble, it is hard to track and usually dies slowly. I got to their house after dark, and we headed down the road toward his tree stand. Before we even got into the woods, we found the doe lying in the ditch. Everyone was happy that it didn't have to suffer.

The next day I returned to recreate the entire scene, I wasn't looking forward to it. To my horror, the doe had been with two fawns, I knew them well. After being shot, the doe moved into cover. It followed a trail, repeatedly gazing back at the archer. The two fawns stuck together, scampering away 30 yards from their mother. The doe was no longer thinking about her offspring. The arrow had entered to the right side of the spine and exited her left lower abdomen. The left stride was noticeably short from the wound's pain, but her hooves were still registering a normal trail width. A steady stream of blood stained the snow just to the inside of her left rear track.

I followed my normal tracking routine, and while placing a hand in one track, I took two deep breaths and envisioned the entire episode from within her body. My back tightened and my attention wavered; I felt a lack of clarity looking back toward the hunter and my young offspring. I moved in short and painful spurts toward the road, until I could go no further. I fought to stay afoot, but it was no use; I had lost too much blood. Lying down, I kicked and thrashed in an attempt to ward off death, but in the end death won. My eyes were damp when I finished the meditation. Walking back to my truck, I passed the location of her death. On the other side of the road were two sets of fawn tracks facing their mother. It was their last goodbye and first taste of adulthood (Gaulke, 1998).

I fought the idea of ever tracking in such a situation, but after this experience, I arrived to understand that the greatest joy and deepest sorrow must be honoured, for they are both gifts that teach people valuable lessons about life. However, accepting the duality of the world was easier said than done.

Developing empathy, compassion, and intimate relationships with the natural world is enjoyable, most of the time. However, similar to people, nature is not exempt from pain. Often, joy is replaced with anger, frustration, anxiety, or sadness, depending on the circumstances a tracker is aware of. Nature is a mirror, reflecting the pain within ourselves and the pain it endures as a consequence of our actions. Tracking forces people to develop sensitivity to the world, and each person reacts to the pleas of nature in a different way. Reaching this point of sensitivity, many sorrowful and distasteful actions appear painfully clear to a tracker. Sarah Conn, a clinical physiologist describes this phenomena. "The world is

sick; it needs healing; it is speaking through us; and it speaks the loudest through the most sensitive of us” (Roszak, 1995, pp. 12-13).

Many traditional trackers become overwhelmed with the level of negativity emitted from atrocious acts perpetrated against the environment. Some trackers dwell on these painful episodes, incapable of dealing with their intensity. Feeling another’s pain is as normal as feeling their joy; most people just haven’t had much practice at it. Entrapped in their sorrow, a tracker is sad to have entered a “wall of grief” (J. Young, personal communication, April, 1998). The most wise trackers turn grief into a positive situation, refusing to develop a negative attitude; it motivates them to take action. Through teaching, conservation efforts, and mentoring programs nature is healed (and the rest of us along with it). The crimes against nature should be acknowledged, as well as people’s feelings about them, but they should not be allowed to render a tracker inoperative. Balance must be maintained even when the environment expresses its enormous amount of grief through the tracker’s receptive senses. These emotions must be recognized, accepted, and allowed to pass, having conveyed their important message. What we choose to do with the messages is up to us.

Expanding her abilities to perceive the natural world, a wholistic tracker looks deep into the heart of every creature she encounters, appreciating its beauty, experiencing the multi-faceted nature of its being. Every element in nature has the potential to provide the tracker with an aesthetically pleasing or displeasing experience. The nature of an aesthetic experience revolves around an individual’s ability to perceive or communicate with a natural entity, using raw emotion, intuition, or any of the other senses. The traditional tracker trains herself to view the world in this way, communicating using the ancient, unspoken languages. She perceives the essence and beauty in all things, never overlooking anything as insignificant or unimportant.

The world of a tracker revolves around the land and her relationship with it. Practicing the skill of “becoming” and envisioning propels the tracker into a realm where identity is permeable, so permeable that communication between her and the rest of creation is ceaseless. This bond engulfs her world view, turning every object, person, plant, or animal into a work of breathless wonder that she cannot deny as part of herself. The traditional, wholistic tracker performs wondrous acts of awareness and perception with her childlike faith that within everything is a part of herself. Being raised in an aesthetically appreciative culture, one Australian Aborigine tracker displayed his unique ability to touch the eternal:

The dreams of waking life appears to be longer lived, or at least more repetitive than our nighttime dreams. In actuality, though, all dreams are timeless. When I was an anthropology student I read the account of an ethnographer who had spent considerable time among Australian Aborigines. He had heard stories of the tracking skills of one particular hunter; The stories were so incredible that he was certain they were fraudulent. When he finally met the tracker, he challenged him to follow the trail of a long trek he had made with another Aborigine years before. He was certain this was impossible and that no trail could remain after such a long time. The tracker was happy to take up the challenge, though, and the moment he was shown the starting point, he took off at a trot and ran the whole course of the journey without even pausing to examine the spoor. The anthropologist was humbled and apologetic. He asked the Aborigine how he had accomplished this feat. “It was easy,” the tracker replied. “I just went back to the time you made the journey and I ran alongside you” (Cowan, 1995, p. 53).

I’ve only gotten my feet wet in tracking. Reaching a level of mastery will take a lifetime of hard work, dedication, and love for this rare art form. The world is still a

mysterious place, full of uncertainties and truth. The traditional tracker lives in such a world, while “progress” marches on, robbing generations of the most simple and fragile experiences available to the human soul. To live in this day and age we need not be techno-addicts, nor reject technology entirely, for the timeless truths and practices of trackers can adapt to any situation if we want them to. Tracking could help reinstitute meaning, empathy, happiness, creativity, spirituality, and universal respect to every corner of our lives. At the very least, traditional tracking can teach our kids how to use each shred of their mind’s potential, so they will be capable of walking through a forest, hearing the call of a woodcock, the yip of a coyote, and the buzz of a cicada, without being afraid of the “unknown” world around them.

## Conclusion

Traditional methods of animal tracking have been on the verge of extinction for many years. There are very few people remaining who continue to practice this ancient skill. In this thesis I’ve mentioned many factors which inhibit people from becoming proficient at wholistic tracking: language, technology, diet, profession, culture, and fear of the unfamiliar. Tracking is difficult and requires a lot from an individual. It takes dedication, patience, and humility. I suppose if it wasn’t difficult, everyone would be doing it.

I believe that this thesis has filled a void in the tracking literature. For every 100 specialized trackers, there is probably one traditional tracker left. Consequently, the vast majority of tracking literature revolves around research and scientific applications. Wholistic tracking material is extremely scarce. I have informed the specialist about alternative methods of tracking as well as introduced many old timers to research which confirms what they have known all along. This is where the future trackers must dwell, becoming interpreters and intermediaries between the contemporary world and the eternal truths of nature. This study is far from complete, but I believe that with time, others will follow and contribute to what I have presented here. The task will be difficult due to the expansive personality of tracking. Many disciplines will have to be referred to in order for a traditional tracker to explain what occurs during the practice of his art. Ecopsychology, neurology, anatomy, natural history, native lore and culture, art, and the study of meditation must be searched to gather the scattered parcels of truth about tracking which lie buried under mountains of useless facts.

Blending history, scientific fact, and personal experience, I have put together an explanation and adaptable outline to describe wholistic tracking: what it is, how it can be learned, and why it is important. This thesis is not meant to be used as a strict format to learn traditional tracking, but rather as a loose guideline to develop an individual style, while still maintaining a wholistic approach. I would like to think of the exercises and advice I have passed on as tracker’s “training wheels,” to be discarded after they have mastered the basics. My paper is intended to be nothing more and nothing less. I know in my heart that if anyone were to follow the exercises I have provided in chapter four and throughout the text, he would begin to see the world differently. However, reading this manuscript cannot give a tracker knowledge, experience, or wisdom about nature. The secrets of the wilderness can only be learned on the trail, alone with the wild beasts and vegetation as guides. Traditional animal tracking cannot and will not die, for there will always be those who are driven by an insatiable desire to seek out the voice of the earth.

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