

We Save What We Love: An Interview with Gordon Hempton

by Leslee Goodman

Gordon Hempton is an acoustic ecologist. He has traveled the globe three times recording the vanishing sounds and silences of nature—from the songbird chorus that greets the dawn to the crash of waves on a rocky shore; from the call of a whale in the ocean depths to the drip of rain on a forest floor. After 30 years recording the natural world, he reports that “There are fewer than a dozen quiet places left in the United States. Even in our wilderness areas and national parks, the average noise-free interval has shrunk to less than five minutes during daylight hours.”

Hempton makes his home in Joyce, Washington, so as to be near Olympic National Park, the place he calls “the listener’s Yosemite.” There he finds not only relatively long periods of undisturbed quiet, but also the greatest diversity of natural soundscapes of any national park he has visited. Covering more than 1,400 square miles of the Olympic Peninsula, the park encompasses three distinct ecotypes: the longest wilderness coastline in the lower forty-eight states, the largest temperate rain forest in the western hemisphere, and a rugged interior of alpine valleys ringed in glacier-capped mountains. The park is home to more than three hundred species of birds, including northern spotted owls and bald eagles, as well as cougars, bears, salmon, Roosevelt elk, and at least eighteen species of animals found nowhere else in the world, such as the Olympic marmot, the Olympic snow mole, and the Olympic torrent salamander.

Hempton is the co-author of a book, *One Square Inch of Silence*, which describes his campaign to create One Square Inch of silence in the Hoh Rain Forest of the Olympic National Park as a test case for protecting other wilderness areas from noise intrusions. He is passionate about protecting quiet as a means for enticing humanity to “fall in love” with the natural world again—so that we will protect it. “We save what we love,” he says.

For this interview, a version of which was originally published in *The Sun* magazine, Hempton spoke with me on several occasions by phone. – Leslee Goodman

Goodman: There’s a beautiful line in the prologue to your book that reads, “Silence is not the absence of something, but the presence of everything.” Please tell us what you mean by that.

Hempton: That is the line of my book I receive the most comments on. Writing the book was a tremendous challenge for a lot of reasons. One was to convey a lot of information, and two was to do it in layperson’s language. I remembered the words of my high school mentor: Do not speak until you can improve upon the silence. So I sat there staring at the blank screen of my computer, hesitant to write until I could improve upon the silence. Because this is a subject that is deeply meaningful for me, I wanted to write at a soul level. A stroke of luck came with a winter storm that blew through the Northwest, knocking down a tree that took out the power line. Without a computer, I went and sat by

the woodstove and wrote the prologue by candlelight.

It was an important experience for me to unplug from everything and really be in my own silence and write in the old way with paper and pen. At various times in the book, when it was not about facts, or about digesting the research or recalling the journey, when it was time to write about the meaning of it all, I actually went over to the breaker switch and cut off electricity to the house and wrote with pen and paper.

To elaborate on silence being the presence of everything: When you're in the presence of natural silence you're not alone, and you can feel it. Whether it's the distant sounds coming from miles away, or the close proximity of a giant tree whose warm tones you can feel, there's a presence, a definition of the living space, which is conveyed through the natural amphitheater that amplifies the sound. It's a quieting experience.

Goodman: But wouldn't the sounds of people be included in that everything?

Hempton: Yes, they can be. If it's not idle chatter, it can be part of the everything. The problem with the sounds of the modern world is that, unlike the sounds of nature, human sounds aren't really paying attention to the All. They're oblivious to the cycles of living that have been established since the beginning of time.

Imagine we were all gathered to hear a symphony and a handful of people were running a vacuum cleaner, or playing their own instruments, without any regard to the reason we were all gathered together. That's how human sound often impacts the environment. I think of Campbell Lake in Pipestone Canyon, in the Methow Valley, Washington, which is a very natural amphitheater. The lake itself is like a speaker and the surrounding hills are like the cone of the speaker. I've listened many times to the sounds of the frogs there, and the killdeer and the blackbirds, the drumming of the grouse, the rustling of the aspen groves. They're all present. That is the silence that is the presence of everything. But there is also a road past Campbell Lake, and I've seen motorcycles roar past the lake and through the canyon. They're taking that route because of its scenic splendor, but there is so much more there—and they're oblivious to it because the noise of their motorcycles overpowers it.

Goodman: So would it be fair to say that human sound is often narcissistic sound?

Hempton: Sometimes it's narcissistic—like aftermarket mufflers added to motorcycles—but often the sounds of people are just waste—the effluent that comes with their activity, with no regard that it falls into a common and shared environment.

Goodman: Why is natural silence important?

Hempton: Its importance is self-evident to those who are fortunate to have it in their lives. What is the importance of seeing the Milky Way? When I look up at the Milky Way—from Hurricane Ridge in Olympic National Park, for example—it never fails to impress me with what a difference there is between talking about the universe and looking up and actually witnessing the galaxy that we're a part of. The universe, the stars, the everything that Earth is traveling through is so immense that, by comparison, the cares that I drove up with—my ever-present “to-do” list—shrink in significance. And at the same time, life itself seems so precious, so wonder-filled, that I am struck with new awe and reverence. My life gets put back in order. I remember that there are really only a few things that matter. The experience is spiritually purifying. Experiencing silence can be like that.

Silence also expands your living space. In a naturally quiet place you can hear for miles. When I ask people “How far can you hear?” people who live in cities can often hear only a few hundred yards. But people who grow up in the wilderness, or in naturally quiet places, know that—at least in their childhoods—they could hear many miles. Your living space becomes, in practical terms, as vast as the Milky Way. Your sense of where you are is huge. It’s wonderful. I call natural silence “the Milky Way at ground zero.”

People today have a harder time appreciating silence because so few of them have ever experienced it. Native Americans typically recognize the value of natural silence. Usually when I ask a white landowner for permission to record natural silence on their land, they’ll say something like, “Why? Why do you want to record nothing?” But Native Americans understand. The Yakama tribal elders, for example, never ask that question. They know that it’s important to hear and understand natural sounds.

Goodman: What importance does silence have for species other than humans?

Hempton: For wildlife, natural silence is critically important. There is no indoors for wildlife. Outdoors is where they have their conversations. They’re as busy communicating as we are, and if they have trouble sending or receiving communications it can have fatal consequences. The little research that’s been done on the impact of noise on wildlife shows that it very definitely impacts species’ ability to survive. Hearing is so important to the survival of vertebrates, that all have the ability to hear, even though some are blind.

You and I, for example, are doing just fine communicating on the phone, even though we can’t see each other, because we have a relatively clear and quiet phone line. For wildlife, however, communicating in a quiet environment could be likened to talking on a party line. There are several conversations occurring simultaneously, but since the species have had thousands of years to evolve together, they’ve developed different frequencies on which to communicate so that they can send and hear the messages sent by their own. But now a large, broad-spectrum roar enters the soundscape—traffic, for example, which is the number-one noise pollution in the world—and now all of the wildlife conversations become much more difficult. Unless the noise is abated, they will have to evolve new voices, or new hearing, in order to communicate. And that is what is happening. Studies done in Europe, for example, have found that entire populations of songbirds are changing their songs to a higher frequency as a result of highway noise. In one study, when traffic was stopped for two years due to road repairs, one species of bird returned to its original song, which is of lower frequency. The significance there is that lower frequencies carry further. In other cases, of ovenbird pairings in Canada, for example, the noise of gas lines reduced the pairing success to 70%, versus 100% for the control group. A study of sage grouse pairings found that noise due to oil and drilling exploration near the leks (the grounds on which they perform their mating rituals) reduced their numbers by up to 50%.

In the oceans, the consequences of noise pollution are even greater. The only marine mammal extinction in the last 50 years—of the Yangtze dolphin—has been attributed to noise pollution from shipping traffic.

All of these effects are about vocalizing and sending messages. But you can also imagine that prey animals in the wild need to be able to hear if a predator is approaching. Noise makes this much more difficult. It’s not surprising to find that the noisiest places in our cities also have the highest crime rates. One place, for example, is Freeway Park in Seattle. Freeway Park is built over Interstate 5. The noise level there is so loud that we

would not be able to have this conversation. While the park does provide views of nature, the sound of the traffic roaring underneath is incredibly loud—and contributed to a horrible crime problem there. People could not detect the noise of robbers and rapists approaching, nor hear the victims' cries for help. To reduce the crime problem, much of the vegetation has been removed, and a call box and an alarm button have been installed so that people can summon help. There's not much they can do about Interstate 5.

There is another element I would like to introduce to this discussion, which is the identity of a place. As noise has increased and natural silence diminished, places all over the world—particularly urban places—have lost their local identities. The world has basically begun to all sound the same—basically, to sound like traffic. You no longer hear the regional, local identity—of voices speaking the local language, of footsteps on different types of ground or pavement, of rain, wind, birds and other wildlife native to the area.

Consider also that in modern times popular songs are typically about love for a person, but that folk songs—particularly in Europe—are often love songs about place. Natural quiet allows us to fall back in love with a place—and to appreciate how one place is so different from any other place. Noise, however, not only detaches us from each other—and research shows that in noisy places people are much less likely to help each other—but it also detaches us from place. I think that's one of the greatest lessons I've learned from being in natural silence like at One Square Inch. In natural silence we feel a part of everything—a part of the presence of everything. We can begin to feel love for a place—and through the place, for everything. When you love, the responsibility of caring for something becomes effortless. Just as we do things for the people we love without asking “what will I get out of it?” so we are better able to care for our world without running a cost-benefit analysis to see whether caring for a place is “worth it.”

You'd think that natural quiet would be an attribute of all of our national parks, but the average noise-free interval in the national parks is now less than five minutes. At Yosemite in 1992, aircraft noise was audible most of the time. There are more than 90,000 air tours each year over Grand Canyon National Park. That's why the quiet at Olympic Park is so rare.

Goodman: You've described the process you go through to “clear your mind” to make it more receptive to silence. Before heading to One Square Inch you might spend several hours body-surfing, followed by a night in the forest, so that by morning your ears might be “relaxed” enough and your mind clear to hear the river valley “singing.” Perhaps this is why most of us are so oblivious to the sounds of nature, or of silence: we're constantly bombarded with our own mental chatter. Can you speak to that?

Hempton: I believe that our mental condition reflects our external environment. Most of us live in cities—which are very noisy and chaotic places. As a result, we tend to have a lot of mental chatter. You'll notice that not all of it is even coherent. When a person then goes to a naturally quiet place, one of the things they may notice is not only how physically loud they are—their voice, footsteps, food wrappers, Velcro, zippers—but they'll have internal noise, as well. Their ears may be whining, they'll have nervous energy—and this may continue for a day, a week, or even more. But eventually they'll experience an internal shift—their imported “to-do” list will fall away, their body will find its rhythm, their ears will attune themselves to their new surroundings, and their mental chatter will quiet. They will recognize unnecessary thoughts as just that—unnecessary. They will become acquainted with the place they're actually in, rather than the place they usually are—which is in their head. That's the part I really love.

Goodman: I suspect that process happens more quickly for you now because you've had practice at it.

Hempton: Yes, like any other practice, you fall into the rhythm more readily the more you do it. I've done it enough that I don't resist. I'm more familiar with the steps. I relax. When something is uncomfortable, I let it go. I don't push uncomfortable thoughts or feelings away.

Nick Sherman, with Foo Films, who has directed a film about my work called *The Soundtracker*, used to ask me, "Have you ever studied Zen?" I was in Hawaii last October and picked up a book called *Being Zen: Lessons from a Quiet Place*. [Laughs.] So, though I haven't studied Zen formally, I have taken many lessons from a quiet place.

I'm not talking about silence as a physicist does—silence as a theoretical condition, or the vacuum of outer space, where vibrations have no media to travel through. Here on planet Earth, there isn't that kind of silence. The silence that I refer to is the absence of all noise pollution, where the noise of the modern world is silent and you're left with the environment of our evolutionary roots.

Isn't it marvelous that when we hear a bird sing it sounds like music to us? After all, birds don't sing for our benefit. We identify it as music because we've evolved along with it. It's part of our shared past.

Goodman: I guess that relates to the reason that film producers buy "room tone" to add to the silent portions of their film between dialogue sequences. The ear would recognize the lack of vibration and find it unnatural.

Hempton: Yes, low-frequency sound content is something we feel more than hear.

Goodman: And we equate low vibrational tones with natural silence?

Hempton: Oh yes. If you record natural silence, your recorder will pick up all kinds of vibrations that you as a listener would not readily be aware of, or recognize.

Goodman: How did you get interested in acoustic ecology?

Hempton: The short story is that I was twenty-seven years old on my way to graduate school in Madison, Wisconsin. At the end of a day of driving I pulled off the side of a road in Iowa to save myself the cost of a motel room. I lay down between two rows of stubby cornstalks and listened to the crickets. Then I heard a thunderstorm booming its arrival from miles away, but I didn't get up. I continued to lay there and listen as the thunder got louder and louder with the approaching storm. I let the thunderstorm roll right over me. I let it rain. I just let it pour. I simply took in the experience. There was no more driving I wanted to do; no more thinking I wanted to do; no more moving at all that I wanted to do. I just let it happen.

When it was all over I was left with one question: How could I be twenty-seven years old and have never listened before?

Although I had all these enthusiastic plans, I now realized that my life had been pretty much a paint-by-number life. Somehow in the grand scheme of things, I felt that I was really missing out. There was something much greater that this opportunity of living could afford—and I was missing it. I ended up dropping out of graduate school because nothing

seemed to measure up to the authenticity of that listening experience.

I didn't know that I was going to become an acoustic ecologist. I didn't know what was ahead of me. I knew what was behind me: a lot of student debt and a life that had been adequate but no longer was. I just knew I wanted to become a better listener. And that's still the way I feel today—I want to become a better listener.

I found that using a microphone and tape recorder was a valuable tool for improving my listening skills. The microphone hears everything, so I would listen to a recording of what I'd heard with my naked ear and become aware of how much I had missed. I jumped freight trains and recorded interviews with hobos. I interviewed punk rockers in downtown Seattle. I started recording everything exciting I could think of. I worked as a bike messenger in Seattle as my day job, but rather quickly I became totally immersed in how natural places are so symphonic, so musical, so informative, and yet so hard to find outside of noise pollution. And I realized that I was creating very valuable recordings because the places themselves are disappearing so rapidly that one day people won't be able to hear them anymore.

I spent nine years on my bicycle as a messenger while I recorded as many natural places as I could get to. I remember trying to get a bank loan to record more exotic places before they vanished and the bank officers laughed at me. So my legs were the only power I had to earn an income and then take time off to record these natural places. After 10 years or so, at the end of my bike career, I got a grant from the Lindbergh Foundation; then one from the National Endowment for the Arts in recognition of my work; then I won an Emmy. Things started snowballing, and I finally got control of my time. I found that I was one of the very few people in the world who'd been paying attention to the value of natural soundscapes, and the only one in the world who was recording them unedited. I simply took the attitude that Nature did not need improvement. If anything needed improvement it was where I needed to be while recording—I might need to change my listening position, or the time of day. Meanwhile, the world of soundscape studies emerged at Simon Fraser University, and the Acoustic Ecology Institute was formed, along with the World Forum on Acoustic Ecology, and other institutions. A lot of other people started paying attention to what I was paying attention to.

Goodman: You've traveled the globe in search of natural silence. What are some of the most profound experiences you've had in your search?

Hempton: That's a tough question because there are so many. [Pause] I'd like to tell you the story of Bertis and the lions. It takes place in the Kalahari Desert in 1990 and it's a story about place and about a person who has grown up intimately knowing a place. Bertis was my tracker. We only had two words in common—lion and no lion—but we built a very meaningful relationship out of those two words. [Laughs]

The Kalahari was a very trying place for me because it is so very hot during the day. Always in the 100s, and very, very dry. And it was dangerous in some ways. But the sound was really so beautiful—it was possible to listen for literally a thousand square miles.

One day we'd been driving looking for a place to record. I'd selected a site and asked Dr. Liversege, my interpreter and driver, to stop the Land Rover. But as I began to get out of the car, Bertis erupted with a flurry of words I couldn't understand. Dr. Liversege, my translator, told me, "Bertis says you cannot get out."

I said, "I've come a long way—halfway around the planet, in fact. Why shouldn't I get

out?" Dr. Liversege said, "Bertis says there are lions." I looked around, saw nothing, and said, "How does he know there are lions?" Dr. Liversege began a long conversation with Bertis and finally reported, "Bertis doesn't know how he knows, but he knows."

I said, "Well, there's an element of doubt," and got out. I walked into the bush and was greeted by five lions.

I back-stepped very carefully to the car and said, "OK, Bertis knows."

The next morning I got up very early and got out of my tent and walked out to the Kalahari and set up my recording equipment. I wanted to record the humming of countless insect wings as they prepared themselves for dawn flight. It was an entirely different experience from listening to one insect. Listening to the vibrations of so many insects over such a vast area—it was like experiencing the Milky Way again. I was so insignificant, and yet life is so exciting to be a part of, I was humbled and inspired at the same time.

When I finished recording, Bertis asked through Dr. Liversege if there was anything I'd like to bring back from Africa. I said "Yes, I'd like to bring back a magic stick."

Bertis told Dr. Liversege that he knew where one grew and he would take me there and get it for me. He told Dr. Liversege where to drive and we stopped the car in the exact same place where I had my encounter with the lions. As Bertis began to get out, I erupted saying, "No, Bertis! Don't get out! There are lions! Five of them!"

But Bertis said, "There are no lions."

Again, I asked, "But how does he know there are no lions?"

So Bertis and Dr. Liversege had another long conversation, which ended with Dr. Liversege telling me, "He does not know how he knows, but he knows." So I followed Bertis and we harvested a magic stick, which I still have today.

I learned a great lesson there: that there are ways of knowing that develop when a person has grown up naturally in a place. When they haven't had somebody tell them how to listen, how to think, what to make of the information they're receiving.

I developed a lot of respect for Bertis in the time we were together. His knowledge was amazing. One additional story I want to tell you, briefly: I lost my recording gear in the Kalahari. I got up in the dark one morning and I walked out to set up my recording gear in two different locations. I hung it up in some trees so that the hyenas wouldn't crack it open. Then I retreated back to camp and left two sets of gear running to record the dawn chorus—the symphony of bird song that announces sunrise. Later, when the sun came up, I started out to retrieve my gear, but I had no idea where it was. The Kalahari looked so different in the daylight—I couldn't find it! Twenty-thousand dollars' worth of equipment was lost; plus I had a lot more recording work to do on the trip, so I really needed to find that equipment.

I went to Dr. Liversege, who explained to Bertis what had happened, and Bertis thought it was hilarious. He couldn't understand how someone could have something in the morning and then not know where it was—that very same day. But when he saw I was serious, he looked down at my feet as if to study them. Then he turned and walked directly to my first set of gear in the bush about 200 yards away and picked it up, and then walked directly to

my second set of gear and picked it up, and walked it back to me. He was grinning the whole time and told me, through Dr. Liversege, that he thought it was so funny that I was alive. It was a wonder to him that I'd traveled halfway around the planet, yet still couldn't do basic things for myself.

Goodman: You've said that children up to the age of five are good "natural listeners"—aware of ambient sounds all around them. Then they learn to "focus" and tune "noises" out. Can you talk a bit about the auditory skills we lose as part of our educational or civilizing process and how those might be preserved or restored?

Hempton: We are born listeners. We have to be. It's evolutionary; instinctual. When people ask me how to learn to be a good listener—which actually is a relearning process—I tell them to put a preschooler on their shoulders and take a night walk. Children will point out all kinds of sounds to you. You won't be able to take two steps without them asking, "What's that? What's that?" I say to put them on your shoulders because otherwise you won't be able to get anywhere. Toddlers don't have much need to travel in nature; there's so much to explore in the immediate vicinity.

Then we send them to school and the teacher says, "Listen to me," which really means to tune everything else out and focus on "what's important," or what's "up front." But research shows that the body doesn't stop registering all of the other sounds, the noise, the vibrations. However, in a loud, noisy environment, the body registers it as stress. So I believe that it's more important than ever for us to listen, by which I mean to pay attention to the noise in our environment, because it's affecting our health, and it's killing our wildlife.

Goodman: In your book, you note that the Audubon's avian census reported in 2000 that 25 percent of U.S. songbird populations are in decline.

Gordon Hempton | We save what we love

in Interview

Hempton: That's right. And their 2007 census warned that fifty-nine continental bird species and thirty-nine Hawaiian bird species are imperiled. Twenty formerly common birds are in serious decline: the northern bobwhite is down 82 percent; the evening grosbeak down 78 percent; the eastern meadowlark down 72 percent, and so on. If we'd been listening rather than looking, we'd have reached this conclusion far sooner—decades ago. The dawn chorus, which is the choir of bird species vocalizing as the sun approaches and clears the horizon, has changed remarkably over the last several decades. I have recordings from the Mississippi Valley before these huge declines in bird species and today you wouldn't believe that the recordings are actually from nature, because the chorus reaches such a dramatic crescendo. In ten minutes we go from the single far-off hoot of an owl echoing through the hardwood forest to a dense chorus of countless bird voices all singing at once. And the most remarkable thing about it is that at its peak, though you can't count the number of species participating, they all combine to form a music that is so well defined and has such a rhythm to it that it's all you can do to keep from getting up and dancing! Seriously, it's like an orchestra with 2,000 musicians! All of the separate voices blend to create an incredible larger song.

When I play these recordings during lectures to modern listeners, their first response is to try to identify the individual species participating. Then we hit the climax and they can't pick out the songs they know, so they say, "It's too loud! It's too much! It's

overwhelming!” They don’t like it when their ability to identify the participants is overwhelmed. But when I encourage them to stop trying to pick out the pieces, to stop trying to make some sounds more important than others, and instead just try to open and take it all in, then usually everyone in the room hears the music that they didn’t hear before. And it’s all the more astounding because what they are hearing is all outside of human intention. We aren’t applying our filters. We’re simply letting go and letting it all in.

Goodman: Before we were urbanized, we needed our hearing. We needed to be able to hear the snap of a twig in the woods that might mean a predator was approaching. But now our hearing brings us unwanted noise, so we shut it out. We walk around with iPods in our ears, or with the radio blasting in our cars. We don’t want to hear our environment.

Hempton: Yes, iPods are everywhere. And as you point out, many people plug in their iPods to avoid hearing the noise pollution that is all around them. The attitude I take, however, is that even though this noise is robbing us of something essential, it is doing something else that is also essential. Our ancestors took quiet for granted; they never imagined that we’d lose it as part of our environment. But now we largely have lost quiet and so we must consciously choose to protect quiet and limit noise, at least in certain places. I believe there were some who made that choice earlier when we created our national park system. But when we visit our national parks today, we’ve lost quiet even in these so-called protected places. So recognizing the noise that we’re living with, and recognizing that we’ve largely lost quiet—even in our most pristine, natural places—gives us the opportunity to choose quiet as a recognized value we want for our national culture—and that’s a beautiful thing.

It’s interesting that virtually all of the research that’s been done—about 5,000 articles—has been on the damaging effects of noise. There’s very little research on the health effects of quiet—partly because there’s so little quiet available. What has been done implies that quiet helps people to relax, become more willing to help others, to do better on tests, to get a better night’s sleep. Interesting research with autistic children shows that a nature experience that includes quiet is as effective as medication. They gave one group of autistic children their normal medication and took the other group on a nature walk and their subsequent medical symptoms were essentially the same. And of course, there’s the whole subject of Nature Deficit Disorder, which some people are applying to children, but really we could apply to most of our culture.

Goodman: I have a friend who thinks people should be required to spend a night alone in the wilderness to get in touch with their vulnerability again. Because on the one hand, our vulnerability is what made us go to such lengths to protect ourselves, but vulnerability also puts us back in touch with ourselves as physical creatures and the fact of our dependence on each other.

Hempton: I think it’s an excellent idea to spend solo time in the wilderness. Whoever you are, when the sun sets, even though you may not have chosen to listen to the natural world, you will listen. You’ll be opening up, you will be ALL there. And all those little details of the world are going to make themselves apparent to you.

Goodman: What is the concept of one square inch of silence? Realistically, what difference can one square inch make?

Hempton: One square inch of silence is real simple—and at the same time, it’s rather remarkable. The idea came to me one day when a jet passed overhead and I realized that

that one point of noise—really loud noise—36,000 feet in the sky was destroying 1,000 square miles of aural solitude below it. Actually more—an airplane is audible in a radius of 20 miles in every direction. The FAA acknowledges that there is no altitude a plane can fly at that you can't hear it on the ground. The noise can be masked, but if there is no other noise you will hear the plane. I thought to myself, what if we flip this around and say, OK, let's maintain silence at one point—one square inch of the planet earth. The result will be managing or limiting noise pollution for an equal area of 1,000 square miles.

So that's how it became One Square Inch of Silence. The concept originated in 1989 as a result of a grant from the Charles A. and Anne Morrow Lindbergh Foundation. I didn't think it was my job to enforce it, so I passed its implementation on to the National Park Service. In 1987 they were charged by Congress with limiting national park overflights, so they seemed the logical agency to enforce One Square Inch of Silence. But in fact, overflights are increasing—and now many national parks have air tours as well, so it is actually very difficult to find one square inch of silence on planet earth.

Then in 2003 I lost my hearing. You can imagine how devastating that was for me. It meant I also lost my job, my definition of myself, and my primary reason for living. But I had a role model in John Muir, whom I've considered a mentor for most of my career. He was not only the father of our national park system, he was also a dedicated and perceptive nature listener, recording with paper and pen what he heard. Coincidentally, as a young man he lost his eyesight in an industrial accident at a carriage factory. He vowed that if he ever got his sight back he would devote his time to the "inventions of God" rather than the "inventions of man."

In the spring of 2005 I got my hearing back—and along with it my career as the Sound Tracker. At that point I thought maybe it was my job to make good on the One Square Inch of Silence conservation project I'd proposed six years earlier—because what good is perfect hearing in a world filled with so much noise pollution?

I chose the Olympic National Park for the One Square Inch of Silence because, of all the parks I have been to, it has the most diverse natural soundscape combined with relatively long periods of natural quiet. It has little air tourism and relatively few commercial flights that cross it. It has no through roads, no scenic drive to its highest peak. To reach its backcountry, you must go on foot.

I dedicated One Square Inch of Silence on Earth Day 2005. Alone, I placed a small red stone, a gift from an elder of the Quileute tribe, on a log of the Hoh Rain Forest approximately three miles from the Olympic National Park visitors' center. I also left a jar where visitors could silently record their thoughts while visiting One Square Inch, but the park management has since removed it saying I don't have a permit—and that "One Square Inch" is not the sort of project they would normally grant a permit to.

Goodman: Wow. That's pretty disheartening. Still, given the severe—many would say, life-threatening—environmental challenges we face, from habitat destruction and species extinction, to global warming and entire ecosystem collapse, isn't the pursuit of silence a bit of a quixotic undertaking? Moreover, since the primary reason airlines give for breaking the silence in Olympic National Park is an environmental one—energy efficiency—how do you reconcile silence with other competing environmental values?

Hempton: Well, as I've said, I think that natural silence is what can enable us to fall in love with the natural world again. Falling in love with the earth is what it may take to motivate us to save what's left of it. Moreover, at the One Square Inch of Silence in the

Hoh Rain Forest, Alaska Airlines is the most frequent disturber of the peace. Now if you consider the most direct path between two points—say Seattle and Anchorage—there's only one, correct? Every other path is less efficient. Yet airlines operate on many flight paths, so efficiency is only one of the criteria they use. We'd like to think that safety is the other one, but in fact it has more to do with convenience—with use of the ground-based navigational system they have set up. Jet traffic over the southwest U.S., for example, goes over the Grand Canyon by design—the result of how they established their navigational beacons. But as the airlines switch to a satellite-based navigational system, they will have the opportunity to reset their travel paths. They will be able to take One Square Inch of Silence—and the quiet of other national parks—into account, if they so choose. It's a matter of priorities. When these jet paths were initially established, no consideration was made for preserving quiet over natural areas. It wasn't a priority, so it wasn't done.

Goodman: Realistically, though, even if you could manage to prevent air traffic intrusion for a 1,000-square-mile radius to protect One Square Inch of Silence, there are plenty of other noise intrusions. As soon as you get back to the visitors' center parking lot, for instance.

Hempton: Yes. One Square Inch of Silence does not preserve silence for a thousand square miles. What it does is manage noise for a thousand square miles—from a single point. By and large, noise made in the visitors center parking lot cannot be heard at One Square Inch. But to preserve silence at One Square Inch, the most common noise intrusion—airplane noise—can be managed for a thousand square miles.

The One Square Inch of Silence Foundation is currently seeking to establish a 20-mile radius no-flight zone over Olympic National Park. Except for search and rescue and medical evacuation, this 20-mile radius will be off-limit to all aircraft. If we're successful, this will be the first airspace off-limit to aircraft for civilian purposes in the United States. We already have restricted air space over military installations—Area 51 in Nevada, for example. We've made it a priority there. We're already willing to reroute aircraft to avoid thunderstorms, or military activities, or heavy air traffic, or on account of wind direction, or sometimes just on passenger request. It's simply a matter of making it a priority.

What is the cost to maintain this 20-mile no-flight zone? We know from the Air Transport Association data that in 2006, the cost of keeping your average jetliner—a Boeing 737—in the sky was \$66/minute. That covered maintenance, fuel, staff, everything. For commercial jet liners to avoid Olympic National Park it would cost less than \$1 and less than one minute per passenger. It is far less significant than wind direction. It is essentially nothing. The arguments that are given for why One Square Inch of Silence is unachievable are really quite empty when you examine them—and when we recognize how valuable, indeed essential, natural quiet is to maintaining—or re-establishing—our connection with the land.

Goodman: That really seems to be your most significant task—raising awareness—since, as you've already pointed out, most people don't recognize what they've lost because they've never experienced it.

Hempton: Right.

Goodman: In your book you quote Max Picard, who said “Nothing has changed the nature of man so much as the loss of silence. Man who has lost silence has not merely lost one human quality, but his whole structure has been changed thereby.” How? What does

Picard mean?

Hempton: It's kind of like asking a person born without legs whether they ever missed running. How do you miss what you've never known? Yet if they have known it, they realize what a huge loss it really was.

Max Picard's statement that "nothing has changed the very fabric of our being as much as the loss of silence" is so true for those of us who have known silence. And for those who haven't known it? I don't think they can even understand the statement. It's in those quiet places in nature that we are best off deciding those other important environmental questions, like global warming, habitat destruction, species loss, carbon footprint, and so on. All the other environmental questions that we think are more important than quiet—are not. They are all part of the environmental crisis, yes, but it's quiet that we need to fall back in love with the earth. It's quiet that will give us—not so much the stamina and fortitude to endure the changes ahead—but the joy that comes with knowing that we're doing the right thing.

I also think that the quiet crisis is a litmus test of who we are. If we decided today that we were going to solve our carbon emissions problem, that we were going to address our fuel issues, and preserve our endangered species and save our forests and our oceans, we know it would take huge sums of money and many decades to reverse all the damage that we've done. But the quiet crisis in our national parks can be solved with one piece of legislation. With a single piece of paper we can save what I call "the think tank of the soul."

Saving quiet in our national parks will not take millions or billions of dollars or decades or centuries to complete. It will take one piece of legislation, to create no-flight zones over our national parks. And if we can't pass this one piece of fairly simple legislation, it will be very hard to convince me that we will be able to muster the will and resources to save endangered species, clean up toxic waste dumps, transition off of carbon fuels, and do all of the other things that restoring the earth will require.

Is it too late, or not?

I don't think it is. I think this is the very moment in our evolution that we're going to bring our environmental impact to a conscious level and choose to act responsibly.

Goodman: What gives you that sense of optimism?

Hempton: I have been to a quiet place. And this is what it tells me.

The 100th anniversary of our national parks occurs in 2016. We need natural quiet more than ever. It's a perfect time to renew our vows.