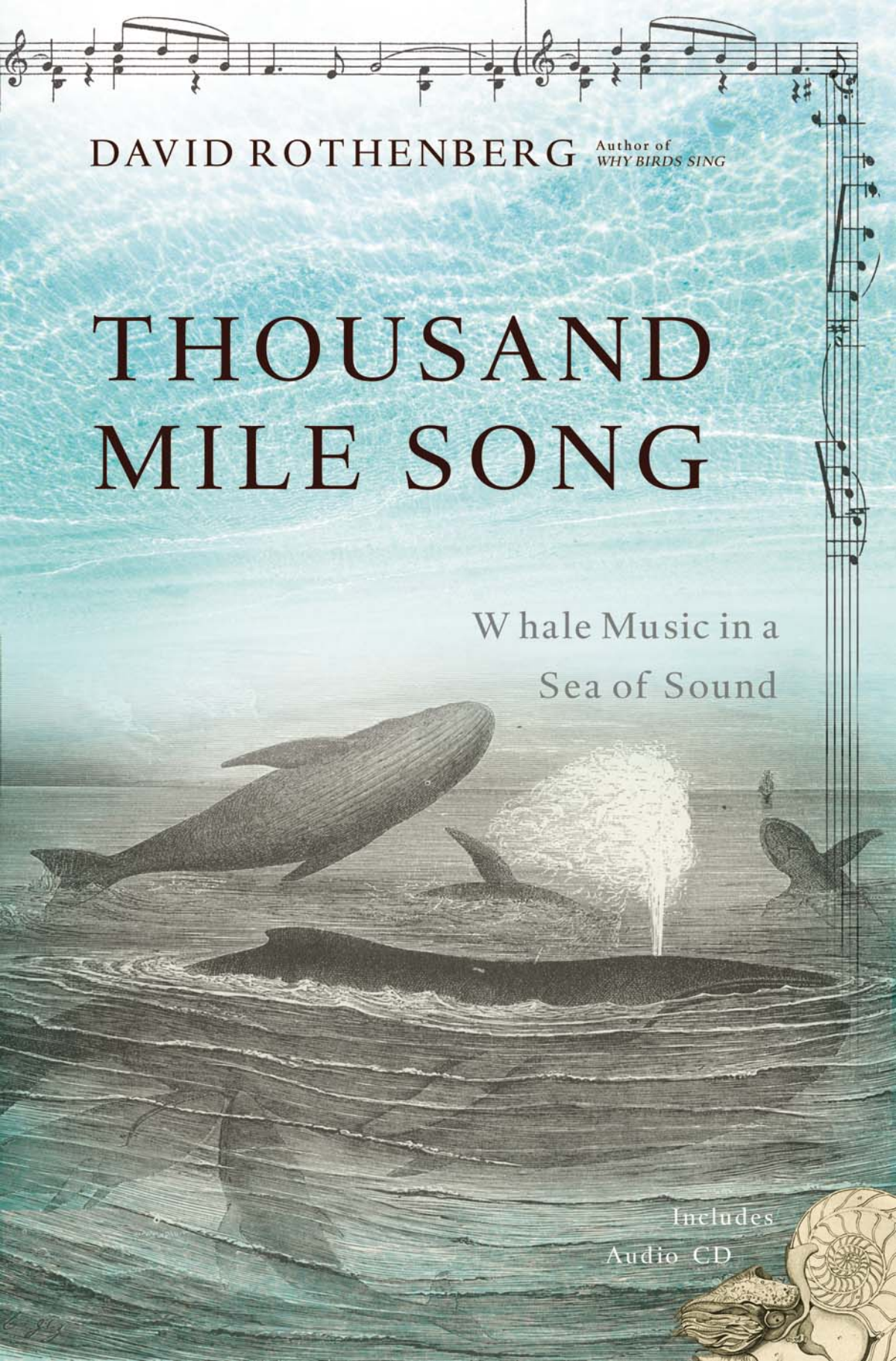
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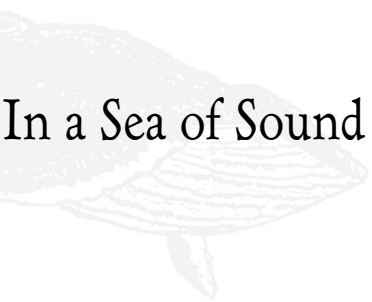
THOUSAND MILE SONG

Whale Music In a Sea of Sound

DAVID ROTHENBERG



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chapter one

WE DIDN'T KNOW, WE DIDN'T KNOW:

Whale Song Hits the Charts

Every morning Paul Knapp sets out from the shores of Tortola in hopes of recording a humpback whale song better than the one he heard on Valentine's Day, 1992.

"I remember that day well," nods Paul, looking up at the sky. "It was the fourteenth of February, and I was all alone. I went slowly and with respect, to the spot I always go to listen at the mouth of the bay. I didn't even see the whale. I think he was used to me by then and used to the sound of my engine. The whole moment made sense." Tall, tanned, in his mid-fifties, he looks like a man patient enough to spend years searching for the thing that matters most. "It's never been quite like that again. But I keep coming back—waiting, listening."

Knapp spends the winter months camped out on the beach at Brewer's Bay, an isolated cove in the Virgin Islands. The road to the place is still an improbable paved-over goat path. People here look pleased to have found a way to get away from it all. Some have come every winter for thirty years and say it hasn't changed a bit.

Paul stays here because of the whales, and the joy he finds in taking others out to hear their beautiful sounds. People sunning themselves on the beach get a surprise vacation treat when Knapp walks right up to them and says, "Hey, wanna come out on my raft and hear some whale songs?"

He pulls his tiny Caribe raft into the blue-green water from the perfect sandy arc of the beach and motors out to the mouth of the cove—as far as he can go before the whitecaps get too rough for a rubber boat. He unpacks his equipment from a watertight box: an underwater microphone (known as a hydrophone), with a cable a hundred feet long. Paul drops this over the side of the boat only after tying it off to a guyline lest the thing disappear and coil swiftly down to the bottom. He plugs it into a little battery-powered boombox and gets ready to listen.

Sound underwater works in an entirely different way than above the surface. It travels about fifteen hundred meters per second, five times the speed it moves in air. Sounds travel much farther submerged than above the surface: the lower the pitch, the farther they go. There is also the constant background noise of waves, the din of endless shipping vessels from motorboats to tankers, and seismic rumblings from far inside the earth. But the loudest thing we hear today is shrimp.

The sound is surprising rough, windy, and crackly, making the tiny, rocking boat seem all the more fragile upon the moving swells. "We're hearing snapping shrimp," nods Paul. It's a sound like electric sparks or radio interference from another star. He sits Buddha-like in big mirrored shades at the back by the motor, taking it all in. "Some days you'll hear nothing but the shrimp for hours." Waves drum against the rubber boat, and the hydrophone cable brushes against algae and rocks way down below.

We get used to the background crackle and then it starts. First it is faint, but soon unmistakable. Far away, in the midst of the sonic mess, a faint howl begins: the rise, the fall, the squeal, the sweep. Out there in the sea somewhere, maybe five miles away, it's the song of a humpback whale, a music unlike any other.

The range is tremendous, from the bowed bass beats of a giant subsurface fiddle to the feedback squelches of a paraelectric guitar. Each note is solid, emphatic, determined, beaming with feeling. It is one of the greatest sounds in the animal world, and very few people had heard it until the end of the 1960s.

This is quite surprising, because if you dive under water in a place where humpbacks gather to breed, it is easy to hear them with no equipment at all. But no one seems to have thought to listen until the first recordings were made. There are only scattered references in old maritime literature to humpbacks making sounds we could hear above the surface. In 1856 Charles Nordhoff wrote, "a whale would sometimes get under the boat and there utter the most doleful groans, interspersed with a gurgling sound such as a drowning man might make. The first time I heard these sounds it was almost incomprehensible to me that they could proceed from a whale." In 1889 H. L. Aldrich wrote that "it has been known for a long while that humpback-whales . . . have their own peculiar cry, or as whalemen express it, 'sing.'" If whalers all knew this, they sure didn't say much about it. After small-boat whaling faded away, no one saw fit to mention the sound for nearly a century.

Scholars say these songs might be the source of the myth of the sirens beckoning to Odysseus as he lay down on the benches of his ship while drifting home, dreaming of Penelope. Until fairly recent times, whales were mostly seen as sources for the oil needed to fuel our society, that is, until petroleum was discovered to be a much more accessible source of the stuff. Melville in *Moby Dick* mused about what tones would come out if such great beasts could actually speak! Well, it turns out some species sing. Others cry, and still others only click.

When the human world first heard these sounds, our sense of whales suddenly changed. It is the song of the humpback whale that made us take notice and begin to care about these animals—the largest that have ever lived on Earth. We would never have been inspired to try and save the whale without being touched by its song. Greenpeace would never have woken the world up to the cruelties of

whaling, and perhaps the whole ecology movement would never have gotten so strong. Humpback whale song is so emblematic of the early days of the green movement that some people laugh at me when I mention it, shelving the music of whales with past lives, weekend shamans, suburban yogis, and other fragments of our yearning for deeper meaning. All this is easier to dismiss as woo woo than take seriously.

Scientists who study humpback whale songs usually collect the music as data, take it home to the lab, and then pore over their recordings as computer transcriptions, discovering form, rhyme, change, and rhythm. They've been doing this for nearly forty years, yet humans still don't know what these songs are for. They don't seem to fit the normal patterns of animal behavior.

There are people all over the world taking whale songs apart in the laboratory, but only Paul goes out every day just to listen. And he never wants to get too near the whales he hears. "Sure, I've heard a lot of close-up recordings, where people are chasing the whales in big fast boats. Yeah, I've heard those songs. Those whales sound pretty stressed out to me." He radiates a certain calm contentment with his listening life on the beach—with no sense of edge or doubt whatsoever.

No one who hears these darkly beautiful tones for themselves can easily forget them. Upon hearing the great song for the first time, whale pioneer Roger Payne said he heard the size of the ocean, "as if I had walked into a dark cave to hear wave after wave of echoes cascading back from the darkness beyond. . . . That's what whales do, give the ocean its voice." Most work on the meaning of these tones is far more prosaic, involving pages of calculations, summary charts that have a hard time containing the original beauty.

But Knapp doesn't care why whales sing, he's just out there on the water every day, listening. He has no money. And he has no job, except to take passing tourists out to listen to whales. Paul's work takes place on that raft. He brings as many people along with him as will come. You may pay as much or as little as you wish. He gets by on whatever his passengers offer him.

Knapp first heard these sounds twenty years ago, and he's been coming back to Brewer's Bay every year since. He's released two CDs of humpback whale songs, and they are among the most sensitive and delicate releases available. It's easy to see why. Knapp takes his time, waits for the whales, and knows that most of the time the sound will not be perfect—a good reason to go out again.

Out on the boat we hear overlapping, faint howls. Group singing, where several males make sounds that follow and interact with each other in a repeating mix of rhythms. To Knapp these simpler, chorusing whoops have an even more universal appeal than the long, solo songs. Blending with the high percussion of the snapping shrimp and the slow beat of the waves and swells, it's oceanic trance music.

We go back to shore to see if anyone else wants to come out. It's high season on Tortola and there's always someone wandering by. First we spy two women reading thick books on the beach. "Hey," Paul asks, "want to hear some whales?" Already nearly sunburned, they're ready to go.

Turns out they are ringers, biologists from Maine, who know plenty about whales and marine science. Still, they've never heard humpbacks in person, so they're ready to go. Back out at the edge of the bay the big beasts do not disappoint, the choir of overlapping voices is back. Their song blares through the speakers, rising out from water into air. I mention a curious fact I had recently read: since it is only the male humpbacks who sing, science would like to believe the song has something to do with attracting females. But no one has ever observed a female humpback approach a singing male.

"Well, biology has been dominated by men for more than a century," says one woman to the other, and her friend nods knowingly back. "They always come up with the same, simple explanation for everything." Seems like these two may have dealt with this issue before. "There has to be more to the story, and it's going to take a lot of long, hard listening to figure it out."

When it comes to song, scientists have spent a lot more time studying birds than whales, and the standard explanation is that males

advertise how fit they are by singing long, complex songs. The females tended to choose certain kinds of songs over the generations and these are the songs that have prevailed. There is enough evidence to suggest this is often true, but it says very little about *what* the birds are singing, why it is often so musical. Science tends to say the particular preference of females is arbitrary, something like the whims of fashion.

If you speed up a humpback whale song it sounds just like a bird. It has the tonality of a catbird, perhaps, with the rhythmic precision of a nightingale— beats, quips, melodies put together in a precise, definitive way. Why should these musical principles appear in nature at such different scales? Maybe music is a part of nature itself, something evolution has produced on different lines, converging into some living beauty that whales, birds, and even humans can know. Music is much easier to appreciate than language, of course. You need not understand it in order to love it.

Our next guest, on the second trip of the day, is a computer programmer from The Hague. A ruffled figure camping alone by the beach, he's dressed in heavy clothes even though the weather is tropical. First off he is surprised that anyone would just come up and talk to him while he sat outside his tent. He seems genuinely touched by the invitation, having no idea there were whales anywhere near.

The sea has gotten a bit rougher and the raft is tiny, so the swells start to get to him and he blows his lunch over the starboard side. His face has turned green. But when he puts on the headphones a more pleasant color returns. He listens intently as if taking notes in his head. "Vel, surely zhis can be figured out, no? Zhere is clearly information content, ja? A machine could certainly help us grab zhe patterns."

So far human listeners have been better at making sense out of the logic of whale sounds than any automatic attempts at song recognition. The U.S. Navy, who knew about humpback whale songs two decades before the general public, has published guidebooks to help sonar cadets distinguish whale noises from all of the underwater signals they are supposed to keep track of, such as those from enemy

submarines and torpedoes. Whale sounds are just classified as "biologicals," nothing to get too worked up about.

After two runs I'm starting to get into this lifestyle, I can see why it appeals to Paul. All who hear the whales slow down, stop speaking for some minutes, and wonder in their own way about what messages may be out there.

"The whales are the artists," says Knapp, "I'm just trying to capture what they do. People need to hear this. I think it's good for us—to have a different vision. That the ocean has a singer, a spokesman, helps us to see the Earth as something else than we often do: a place with other life, other presence, other beauty. We are not the only musicians on this planet."

Back on shore the beach is getting warmer, and busier. Our third group consists of two forty-year-old tanned surfer babes and one teenage boy—boyfriend or son, I'm not sure. One of these women has been out before, and she just has to bring her friend, who gets real excited as the music begins. "Oh, listen to him, he's getting there, Geez Louise, all right, that's a good one, yeah baby! *Whoooee!*"

"What do you think the song is about?" I ask her from behind my wraparound sunglasses.

Staring at me with disbelief she says "I thought that was obvious. It's got to be something to do with mating. He really sounded into it." She could get a job as a whale scientist.

This is my first time out to hear whales, and I've learned in just one day how these humpback songs hold countless meanings for those of us lucky enough to hear them. Paul reckons he's taken more than a thousand people out, no more than three at a time, to hear this music of the sea. "I find something truthful and relevant in the song. If I didn't, I wouldn't spend my time doing this. Those are two big words, truthful and relevant. If you find that you've got something worth pursuing."

In all my travels playing music with animals, whether they are mockingbirds, crickets, coyotes, or marmots, I'm most interested in

what kind of music we can make together. Without knowing what the animals think about such interaction, some kind of interspecies music is made. Either art spans its way into the more-than-human world, or it's all some kind of ridiculous stunt. Often I'm not at all sure. Making music with the great singers of the sea will be my next adventure.

Of course there are many obstacles to such a dream. Humans and whales live in quite different worlds. Whales travel far under water and can barely see. Sound is everything to them. It tells them much more about their environment than what we hear. Clicks and pulses help some species navigate by how the sound goes out and back—echolocation, or finding your way through sound. Humans have turned such ability into technology and developed sonar. But whales can still do it better than us. A beluga can detect the precise shape of an object under water behind an opaque screen. No human machine can do that yet.

Thousands of meters way down in the ocean, there is a realm known as the deep sound channel, where the lowest tones—the subsonic groans made by blue whales and the pulses made by fin whales far beneath the range of human hearing—may be able to carry for hundreds and even thousands of miles. We know it is feasible for a distant whale to hear the lowest tones of her possible mate so far away, but we have no idea if she actually listens.

A thousand mile song—the scale of it defies comprehension. Great whales, with their huge brains and slow metabolism, have an experience of life nearly impossible to fathom. After centuries of thinking of whales as little more than oil, meat, and blubber, we now see them as icons for the saving and cherishing of the Earth, reminders that nature will always remain more than we can ever understand.

How did the whale rise in our consciousness in this whole new way? It all began with the sound. Hearing the humpback whale song from a rubber raft splashing in the Virgin Islands' waves is unforgettable, but many more people have been touched by the recording *Songs of the Humpback Whale,* released by the Wildlife Conservation

Society at the Bronx Zoo in 1970, later included as a "sound page" in an issue of *National Geographic* in 1979. They printed ten million of those and sent them around the world; it was the largest single pressing of any record in history.

Once you hear the music, it is hard to think of killing any animal that can sing so beautifully. True, most other species make less musical noises, but they are far from silent. Sperm whales have elaborate clicking patterns that some have likened to West African polyrhythms. Killer whales, also called orcas, have a wide range of whistles and slaps that vary tremendously from pod to pod. Smaller, white beluga whales have the widest range of pitches from low to high, and textures from shriek to creak to ratchet to noise. That species has been admired long enough by sailors to earn the nickname of 'sea canary.' But humpbacks have the most extended and resonant tones and phrases, and it is they who have moved humans with the greatest music in the natural world.

It's a song that never stays the same. Each winter the Atlantic humpback whales return to the sheltered waters of the Caribbean, where the males sing a song that continuously changes through the course of the breeding season. No other animal changes its song so rapidly in a single season, and we have no idea why or how the whales do this. Do they follow the latest hit song just because it's popular, or is there a message hidden in their variations? We don't know, and we hardly know what it would take to find out.

The world of whale sounds reverberates deep under the sea, from hundreds of meters to hundreds of miles. It's completely alien to the soundscape of humanity, shouting and singing up in the air, where songs and speech can't dream of carrying so far. Under the surface lie deep booming patterns, and perhaps music can help us make sense of it where words and logic fail.

As I did with birds, I hope to play my clarinet live with whales and discover how they will react. Might I be able to help them change their song? Or will I be just another strange sound to challenge or ignore? On this trip with Paul, my first, I'm only listening; but next

I'll head to Canada for orcas, to Russia for belugas, and next winter to Hawaii for humpbacks. I'll be prepared to join in wherever I am.

How can a human play music with a whale? I have to cross the sound barrier into their world. Playing my clarinet on the shore or on a boat, I'll get a microphone that picks up my sound and plug it into an underwater speaker that can broadcast these melodies way down into the world of the whales. Mine is a watery clarinet sound that will also be able to travel at least a few hundred meters into the water. A hydrophone will be positioned not far away, and that will bring the mix of human and whale sound back together as I listen to it through headphones above the surface.

Why would a whale care about human sound? There is a history of experiments demonstrating that dolphins, belugas, and even orcas are curious and enjoy playing around with sound. The larger the whale, the less interested they seem to be in our tunes. No one has successfully gotten a humpback whale to interact with human music—that at least is the official line. I hope to discover otherwise. Perhaps humpbacks might be inspired to heed our music as we have learned to care about theirs.

If we imagine animal sounds to be a kind of language, we will want to decipher them, to translate every nuance into a functional message. It is hard to correlate specific whale behaviors with specific noises. Some sounds help them navigate, some help them say hello. Most probably serve to hold groups of them together as part of ritual or culture—the way of being a whale. They live and sense through sounds both complex and beautiful. Consider them as music, and then we may enjoy them before explaining every noise away.

Human description cannot contain such reality, such meaning lies beyond us. The sounds are so iconic they have become ironic, the prototypical New Age shtick, just another excess of the 1970s. In this age where music continues to open up to the possibilities of just about any sound, it's time to bring whale song back into the public ear.

Nothing we know about whales is certain. Are they intelligent? Can they hear each other from afar? Are they as interested in us as we

are in them? Can they tell a good song from a bad one? We are at the very early stage of figuring out these animals and learning to appreciate them. Hopefully we and the whales will both be around long enough to let the relationship grow. To find better answers we need to ask better questions, and more people need to listen to this undersea music. More people need to listen, and to care.

Most of us are made to read *Moby Dick* sometime in college. We're usually taught that it's a great adventure story about obsession, mad leadership gone awry, or the hopelessness of extreme human quests to dominate nature. By the time it became popular, fifty years after its author's death, it was a window into an entire industry that was no longer familiar to most who picked up the book.

Scott McVay was luckier than most of us. At Princeton in the 1950s, he took a course with Lawrence Thompson, one of the top Melville scholars of the day. "Don't skip the whale stuff," said Thompson. Little did he know this advice would lead McVay to spend a lifetime devoted to whales. McVay, along with Roger Payne, is the man who discovered that the song of the humpback whale is a true composition: regular, rhythmic, full of patterns and organization.

McVay is one of those cheerful, well-connected people who remembers everyone he's ever met. Tall, in his mid-seventies with an enthusiastic grin, he usually sports a bowtie. Conservationist and poet, he has worked as director of some of the largest and most influential philanthropic foundations in America. His greatest passion has been for whales, and his essential role in the effort to save them has been overlooked in favor of more public, outgoing figures. He's a behind-the-scenes guy, eager to put on events and make things happen. McVay is the key man in the story of how the whale came to be saved by its beautiful song. With a glint in his eye, he tells me his story.

As a young administrator at Princeton University, his alma mater, he happened to attend a lecture by maverick cetacean scientist John Lilly. It was 1961, and with the recent success of his book *Man and Dolphin,*

Lilly was well on his way to becoming one of the most famous popular-science writers of the day. The public was becoming transfixed by the possibility that these underwater creatures possessed great but alien intelligence. Sure, many people were impressed by Lilly's ideas, but only Scott McVay typed out eighty-three questions about the book to hand to the author after his speech. Lilly took one look at the list and immediately invited McVay to work for him.

Scott had two young kids and a fine job at the university as general recording secretary, with fifteen people under him. He wasn't ready to take off. But Lilly knew a good man when he met one and kept hounding him. Two years later McVay took his family down to the islands and stayed there for two years. He was assigned to work with the most precocious dolphin, an eager learner named Elvar.

There are basically two types of whales. First are the mysticetes, also known as baleen whales, who comb through the water with huge mouths agape stuffing all kinds of tiny creatures into their gullets. This family includes most of the biggest species: blues, fins, humpbacks, minkes, seis, rights, and bowheads. Next are the odonticetes, or toothed whales, the largest of which is the sperm whale, the Earth's biggest carnivore, who eats mainly squid. This group includes killer whales or orcas, belugas, pilots, and all species of porpoise and dolphins (who are basically just small whales). Since they are much more manageable in captivity, most of the controlled experiments on cetacean hearing and learning have been done on dolphins. They were the main subject animals in Lilly's research.

McVay's task was to teach Elvar the dolphin a set of 188 vowel-consonant combinations, through regular attempts at interspecies interaction. McVay would say "*ees oos oar*" and the animal would come back with something like "*ea oo awr*" and they'd try this over and over again. Elvar couldn't really hear the lower frequencies, so McVay sped up his voice, putting it through a vocoder that raised the pitch, and then it began to sound like what Lilly called 'delphinese,' the supposed language of the dolphins.

But all the while, McVay felt they were approaching the problem from the wrong side. "I did exactly what Lilly wanted done, but after a while it seemed like we were brainwashing the dolphin with regard to the English language. . . . I became interested in kind of the opposite, listening to what the dolphins themselves were doing, to try to figure out *their* sounds, not to teach them ours."

He left the Lilly lab and returned to Princeton, where he became assistant to the president of the university. Yet McVay's curiosity about dolphins and whales, and what our proper human relationship to them should be, had only increased. He was haunted by a line from *Moby Dick* on the uncertainty of the whale's future, which Melville already suspected in 1851: "The moot point is, whether Leviathan can long endure so wide a chase, and so remorseless a havoc; whether he must at last be exterminated from the waters."

Back in the nineteenth century, Melville answered with a resounding "no!" But that was long before Norwegian whaler Sverre Fehn's invention of the explosive cannon harpoon around 1890 and the transformation of whaling vessels from lone, struggling ships into the factories of capture, killing, and processing they became in the twentieth century. By the end of World War II the populations of most whale species had been so depleted by hunting that the International Whaling Commission was formed to try to regulate whale "stocks" so that the industry could continue in some sustainable fashion. But the killing continued.

In 1965 the commission conducted the first extensive survey on the number of whales remaining. The populations of blues and humpbacks had plummeted to near zero, and most other commercially hunted species were in trouble as well. Perhaps the whale fishery as a whole was an unsustainable enterprise whose time was now gone. If whaling as an industry was to survive, the hunting nations would have to impose careful quotas on the number of animals they slaughtered.

The general public really gave the matter no thought whatsoever, even if they had all read *Moby Dick*. Scientists realized the word

needed to get out, so they encouraged McVay, an excellent writer and communicator, to write an article for *Scientific American* in the summer of 1966, entitled "The Last of the Great Whales." The piece included very clear and alarming graphs revealing how only two decades of intense, industrialized whaling in the Antarctic had decimated whale numbers, urging the Commission and the global community to reconsider whether whaling as an industry was obsolete, since so few animals were left to kill. "What troubles me," wrote McVay, "is the prospect that the whales, possessing the largest brains on earth and gloriously unique in the scheme of living things, will be gone from the earth before we may be able to understand them."

The ideas of ecology were just beginning to be taken seriously in the public air. Commercial whaling began to be seen as a symbol of unstoppable human greed. The ideas of ecology were just beginning to seep into the general mood. John Lilly's dolphins were inspiring millions. Television gave us Flipper, Sea World had Shamu, and the film version of *The Day of the Dolphin* was already in the works. People fell in love with dolphins and whales because of the way the media offered them to us: as sensitive, even telepathic creatures who showed compassion for our kind, aiding drowning swimmers and helping fishermen with their catch. Meanwhile, a few privileged individuals were hearing some very strange underwater sounds. . . .

Frank Watlington had a very secret job. The Navy stationed him in Bermuda at the dawn of the Cold War to listen under water. Already by the early 1950s, the Palisades Sonar Station at St. David's, Bermuda, had primitive hydrophones rigged seven hundred meters down in the ocean so that clear recordings could be made without too much surface noise from traveling ships. Watlington's main task was to listen for Russian submarines that could have been anywhere, at any time, threatening our freedom with no mercy and no bounds.

Instead of picking up submarines the hydrophones called up all manner of strange, mysterious sounds: "We had become quite familiar

with the sounds from propeller-driven ships passing the islands, with explosive signals, and with sounds from West Indian seismic activity, but this new sound was quite unfamiliar, coming in with breathtaking clarity." Watlington was determined to discover the source, so he went back to his laboratory to build better hydrophones that could more effectively pick up the strange sounds.

A few years later a better system was installed and attached to a buoy in fairly shallow water.

It was not until 1955 that Watlington was able to sight three whales within fifty feet of the hydrophone, and then the sounds came in clearer than ever before or since, like Paul Knapp's magic Valentine's Day recording. Now he knew that humpback whales were the source of this marvelous noise. "Such success was pure luck, as I have discovered many times since." Further listening revealed that only humpbacks made anything like this complex music.

For fifteen years, no one besides Watlington and a few Woods Hole acousticians knew the beauty and range of humpback whale sounds. And no one who was privy to this classified information spent much time listening to the songs—they weren't coming from the enemy, so why bother? Plus, Watlington was worried the whaling industry might find out about these sounds and gain yet another weapon in their battle to exterminate the last of the great undersea beasts. If whalers could track whales by their songs, they might be able to kill them even faster.

In 1967 Watlington handed his tapes over to Roger Payne, the first person he thought could be trusted with them. Payne was beginning to make a name for himself as the great public voice of whale science and whale conservation around the world. He didn't really have the time or the inclination to study the tapes in depth either, and he knew Scott McVay had worked on dolphin vocalizations with Lilly. So he passed the tapes along to McVay.

Princeton University had one of the few sonograph machines capable of printing out the details of the sound in a form that could help make sense of its organization. This device was originally invented

during World War II as a possible aid to help the deaf learn to speak, but instead it was put to new uses because of its ability to accurately visualize complex sounds otherwise hard for humans to describe. The machine had already helped scientists decipher bird sounds, and Payne thought the sonograph might shed some light on the strange wails of the humpback whale.

Today any personal computer running shareware programs such as Amadeus or Audacity can print out in minutes a sonogram of a sound of any length; but in those days it was quite an effort to get the machine to draw what it was hearing. Mark Konishi, one of the pioneer birdsong scientists, had a lab in Eno Hall at Princeton and McVay would work there late nights and weekends, painstakingly printing out one syllable of the whale song at a time and then taping the pages together into a giant scroll. Humpback whale songs run uninterrupted for up to thirty minutes at a time, so this was a lot more time consuming than working with the song of your average fast-talking songbird.

"What is science if not bean-counting and patient observation?" McVay smiles. "I literally spread these printouts on the living room floor and kept looking and looking at them. My wife Hella, a math teacher, came over and looked along with me. We finally looked at each other in astonishment and said, 'My God, it repeats.'" There was a regular pattern with form and shape. With the alien song all graphed out, frequency against time, the McVays could see its intelligible structure.

Whereas birds perceive information about twice as fast as we do, whales must do so much slower for them to follow such drawn-out patterns. Speed the whale up or slow down the bird, and they begin to show the same senses of organization at work at different levels. What does this prove? Natural selection may use randomness to advance, but its methods somehow generate beauty.

"Hella and I looked at each other and had the same thought: we've got to go to Roger with this, because no one is going to believe us." McVay has always known how to pick the right allies. When Payne

saw what the McVays had uncovered in the structure of the song, his jaw dropped and he calmly announced, "Maybe we should publish this together. Who should be the lead name on this?"

"Let it be you," said McVay, with honest modesty. "You're a card-carrying biologist, this is your life's work. I'm just an English major who loved *Moby Dick*."

"Songs of Humpback Whales," by Roger S. Payne and Scott McVay, appeared in the influential journal *Science* in 1971. The paper was accepted more than a year in advance of publication, but they wanted it to appear on the cover, and all the earlier covers were taken. It was worth the wait because this is one of the most beautiful covers the journal ever published, carefully depicting the beauty and structure of the song visible in one glance. It is still the best and clearest paper ever written on whale song, with carefully arranged tracings of the early sonogram printouts and a real attempt at structural, almost musical analysis of the kind rarely attempted in bioacoustics. The illustrations show the enigmatic but nearly hieroglyphic structure of the repeating whale syllables, like markings from another planet or civilization.

This was the humpback whale's big break. Until then, these animals had been hunted, feared, admired, but not really known. Suddenly they were capable of something few animals could boast of: a long, developed, extended vocal performance that looked like it contained a whole range of information. And it was something that could be genuinely discovered and appreciated by every new person that heard it. In space we had reached the moon, and in the oceanic depths we had heard whales sing.

The record *Songs of the Humpback Whale* came out first, in the spring of 1970. It was pressed by an outfit called Communications Research Machines in Del Mar, California, who mostly published psychology books. It came in a most unusual jacket: all white, with a painting of a majestic humpback leaping out of the water next to a small rowboat glued onto the front. No words, no title, nothing on the back at all. Inside is a full-size, thirty-six-page booklet with texts in English and Japanese, urging us to save the whale. "Listen to him

singing far below the turmoil and ceaseless motion of the surface. . . . From that profoundly peaceful place a voice calls us to Turn Back." There's a chart showing just how much bigger whales can get than dinosaurs. There are sonograms of the structure of the whale songs and detailed charts on the decimation of whale populations thanks to human hunting. The inside back cover has a photo of bloody guts on the deck of whaling ship. Listeners were urged to do whatever we could to halt the senseless killing of these great, musical animals. On the edge of the circular label on the record itself, these words appear over and over again until they loop upon themselves: "turn back turn back turn back turn back . . . "

The record sleeve contains detailed instructions on how to listen to the whale music. As if presaging the future personal soundscapes of Walkmans and iPods, the sleeve urges us to put on headphones and surround ourselves with the noisy ocean full of sound. With your ears covered, the sonic ecosystem takes over your senses. Postcards in the back of the booklet could be used to order more copies at $9.95, with the money going to the Whale Campaign at the New York Zoological Society, the Bronx Zoo.

The first review appeared in *Time* magazine, by a writer obviously flummoxed by an inability to describe what he was hearing, music that "might have come from the throat of a 40-ton canary to the rumble of a stupendous Model T with a cracked muffler." Albert Goldman in *Life* likened the sound of the water burbling past the hydrophones to "the waters in Wagner's Rhine, while down in the depths you hear squeegee squeals and two-cylinder *brrrrrrps* and other-worldly cries that arc across acoustic space like particles in a cloud chamber or the inconsequent anguish of an atonal violin." Whale song sounded of the moment, totally au courant.

It was Jon Carroll at *Rolling Stone* who really got it, realizing that this song was destined to be a hit: "This is a good record, dig? Not just an interesting record, or, God help us, a *trippy* record. . . . It's especially good for late at night and peaceful, together moments. It stretches your mind to encompass alien art forms. The kids can't dance to it,

but they can't dance to Satie either." Carroll recognized that these humpbacks sounded like the electronic music that was just starting to get beamed into our consciousness, but he preferred the whales, because they were "without the sterile, hyper-intelligence trip that much electronic music gets into." (I asked Carroll, now a columnist for the *San Francisco Chronicle,* whether he remembered the first moment he ever heard a whale song, and he said, "No. We were all doing a lot of drugs in those days.")

Whale song was thus anointed as hip, serious, and 100 percent natural. The music came out of the blue and people loved it like nothing else. In February 1971 Joseph Morgenstern in *Newsweek* reported that 45,000 copies had been sold, and the record was reissued as a regular disk without the pages of explanation and conservation appeal. Morgenstern was a bit concerned, "I must confess to some dismay when I learned that the kids were lacing their whale songs with pot. It seemed as if the counterculture were co-opting a straight sense of wonder."

It is rare for humanity to come across a new experience that is impossible to expect or describe. No one imagined great whales could make such great sounds, and this was an age when new experience was especially treasured, sought out, and blended with a rush of sensory possibilities. We dreamed of a better, more joyful world, and singing whales would be part of it.

The release of the record changed the lives of Roger Payne and Scott McVay. "The impact of the song," said McVay, "was huge and staggering." The two men appeared on *Good Morning America*, and on the *Arthur Godfrey Show*, where McVay was asked, "Scott, tell me what an endangered species is."

"You sir," said McVay, "are an endangered species."

After taping a whole hour on whale song, Godfrey said, "Look, we like to tape three of these programs at a time. What do you know about their courtship and mating?"

"Enough to go on for another hour."

Seizing the moment, McVay embarked upon a remarkable journey to Japan to try to get this major whaling country to take a second look

at their whale-killing ways. Armed with a dozen copies of *Songs of the Humpback Whale,* with its Japanese liner notes, he took off on August 6, 1970.

In advance of the journey, a committee of six eminent Japanese scientists was created to tackle the issue of whale conservation in Japan, under the leadership of Seija Kaya, former president of Tokyo University. The group included the former head of Japan's atomic energy commission, the director of their national institute of genetics, and the director of Japan's primate research center. Other allies included the young novelist Kenzaburo Ôe, who later went on to win the Nobel Prize in literature; Kunio Maekawa, designer of the Japanese pavilion at the New York World's Fair; and the composer Toru Takemitsu.

McVay appeared on the biggest Japanese radio and television shows, charming millions of listeners and viewers with the record of the songs and his paeans to their beauty. "Imagine the day," he regaled them, through a translator, "when you can take your kids on a photographic safari underwater to follow a pod of whales. What splendid sport it would be to see a whale moving through its water world, to film that great graceful hulk in the well-illuminated waters near the surface as readily as you would an elephant on the Serengeti Plain." He paused for emphasis. "Yet as certainly as technology will catch up with this dream, so do we seem as certainly bent on cancelling that chance by the almost unchecked slaughter of the remaining whales. Today, every twelve minutes the charge in the head of a harpoon explodes in a whale's body."

The Japanese public was touched by the humpback whale song in a manner far deeper than the Americans, perhaps because whaling was much more relevant to their culture. The popular science fiction writer Sakyo Komatsu said, "You have opened our eyes and minds to a new frontier for the human soul." McVay graciously offered the Japanese gentle questions and koans on these beautiful animals of the sea. He quoted Thoreau: "Can he who has discovered only the values of whale bone and whale oil be said to have discovered the true use of the whale?" When he met Kota Hoketsu, chairman of the board of

one of the biggest Japanese whaling concerns, McVay played him the song. Hoketsu shook his head solemnly and whispered, "*We didn't know, we didn't know.*" He pledged to play the song at the company's next board meeting.

Arrangements were made with the Asahi Company to release a mass- market edition of the whale song record as a flexible plastic "sound page," which could be printed in book form. It was to sell for the equivalent of $3, one third the price of the American edition, so as to be accessible to the largest possible number of people. Kenzaburo Ôe published a moving story, "The Day the Whale Becomes Extinct," where an old man announces that the last whale has died and a young child asks the writer, "What on earth was a whale?"

> I tried to explain to him about whales, but since I didn't remember a thing about whales myself, I clammed up. Then I realized with a sense of fathomless annihilation that the old man of just now was the 'me' of the past and the child none other than the 'me' of the future. The face of the child, looking up silently at me, distinct in the evening light, was crumbling away.

In 1970 the fate of the whale lay decisively in human (and especially Japanese) hands. The nation was moved to tears as whale song resounded in everyone's ears. It is nearly forty years later, and Japan *still* wants to kill whales, defying the International Whaling Commission's 1986 ban on commercial whaling, even though most of that country's citizens are against it.

Upon his return, McVay asked his good friend Mark Konishi how the Japanese could seem to love the whale songs so much and still want to hunt them until they're gone. "In Japan," smiled Konishi, "ethics . . . *very slippery.*"

As they may be everywhere. Hoketsu, captain of the whaling industry, was also famous for being a bird conservationist. "It is very simple," he gestured to McVay over dinner. "With my left hand I stroke the birds and with my right, *shaft* the whales."

McVay was moved enough by his journey to write this haiku-like poem entitled "The Alternative":

If we do nothing,
in a few years
the whale will live only
as a legend,
a marine Daidarabochi who,
it was said,
sang unspeakably beautiful songs.

(A *Daidarabochi* is a mythical giant, familiar to some from the Miyazaki film *Princess Mononoke* as "Didarabocchi.") Later this elegant message appeared on a save-the-whales poster above a beautiful whale image, only the author's name was listed as "the distinguished and frail poet Osaka."

McVay laughs. "I wrote that *in* Osaka. Don't know where they got the 'frail' or the 'distinguished' part. On the next printing they put my name back in, but that takes the whiz out of the story! If I ever publish a book of my poems, I'll entitle it *Whales Sing*."

McVay performed the title poem from this still unwritten book on the occasion of his retirement from his position as director of the Geraldine R. Dodge Foundation in 1998, at the biannual poetry festival the foundation supports, the largest such event in the country. The Paul Winter Consort, the musical group most known for its integration of whale and human melodies, accompanied him:

If the whale's voice be stilled,
then I shall be quieted utterly.
I have this tape
and I'll listen
until I know each linked sound and
can play them all in
my mind whenever. . . .

Before Watlington we intuited
such miracles—
now knowledge almost unbearable
saturates the senses,
charges the mind.
Music must be the language
that blends
two otherwise separate paths
for a way,
making each journey more
than either alone,
linking all journeys.

A noble song fills the head
—implications shake me.
Share first with one or two
well chosen
and then with all who care.

As I heard this great activist intone the tale of the cause closest to his heart, I felt ready to follow my own quest for the "grail" of the whale's song. McVay is one man who realizes art is more than a metaphor when it comes to saving nature. There has always been nature in poetry, but here is a man who discovered a poetry in nature when he first identified the stanzas and rhymes in whales' songs. In his 1971 article in *Natural History,* "Can Leviathan Endure So Wide a Chase?" McVay sums it all up once more: "To leave the oceans barren of whales is as unthinkable as taking all music away. . . ."

Still in print today in several editions, the record *Songs of the Humpback Whale* became the best-selling nature recording of all time, a multiplatinum album that has sold more than thirty-million copies, right up there with Pink Floyd's *The Wall* and Paul Simon's *Graceland.* Without the effect of that whale song record on the millions of people who heard it, there might never have arisen a movement to

save the whales, transforming their image from oil and blubber to gentle serenaders of the sea—turning the majority of the world's people against whaling, probably forever.

After thirty years of conservation efforts by McVay and thousands of fellow activists, whale music can still be heard. Back on Tortola, Paul Knapp goes out every day to make sure. "It's good for me to go out every couple hours to hear what's happening out there. Things do change, and you have to keep up with it, things are happening, and if you are not aware of it you're not going to be able to capture it on tape." Good thing there are witnesses on the water taking in all the changes—someone has to notice such things to remind us what is truly worth saving.

chapter two

GONNA GROW FINS:

Humans Take Up with Whale Music

On January 3, 1971, *New York Times* critic Harold Schonberg summed up the previous year's highlights. In music, 1970 was surely the year of the whale. Luminaries from classical, pop, and folk music were so turned on by this amazing sound that they began to integrate it into their own work up here in the human world, safe on dry land. Judy Collins had a hit song with "Farewell to Tarwathie," and Pete Seeger wrote a rousing tune in a minor key, "The Song of the World's Last Whale." The first classical work to make use of whale sounds was Alan Hovhaness's "And God Created Great Whales."

After Roger Payne gave his tapes to Scott McVay for scientific analysis, he also thought a qualified composer should have access to them. New York Philharmonic conductor André Kostelanetz suggested Alan Hovhaness, a populist composer whose works blend his Armenian heritage with a cinematic response to the rhythms and moods of nature. The composer started work on "And God Created Great Whales . . ." before the record *Songs of the Humpback Whale* came out, and his piece premiered on June 13, 1970, around the time the disk was first released.

Kostelanetz probably chose Hovhaness because of the booming, Orientalist quality of his music, with its heavily orchestrated modal melodies. Hovhaness never went in for the experimental, atonal excesses of modern music, so it was a safe bet he would produce something audiences would warm to. Yet the introduction of whales led the composer to write his strangest, freest, and most famous work.

Hovhaness claimed he was writing a music of the dawn of time, long before humanity appeared on Earth. Usually his music makes use of booming, unison melodies with a solemn Middle Eastern feel. But when he had to incorporate material as unearthly as whale songs, he made his orchestra do unconventional things: Improvise around the soloing whale, screech up and down the strings, offer a trombone *blatt* or a bass fiddle *thunk*. He bent his method to work more the way nature works, following rules only loosely, with results that sometimes surprise. After the whale section stops, the music returns to his usual orchestral exotica.

Hovhaness played his idea to Kostelanetz, who was not impressed. "That idea is too Oriental," said the conductor. "The whales don't sing Oriental music."

"But they do," Hovhaness defended himself. "That's the whole thing, they really do!" He took a five-note theme from one of his early operas, and Kostelanetz was fine with that.

Time magazine found "the eerie whale songs" to be a "natural complement to the mystical music of Hovhaness." Their critic wasn't sure if the thundering final applause was for the whales or for the composer, who "beamed like an ecologist, announcing that we've got to preserve everything we can on this planet. It's God's own little spaceship. Everything counts." The *New York Times* critic Donal Henehan wasn't quite sure the different species' voices met on an even keel. "His whales spoke profoundly, but [the orchestra] stayed on the surface. . . . Faced with such an irresistible soloist, Mr. Hovhaness must have suspected he would be harpooned." Henehan was not impressed by the "commonplace black-key melody, conjuring up the sea by unmeasured bowing and overlapping patterns, setting

brass and percussion to echo the real thing." Too obvious, too close. It was music imitating nature without thinking enough about how.

In the mid–1980s Hovhaness added some choral parts to the piece and a grander version was performed *for* three killer whales at the Vancouver Aquarium, who jumped and leaped along with the human performers. The whole thing was documented in Barbara Willis Sweete's film *Whalesong*.

Toward the end of his life Hovhaness used to say "And God Created Great Whales. . . " was the one piece he regretted having written. I suspect that's because he realized the composed parts of his music were no match for the power of the whale's voice and that the ensembles he worked with were not sufficiently prepared to improvise the way they ought to. Yet it remains his most performed work, perhaps the first example of officially sanctioned interspecies music. Those few musicians who dare to cross species lines will at least be remembered for their willingness to try.

Shortly after *Songs of the Humpback Whale* came out, Scott McVay was to give a lecture at New York's austere, oak-paneled Explorers Club, a gathering place for adventurers for more than a century. Word got out that Judy Collins, one of the most popular singers of the day, was interested in attending. Only problem was, at that time the club did not allow women through its doors. McVay thought such a rule entirely ridiculous and suggested he do two talks, one for men and another for women. With that idea, the club relented, and Ms. Collins, known for her pure and quivering voice, got to hear the song of the humpback whale for the first time.

Immediately she was inspired to work the whale song into the album she was recording, which would be entitled *Whales and Nightingales* when it came out in November 1970. The most stirring song on the record is a solo performance of Judy singing a Scottish whaling shanty, "Farewell to Tarwathie," accompanied only by a particularly hypnotic track from *Songs of the Humpback Whale*. The whale part has a little delay added to it, so a slight echoing rhythm

appears at the beginning, giving the tune a very subtle electronic beat. Judy sings crisply and mournfully of the loneliness of the whale hunt off frozen Arctic coasts:

Farewell to Tarwathie
Adieu Mormond Hill
And the dear land of Crimmond
I bid you farewell
I'm bound off for Greenland
And ready to sail
In hopes to find riches
In hunting the whale. . . .

The cold coast of Greenland
Is barren and bare
No see time nor harvest
Is ever known there
And the birds here sing sweetly
In mountain and dale
But there's no bird in Greenland
To sing to the whale

This fine killing song wafts over the whale's own lament. Toward the end of the piece Judy modulates up a step, and the whale backup sounds just as much in tune, revealing how this animal music comes from a whole different harmonic world. As the sad tune fades away, Judy and the whale disappear into a wash of reverb, rewarding the listener with the thoughtful echo of deep oceans, where whale and human songs wash together over distant leagues.

Without any explicit preachiness, this song is the purest and most moving of any of the first examples of human/whale music. It certainly touched a chord with the public, for the album went gold a few months after its release, selling more than half a million copies by the

spring of 1971, making it the most successful human/cetacean collaboration in the popularity contest that is the music business.

As the number of whale-inspired songs increased, the numbers of real whales dwindled in the ocean depths as we humans kept killing them. I don't want you to be particularly impressed by all the money made off of whale songs in those days, but the point is that these songs were on the airwaves, and whale music was filtering into human consciousness on many levels. Brought to human ears through the latest technology, they were ancient and contemporary all at once.

Right at the moment when we believed in hope, peace, and revolution, the song of the humpback whale appeared in our midst. We wanted causes to believe in, and the whales needed our help, and were making all these sounds for who knows what reason. Why not hear it as a cry for aid, a chance to reach out, a push for humanity to find a better way to fit into the world?

Of course those whales are singing for each other, not for us. If we listen to them closely and take them seriously, we honor our place in the bigger scheme of things. As we strain to appreciate sounds that are larger than we are, perhaps we move a little closer to the greatness of the natural world—the most important thing we can bear witness to, as the thinkers, questioners, and chroniclers of nature. To truly be human we must listen well.

Not everyone liked what they heard. Some early reviews of *Songs of the Humpback Whale* recognized that these underwater melodies might have something in common with the experimental human music of the day. Paul Kresh in *Stereo Review* wrote that "the humpback whale sounds more like a mewling cat than a nightingale, with echoey electronic overtones that should prove no threat to Morton Subotnick or György Ligeti, although they may be of some help to the whale in locating his friends, if he has any."

I called up Subotnick, thirty-seven years after that review was written, and asked him about this. "Wow," he was surprised. "That's certainly an insult to the whales."

Back in the day, he didn't think the whales sounded anything like the electronic music of the late sixties, such as his own pioneering work "Silver Apples of the Moon," the first classical commission for synthesizer. He does remember what it was like to first hear the deep, profound music of another species: "It wasn't primal, it wasn't animal-like. It was beyond any musical instrument we could then imagine."

The whales sounded nothing like a sine tone or white noise (the basic building blocks of early electronic music) yet the newly found animal sounds reminded young composers and performers that there were unknown worlds of music still to explore. "We were desperate to define a new music for ourselves, and we were thrilled to discover such beautiful sounds were out there that had never even been considered before." Still, like most human composers, Subotnick was content to let whale song occupy some sacred place beyond: "It was an Ur-music, almost a religious experience."

Hovhaness was the first classical composer to have access to the prized Bermuda whale tapes, but George Crumb was sent the recordings only a few months later. Like most composers, Crumb may not be a household name, but his music is incredibly powerful, subtle, and unique, full of unusual sounds and deep silences made by unconventional techniques like singing into a flute or preparing a piano with paper clips and string to give it a brand new sound. This is music that reveals a genuine astonishment in the sheer beauty of sounds, nowhere as evident as in his delicate and subtle piece, "Vox Balaenae"—or "Voice of the Whale."

Crumb looks and sounds like the guy who's run your local hardware store for fifty years. He is not impressed by the ways some of his predecessors have integrated natural sound into their music: "Some of the real birds make Beethoven's Pastorale Symphony birds look like *pikers.* He had no sense of the sounds of nature. Now eighty years later with Debussy, things started to change. . . . Not now, Yoda, *quiet!*" says the great master to his dog, a nervous terrier.

We're speaking at his plain ranch house in the suburbs of Philadelphia. I ask Crumb, now seventy-six years old, if he thinks

contemporary composers are closer to making good use of nature's sounds than their forebears. "Oh, certainly in the twentieth century, in Ives and Bartók I begin to hear nature in their music, don't you? Perhaps it's the influence of Asian music, one stroke on a Chinese gong and suddenly the winds are rushing in to your piece. I don't think you need to actually imitate the sounds of nature in your piece to get that." He sounds like a composer revealing his tricks or the hardware-store man explaining how to fix a drafty window. It's amazing that such a regular guy can write such remarkable music. Perhaps true sensitivity to sound is a quite ordinary quality that most of us have not tapped into.

"'La Mer' doesn't sound like an ocean, Debussy could just as easily have called it 'La Terre.' Nature is music but it becomes refracted in a curious way through the persona of the composer. I read once that Bartók had an incredibly acute ability to hear insect sounds. It shows up in his music, and it's so effective. Don't you think that happens, that we don't need to hear the actual sound? The evocation of nature is what matters."

Crumb didn't think up the idea of writing a whale piece himself. In 1970 a reel-to-reel copy of the humpback songs was already making the rounds among various musicians, and they were all amazed by it. The New York Camerata chamber ensemble commissioned Crumb to write a piece inspired by whale song, but Crumb didn't want to use the humpback recording in the piece itself. As a composer he doesn't believe in using prerecorded sound, because anything planned in advance takes away from the live musical experience.

"Each moment in great music is authentic, there's no accounting for it, something is there," muses Crumb. "If you use a recording you have no sense of bravura, there's no chance of falling flat on your face. It's what I call 'danger music,' fragile sounds that can collapse at any moment. The audience knows this is going on and they're relieved when a performer gets past a treacherous passage."

Crumb's music is famous for unusual techniques and theatrical moments, like a flutist playing a phrase over the piano's strings while the

pianist holds the pedal down to create an instant sitar-like drone echo. He was the first to have classical players amplify their instruments so that very subtle gestures could be heard, like the tap on a clarinet key or the barest touch of a bow on a cello string.

So if he shunned the use of recordings, could he find a true use for the whale?

"The range was the first thing that impressed me," says Crumb, "from the pedal tones of the organ to sounds that go way beyond the limit of human hearing. A sense of musical phrase, an incredible composition that was going on, majestic, huge phrases. I loved the movement from the lowest to the highest sounds, the percussive elements, sounds like a thousand tubas playing at the same time."

Crumb didn't write a magisterial piece for a huge brass ensemble, that was more Hovhaness's line. Crumb instead used three of the four instruments of the Camerata: flute, cello, and piano, all amplified, demanding enhanced techniques from the performers. The flutist had to sing into her flute as she played, making some buzzing tones that mimicked the whale's sound. The cellist had to play high overtones beneath the bridge. The pianist had to "prepare" his instrument by sticking all kinds of screws and tape on the strings.

The whole conception of the piece bespeaks of evolution and of the sea, passing through a series of movements borrowed from the march of geologic time: Archeozoic (announced in the score as "timeless, inchoate"), Proterozoic, Paleozoic, Mesozoic, and Cenozoic (where humanity emerges, "dramatic, with a feeling of destiny"). And did I mention? All the performers have to wear black, half-masks over their faces. They are only removed for the final movement, the Sea Nocturne.

Sitting in the corner of the room the terrier paws at the door, yapping. "*Yoda, be quiet!*" snaps the master musician, and he returns to remember what his piece is like. "The sounds are epic, huge. Lions may roar but this is a much more vast conception with many more components than the howls of wolves or bears," says Crumb. He also made specific use of the idea that whale songs reverberate across the world.

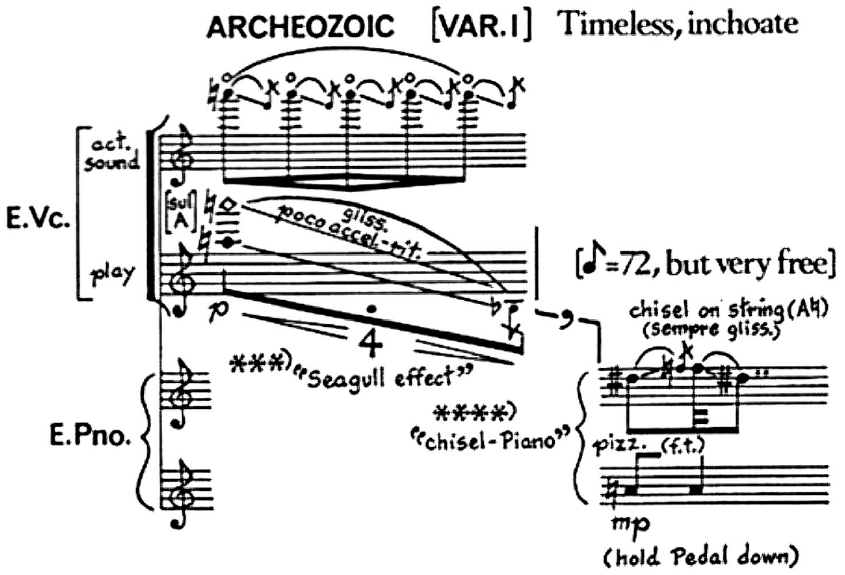

Fig. 1. A fragment from George Crumb's score to "Vox Balaenae."

"My piece sounds at times like it's under water, it's got something submarine. I mean little things, extra things like the seagull sound which I borrowed from Bert Turetsky. He invented that on the double bass and it works just as well on the cello, like fingering a false harmonic. It phases in and out, no one knows exactly how it works." Figure 1 shows a fragment of the score where the electrified cello is playing that very whale-like sound.

"Vox Balaenae" is clearly an homage to Olivier Messiaen's "Quartet for the End of Time," which may be the most important classical piece inspired by bird songs. Messiaen was certainly more wrapped up in the sound world of birds than Crumb ever intended to be with whales—he was never out on the sea transcribing the songs as they welled up from the deep, the way Messiaen did in the wilderness with birds. But Crumb also wrote a piece for a very small ensemble with a genuinely epic reach, mirroring the whole evolution of life on Earth. He thought about the grandness and extent of the whale's music, and

he did not copy it or easily insert it into his own work. Instead he evoked it, not only with buzzy timbres and irregular forms, but by inhabiting the submerged magic.

Every effect and strange sound proceeds sequentially, so we can really hear the weirdness of it, much like the relenting solo explorations of a singing humpback whale, who introduces one astonishing phrase after another. We listeners drink in the sound. Crumb's succession of beauteous effects is serene and delicate, in that sense nothing like a 150-decibel whale. He sighs and takes another sip of tea. "Some people tell me my music is too *quiet* for today's world," he tells me. "It just gets lost in the noise."

It is a stirring, unusual, but ultimately accessible piece, with powerful tonalities luring you in to an alien world. Donal Henahan reviewed the second performance of the piece in the *New York Times* in 1973, impressed by the "fragile harmonics" and fuzzy piano preparations. He praised the delicate poetry of the sounds but cautioned that "sheer surface beauty of this kind is always suspect in intellectual circles. 'Vox Balaenae' may not turn out to be a major work. But don't bet on that." His second hunch was right on. It is Crumb's most-performed work, and it too has been performed for whales a few times. Their critiques have not been noted.

Crumb considers his music to come from a solid twentieth-century history of emotional energy. "Four composers were extremely influential on me, Béla Bartók, Debussy, Charles Ives, and Gustav Mahler, and they all were heavily affected by nature, they were pluralists in their outlook, so nature had a place. They weren't insulated from what life is and what the world is all about. Not like those middle-of-the-century purist abstract guys." Much of twentieth-century classical music lost this raw power. "It became university music, it had no potency, it became inert. It's music without sex, emasculated."

Since Crumb taught for years at the University of Pennsylvania, I wondered if anyone pressured him in that more standard, academic direction. (I remember they tried to pressure me, as late as the 1980s.) "No, even though much of the academic world was buried in gray

music, we could ignore it. But today there's been a complete change, composers are hearing *sounds* again."

Crumb has shown us how the specific inspiration of one fragment of nature can completely change the way we listen. As computers make the manipulation of sound for its own sake ever more facile, people start to pay more attention to the immense musical power of raw, natural sounds. Today's music students study the perfectly realized splendor of "Vox Balaenae" as an example of how traditional instruments can be stretched to the brink of possibility.

These underwater ballads appeared to human ears from nowhere, and musicians from all walks of life almost felt obligated to respond to them. Back in the early seventies, it is astonishing that so many leading music groups wanted to weigh in on the whale situation. I couldn't find a recording of Pete Seeger's reputed "Song of the Last Whale," but there are plenty of others. Country Joe (and the Fish) sang "Save the Whales!" David Crosby and Graham Nash, with James Taylor and backup, recorded an unusually complex arrangement in "To the Last Whale: Critical Mass" with wordless choral echoing, a tiny bit of actual whale song, and a plaintive lament for the great beast: "Maybe we'll go / Maybe we'll disappear / It's not that we don't know / It's just that we don't want to care." The faintest glimmer of whale song appears at the end, and we know we have to change the world. The band Yes did "Don't Kill the Whale." Even the Partridge Family devoted an entire episode to using their music to save the whales so we could save ourselves. Almost all of these songs offered the same basic message, but everyone felt the need to make it their own.

Captain Beefheart went a little farther. "I'm an animal," said this punk-like figure whose Magic Band sometimes veered in the direction of avant-garde jazz. "I think I sound more like a whale than I do John Coltrane." A more bluesy, raggedy version of Frank Zappa, Beefheart was suspicious of presenting whale songs themselves as music because he respected the animals too much.

"Whew . . . a thirteen and a half pound brain! I wouldn't record the whales though. I just want to help them, man. I mean, can you see a

whale as a rock star? You know there is a family of whales, *heh heh,* in Trinidad Bay near where I live and when we play the music, the album, late at night when it's quiet they show up, they come and they dance!" When critics complained that his band sounded all out of sync like some garage free-for-all, Beefheart just smiled and said we just start and stop when we want to, like those whales. Their music "is past trigonometry, calculus, past polygraphs, and beyond that. They're smart, and it's frightening that we're killing them."

He handed out pamphlets for whale conservation groups like Project Jonah at his concerts during the seventies. He sensed something whale-tastic in the way he made music, raw craziness with a deep respect for the whole animal world. "Gonna grow fins," Beefheart wailed, "take up with a mermaid, and leave you land lubbin' women alone." No other pop figure is so suspicious of the human world—he's spent the last few decades painting alone in the desert, having left music behind long ago.

Over the years the songs inspired by whales appear less frequently but are perhaps deeper. One of the best is by Lou Reed, who turns "The Last Great American Whale" into a hero for our time: "He measured a half mile from tip to tail / Silver and black with powerful fins / They say he could split a mountain in two / That's how we got the Grand Canyon." Tougher than most songs of its kind, the lyrics admonish us for not having the strength to be concerned: "Well Americans don't care for much of anything / Land and water the least / And animal life is low on the totem pole / With human life not worth more than infected yeast. . . . They say things are done for the majority / Don't believe half of what you see and none of what you hear / It's like what my painter friend Donald said to me / Stick a fork in their ass and turn 'em over, they're done." Only the tiniest glimmer of a whale song appears at the end of the track. When Reed wrote about his early days in the Velvet Underground, he could have been talking about whales: "We heard our screams turn into songs, and back into screams again."

Laurie Anderson did a theater piece called "Songs and Stories from Moby Dick" in 1999, which became an album called *Life on a String* the following year. Again, you hear only a slight imitation of the whale, with evocative, searching texts. In one piece, "One White Whale," she wonders if the song will lead us to our goal: "How to find you, maybe by your singing / A weird trail of notes in the water / One white whale in all these oceans / Slipping through the nets of silence." We know so little yet pretend to know so much. The search is endless, and even when we find him in another tune, "Pieces and Parts," we still can't figure him out: "It's easier to sail around the world in a coffee cup / Than to see a whale when he comes rising up / We see him only in parts / A fountain, fins, a speck on the horizon / Giant teeth, an open mouth / Look out, look out, look out, look out."

Every musical portrayal of whales seems to combine longing and sadness. We want to reach them but we cannot. The sum total of human effects on the planet may have made the timing too late. Ecological longing continued to inspire more music. Other classical composers got on the cetacean bandwagon after a few years. John Cage, pioneer composer and musical philosopher, who for years urged us to enjoy sound for itself and to let art imitate nature by manner of operation, wrote his "Litany for the Whale" in 1980. This composition is a nearly half-hour piece for two male voices, each singing the letters of the word "whale," like "*woo ha el eh,*" each to the other, never overlapping, like the actual solo humpbacks never interrupting each other across ocean miles. The whole work gives a meditative sense of wide spaces and great distances.

Toru Takemitsu, perhaps Cage's Japanese counterpart, met Scott McVay in 1970, but it took him eleven years to offer up a whale piece, specifically commissioned by Greenpeace in 1981. Takemitsu was also inspired by Melville's *Moby Dick*, impressed that, for once, a whale triumphed over its hunters in the end. Yet his favorite reference in the novel concerned the musical power of the sea itself: "Let the most absent-minded of men be plunged in his deepest reveries,

and he will infallibly lead you to water. . . . Yes, as everyone knows, meditation and water are wedded for ever."

"Toward the Sea: Moby Dick" is a swishing, wave-like tone poem echoing Debussy's "La Mer." Takemitsu adds some of the unusual flutter-tonguey flute sounds that Crumb so eloquently brought to whalify his own piece. Still, Takemitsu's work sounds more conventional, more derivative of these earlier masters. But the significance is that he, the acknowledged master of classical music in Japan, cooperated with Greenpeace to save the whales instead of continuing to offer humpback sushi on the menus of the nation.

You would think that jazz musicians would be among the first to welcome the strange culture of the moaning whale, yet it wasn't until 1979 that a jazz player explicitly emulated whale sound in his own playing. With just the right amount of undersea reverb, bassist Charlie Haden begins "Song for the Whales" with an improvised melee of descending bowed notes. He is known for the deep sensitivity of his tone and attack. His band Old and New Dreams was composed of four of Ornette Coleman's most distinguished sidemen. They continued Ornette's style of playing free jazz with an undeniable sense of groove and swing.

Don Cherry interjects with dolphin-like pocket trumpet *upbleeps*, and eventually the two remaining members of the band, drummer Ed Blackwell and tenor player Dewey Redman, come in with a sped-up dirge with a fast running drum line beneath. Whales come back up on land once more, and this time they dance. The structure of the piece is unlike anything else the band ever did, once again showing that when musicians take up with humpback song, their music changes and there's no going back.

The one jazz musician who has most allied his work with the sounds of nature is Paul Winter, a man who has used wolves, whales, and birds throughout his work. Winter was discovered as an up-and-coming young saxophonist while still in college in the early 1960s. The U.S. State Department sent his band on several international tours where he got acquainted with Brazilian music, which he soon

integrated into his sound. In 1962 Jackie Kennedy invited the Paul Winter Sextet to be the first jazz group to officially perform at the White House.

In 1968 a friend of Paul's said he ought to put on headphones and check out these whales, saying it was way better than an acid trip. "Their voice was sort of a cross between an elephant trumpeting and Miles Davis. They had this bluesy quality that was so poignant. This made me realize that there is perhaps a universal yearning that is shared by all species, this calling, crying quality, in their singing." Winter may have been the first to think of whales as subterranean jazz musicians.

He was inspired to attend a lecture by Roger Payne, and from that moment he was hooked. Few speakers on whales are as gripping as Payne, who has brought thousands to tears with the songs and stories of the humpback whale. Through his research and activism he has done more to spread the beauty and dignity of whales and their sounds than anyone else.

Winter was astounded by Payne's diagrams of the deep structure of the humpback song that resounds for up to thirty minutes before it repeats. He immediately felt an extraordinary intelligence behind the songs of these animals that were being killed for lipstick and dog food. Paul asked Roger what he, as a musician, could do to help. Payne said, "Make sure nature has a place in your music."

By the mid-sixties Winter had moved to the countryside of Connecticut, not far from where Dave Brubeck, Gerry Mulligan, and Winter's first producer John Hammond lived. Living in the woods is a challenge for a rising jazz musician. Jazz is famous as an urban music—the jarring juxtaposition of city sounds suggesting new sudden moves, improvisations out of the melee of people meeting, cultures blending. Living amid so much water, wind, and trees, Winter began to wonder how a sense of place could meld with his sound.

The first nature piece he did was based on the beautiful Eliot Porter photo book *In Wildness Is the Preservation of the World.* The vivid, pure photography juxtaposed with pithy quotes from Thoreau

set the tone for a whole line of Sierra Club Books that showed how beauty, not only worry and fear, could coax the public into the environmental movement. Winter's piece of the same title used a litany of voices of endangered species, with their names recited one after another: "Black-footed ferret, whooping crane, Alabama cavefish. . . ."

After one such performance, someone in the crowd came up and gave Winter some advice: "You're never going to accomplish anything by making people feel guilty. You need to celebrate the creatures instead." He had to learn to create the musical equivalent of a Sierra Club book. It took Winter nearly a decade to figure out how to do that.

In the early seventies Winter found himself influenced by another Connecticut musician, the iconoclastic composer Charles Ives, who had lived just up the road in Redding, fifty years earlier. An early champion of a raw, primal kind of Whitmanesque Americanism in classical music, Ives set up different marching bands clambering up and down hillsides, playing cacophonously together in and out of time. One might call him the Captain Beefheart of his day.

Winter tried in his own way to make a music rooted in his home landscape. He began to organize music villages where all kinds of people would get together and play, breathing in the clean country air. Following Ives, he saw a possibility of blending classical, folk, and jazz music. He worked with Peter, Paul and Mary as well as Pete Seeger. He gathered together some of the best and least conventional improvising musicians, guys like guitarist Ralph Towner and oboist Paul McCandless, who applied a personal, jazz-type sound to classical instruments. Winter called his band the Consort, evoking a purer world of medieval troubadours.

Their record *Icarus* was produced by legendary Beatles producer George Martin in 1972. Mixing Bach, drums, ancient ballads, and wild soloing, it presents a genuinely optimistic, new sound. Martin has famously called it the finest record he ever made. The title song was even launched into outer space on one of those Pioneer missions that left our solar system. (Also included, at the behest of Carl Sagan, were songs of the humpback whales themselves, just in case the probe

is found by an alien intelligence that might understand them better than we do.)

Icarus is a beautiful record, and it was critically well received, but it did not become a hit and did not bend the jazz world in Winter's nature-oriented direction. He went back to the drawing board. "The failure of that album to connect with the culture led me to withdraw and want to write my own music."

The Consort started to play ecology movement benefit concerts, and Winter began to meet more activists and biologists. He went out with David Mech to listen to wolves, and discovered that his especially soft and pure saxophone tone seemed to blend perfectly with their howls in the night. He first saw gray whales from the Greenpeace boat *Phylis Cormack,* off Vancouver Island. "I had never before seen a whale, I had only the sounds and this vague notion of what they are. What struck me so deeply was this slow-motion grace, their surfacing, this powerful spout, and then they would dive. Suddenly I understood a whole different aspect, not just this thunderous power."

The next day he took a cheap saxophone out on a Zodiac raft and tried to play for the big, mostly silent grays. Although there are famous pictures of Winter playing his sax out on the water with whales, he's never been sure they could hear or respond.

In the seventies, Winter went down to Baja California three years in a row, where the gray whales in their winter calving lagoons have since gotten more and more interested in human whale watchers. Someone was trying to make a film of people and whales getting closer together. "There was a yoga dancer on the beach, and I was playing my soprano, and both of us were completely naked, and they had a big plastic inflatable whale on the beach and some real whales in the water watching us. This film was never completed; I often wonder what happened to the footage. And I wonder what the whales thought of it all."

(Now it so happens that a few months after visiting Paul I met this very same dancer on a beach on Maui, about thirty years after the fact. "Naked?" she laughed, "I would never do those dances naked.

They're sacred. Of course, there was a lot of general nakedness going on down in Baja, Paul's memory may be confused.")

Probably because of tales like that, and because of the softness of his speech and his saxophone sound, Winter is often thought of as a father of New Age music, a category in which he has won many Grammy Awards. To those who support it, the New Age genre refers to that kind of sound that connects the listener to higher spiritual states, into a kind of pan-religious bliss of a hopeful future. To those who don't like it, it's trumped-up muzak or milquetoast instrumental folk. Winter, though, has always been a jazz musician, one who has tried to push the boundaries of that genre to encompass the tunes and inspiration of many species through new clues for improvisation.

Since his performance in the White House forty-odd years ago, Winter has continued to be a musical activist, creating beautiful and provocative soundtracks to numerous important environmental and political campaigns. His 1976 album *Common Ground* is the first to incorporate the melodies of the creatures themselves, specifically the trio of whale, wolf, and eagle, where the specific tones of each creature's tunes form the basis of the music in a direct and easily accessible way. Paul McCandless improvises with an eagle's cry in the loosest piece on the record. The wolf howls over a minor, tragic harmony in "Wolf Eyes," and the whale piece is called "Ocean Dream."

The piece opens with the hissy waves of the original recording from Payne's *Songs of the Humpback Whale*. Organ and guitar enter, with a downswept sigh. Winter sings a melody that heads up a tritone, the inverse of the whale's own interval: "Ocean child, come now home, holy wonder, holy one." The whale song comes back, weaving in and out of the human melody as the cello picks up the anthem as more squeaky whale songs emerge. The whale recedes into the distance, the saxophone drifts back. A wash of descending weird washes. They sound electronic, but they're actually humpback wails.

Hearing that record at age sixteen changed my life. When I first heard Paul Winter, I was amazed that music and ecology could be honestly combined. I imagined that better listening might really lead

us all closer to nature. I even named my high school band Ecology. Winter showed a way that musicians could contribute to environmentalism not just through propaganda, but by teaching people how much music could be found in nature itself.

"That was the first time I ever tried to sing," says Winter. "And almost the last. It was fun, but I never felt like it was my essence. Lyrics to me are limiting. You can't take people into the realm of magic and mystery when words are in the way. That's just the prejudice of a lifelong instrumentalist. I'd much rather aim for something that's universal, not limited to one language." Winter's singing voice is soft and alluring, a fine complement to his horn playing, a classical sound that few other jazz players use as effectively. Certainly influenced by the Paul Desmond tone that was so much a part of Dave Brubeck's sixties quartet, it is not a sound that has spawned many imitators today. Perhaps, like George Crumb's music, it is too quiet for the noise of the modern world.

I ask Winter what he thought of the works of Hovhaness and Crumb, both written at the dawn of human interest in whale music. "That's head music. I have always been interested in *heart* music." Makes me smile, because that's just what Crumb said about his nemeses, the chilly composers of atonal serial music like Schoenberg and Berg, so beloved by the academy. Perhaps for musicians, whatever we embrace comes from the indescribable heart, while whatever leaves us cold is the work of a mind more willing to calculate than to feel. But Winter is more practical in his rage. He wonders more about the fact that most musicians didn't give whale song a moment's thought:

"What about all the people who *didn't* get inspired by the whales? There should have been *thousands* of compositions." This should not be considered a mere historical fad, a relic of the 1970s. "Our only hope at salvation is to recollect with the wild world around us and to rejoin the family of life. Not just for aesthetic reasons or to preserve them, but because they are our elders, and we need to learn from their wisdom and their example of how to live in the world without defiling our own home."

If Winter sounds a little pious here, you may find it no surprise that for nearly three decades he has been "artist in resonance" at the biggest cathedral in the world, St. John the Divine in New York City, where his summer and winter solstice concerts draw thousands of listeners over many nights. There is nothing quite like hearing the jazz of nature echoing in this giant church. Those who call Winter a New Age musician miss the point, that he is trying to reach beyond humanity to the hope of reconnecting our marauding kind with the gentle voices of the eternal, natural world. He is actually seeking something sacred.

Not thinking of himself as a singer, Winter rarely performs "Ocean Dream" today. His next record, *Callings,* in 1980, was the first on his newly founded Living Music label. Winter wanted total control of the recording process on this, a concept album featuring a sea lion pup named "Silkie" on a fantastic journey from Baja California all the way to Magdalen Island off of Prince Edward Island, where harp seals are slaughtered for their fur. This time Winter went back to Payne's original recordings and heard something that sounded like a lullaby: "I had this fantasy, that this song, from one of the largest mammals in the sea, was crying out for the fate of these small, helpless creatures. . . . It was an act of reverence to put these humble human harmonies beneath this whale melody."

This soft, gentle song, with the rather weighty title "Lullaby from the Great Mother Whale for the Baby Seal Pups," is a moving melody even if you might find the tale behind it a bit heavy. This is the most frequently performed piece of Winter's whale music: a simple ocean melody turned into a chorale, with clear, honest harmonies.

In fact, it is based on the same fragment of whale song that Judy Collins used in "Farewell to Tarwathie." The humpback fragment comes from *Songs of the Humpback Whale,* and this particular song was recorded in Bermuda in the spring of 1967. Collins used it in 1970, Winter in 1979. The whales change their song as a population from year to year, so forty years later none of them are singing the same songs anymore. None except for the Paul Winter Consort, that

is. You don't hear much whale song in classical, jazz, or pop music today. Perhaps we're all so used to it that it's become a cliché. Did these many efforts help at all to save the whales?

For Katy Payne, who did so much of the most sensitive work really listening to and trying to decipher the song, the most important thing was how this whale music made us reconsider all of nature: "There was a burst of realization that the world could change its relation to wildlife. The reaction people had to hearing these sounds made whaling obsolete!" Whaling had been the only reason people knew anything about whales. As people heard the songs the desire to kill whales soon lifted away.

Not that it was so easy to convince the governments of the world that this was a good idea. It was public concern that forced our leaders to suggest that whaling must be stopped. In June 1971, the U. S. Senate unanimously passed a resolution demanding a ten-year halt to commercial whaling. At the time the government's highest-ranking whale scientist, director of the Smithsonian's Marine Mammal Council, was Carleton Ray of Johns Hopkins. This is what he had to say: "I don't find it very relevant to hear that whales produce music. Cock-a-doodle-do produces music too. Whales are smarter than chickens, but it is not relevant to say that whales have a complex social life. So do all animals, including the cows that we eat." Ray was also famous for arguing that clubbing seals to death was a quick and humane way to kill them.

Despite his academic pedigree, public opinion turned against Ray. Whale songs were all over the airwaves in the early seventies, and Congress succeeded in passing the Marine Mammal Protection Act of 1972, placing the United States at the forefront of global environmental protection. It is still one of the world's most exemplary articles of law concerning whales, sending a clear message that cetaceans are to be studied and respected, not used. Section 101(a): "There shall be a moratorium on the taking and importation of marine mammals and marine mammal products . . . no permit may be issued for the *taking*

of any marine mammal and no marine mammal product may be imported into the United States."

Whales got a great boon of protection with this law, and the fifteen years of public outcry and music inspired by the plight of the whale helped to push global sentiment in their favor. Greenpeace became famous for its Gandhian techniques of putting their rafts right between harpoon and whale. The elegant book *Mind In the Waters* was published by the Sierra Club, an anthology of whale tales, drawings, and scientific reports, which drew further support for these wonderful, little-known animals.

By 1986 the International Whaling Commission had to respond to the overwhelming support of the world's people, and their governments, for a moratorium on commercial whaling. Though Japanese, Norwegians, and Russians continue to hunt whales and defy the ban, world public sentiment is against them and protests continue. Whale populations have been recovering steadily since the ban, and these countries sometimes argue there are more than enough whales out there to kill—no one will notice and whale watching can still thrive. But most of the world's people now consider whaling to be an obsolete and barbaric practice. If they want to openly continue to kill whales, it's up to those countries to prove otherwise.

"There was one moment in the seventies in which I most admired Roger," smiles Katy Payne about her ex-husband. "At a meeting in Bergen, Norway, with hundreds of people there deeply invested in the whaling industry, he simply told them that whale watching was starting to make more money than whale killing. When people began to realize that this is the case, I realized, the world is changing. And it was the song that did it.

"But people forget quite soon; there's this love for novelty which probably drives the changing whale songs, which also drives people's interest. We find fashion a really important part of human culture. Our culture got really fond of humpback whale songs, and then they forgot about them."

Until now. It's time to bring whale song back into the human world again. The long, epic rhymes of humpbacks. The *tap-tap*-tapping of sperm whale click trains. The cacophonous free jazz of belugas and the kinship whistles of orcas. The thousand mile thrums and beats of blue and fin whales, crossing whole oceans in less than an hour.

What about that Pete Seeger song? There is no recording of it, but a quick Internet search did conjure up the lyrics:

It was down off Bermuda
Early last spring,
Near an underwater mountain
Where the humpbacks sing,
I lowered a microphone
A quarter mile down,
Switched on the recorder
And let the tape spin around.

I didn't just hear grunting,
I didn't just hear squeaks,
I didn't just hear bellows,
I didn't just hear shrieks.
It was the musical singing
And the passionate wail
That came from the heart
Of the world's last whale.

This song seemed quite different from the others of its time. It's all about how the song is recorded, and how the music happens. At the end, it does return to a morality tale:

So here's a little test
To see how you feel,
Here's a little test
For this Age of the Automobile.

If we can save
Our singers in the sea,
Perhaps there's a chance
To save you and me.

I heard the song
Of the world's last whale
As I rocked in the moonlight
And reefed the sail,
It'll happen to you
Also without fail,
If it happens to me
Sang the world's last whale.

Seeger got all the details right: the microphone deep under the sea, the rocking, rhythmical beat of the boat swaying back and forth, and the whale poetry resounding and repeating underneath. Never recorded? I was shocked. Pete Seeger lives just up the road from me, so I wondered if I might rectify that situation. Let's record it today.

We had recently performed on the same bill in Toronto, so I gave him a call. "You remember that song about the world's last whale?"

"What song?" The scratchy voice on the other end of the line sounded suspicious.

"Goes like this: 'I heard the song, of the world's last whale. . . .'"

"Ah yes, you know my mind doesn't remember it, but I believe in muscle memory. My body's still got that tune."

"You want to sing it?"

"I'm eighty-seven years old—too old to sing. But *you,* you should come on down to the Hudson riverfront and play some of those whale songs of yours while the swimmers cross the river from the other side. They're going to love it."

"I'll do that if you sing the song."

"What song?"

"'The World's Last Whale.'"

"Oh, we'll see about that."

The next weekend I ambled down to the waterfront festival in the nearby town of Beacon. Pete started the Great Newburgh-to-Beacon Hudson River Swim four years ago to remind us that this river has gotten clean enough to jump in. He wanted to celebrate some environmental good news and raise money to build a lined swimming pool in the river to make it safe enough for all.

I had done my homework, and found out that in 1988 a humpback whale had actually swum up the Hudson River. Why not play some of its songs to inspire swimmers just finishing their mile-long crossing? I asked a question of the crowd, "How many of you know what a whale sounds like?" The parents and grandparents smiled.

I pressed "play" on my computer, and the swoops and bowed bass notes resounded from the speakers on stage. I accompanied on clarinet, trying to play sounds that would blend. It was a bit of a change from the usual river festival folk tunes, but the swimmers and their families didn't seem to mind.

A tall, rail-thin man with a beard pushed his way to the stage with a banjo and a big pile of papers. "You know, I had totally forgotten about this song until this young man brought it back to my attention," Pete nodded in my direction. "Here are some copies of the words, and I wrote out the music, too. These whales still need our protection. Anyone who wants to keep this song alive, here, take a copy."

Can Pete Seeger still sing after sixty years on the road? More than once I've heard him go on unaccompanied for an hour at a time. On the tribute album to Seeger's work, I find that Bruce Springsteen, with his worn, gravelly delivery, sounds a lot older than Pete.

This lilting, grooving tune in a doleful key reveals exactly what the song of the humpback whale meant for us when it first became known: in the 1960s, miraculous underwater recordings revealed there is music under the sea, and we learned of one more rare thing of nature that was fading away. If we don't work hard to save this song that is so radiant yet also fragile, we're going to disappear just like the whales. It's a simple moral from a beautiful sound.