

**The following interview with
ROGER PAYNE
was conducted by the Library of Congress
on March 31, 2017.**



Roger Payne

LIBRARY OF CONGRESS: If my research on you is correct, I believe you began your wildlife research studying owls. When and why did you switch to whales and the ocean?

ROGER PAYNE: I started on bats and then worked on owls for about eight years--and then switched to moths. (A friend once said that I'd gone from, "One fly by night organism to another.")

I was working at Rockefeller University, and having a wonderful time, but I began to think that all I was doing was entertaining myself, and I could see that the world—the wide world—was going to Hell in a hack and that it was time for me to give back something. My feeling was, "What can I do if I only have experience in studying the sounds of animals and their acoustic systems?" And then I thought of whales. They were being terribly overhunted and people had already found out that they made lots of sounds. But there wasn't much known about their behavior.

I had heard a lecture by a man who was the head of the Bureau of Whaling Statistics for the International Whaling Commission and his talk was about the problems that whales were having at the time; whalers were killing about 30,000 whales a year—a harvest that was completely unsustainable. It was clear that unless something changed, whales could soon go extinct.

I felt that unless people got interested in whales there was no hope of saving them and I realized that I might be able to help change that. At the time, no one was really thinking about whales; they weren't part of the zeitgeist of those times.

I knew nothing about whales; I had never even seen one! Well, I once saw a distant spout when I was crossing the ocean, but I never actually saw the whale. Except for the Antarctic I didn't even know where you could go to see one. I much later found out that they were quite close to where I lived at that time, Lincoln, Massachusetts. They were right off the New England coast but I didn't know it then.

LOC: About what year was this?

RP: I think it was about 1966 or 1967. I had heard from a friend that whales pass Bermuda. So I later went there, where I met an engineer named Frank Watlington who gave me some

recordings he had made of underwater sounds. He guessed that they were whale calls and that they were probably made by humpback whales since that was the species he saw around Bermuda when he heard those sounds.

I played his tape that winter so often that I memorized the sounds and soon realized that the sounds were being repeated. It wasn't very obvious because they only repeated after about 10 minutes (I later found out that some repeats only occur after half an hour) so that by the time they repeat, you've forgotten what you heard earlier. But they *were* repeating. Scott McVay and I later made spectrograms that demonstrated the repeats visually.

Claiming that whales "sing" is not an esthetic judgement of the sounds' quality. It simply reflects the fact that a repeated pattern of sounds that's rhythmic and contains tones is properly called a song. We say that crickets, birds, and frogs sing; well, so do whales. When I realized that whales sing, I thought; "My god! This is just what is needed to get the world interested in whales!"

LOC: Published reports differ. I read that you invented the hydro-phone for recording sounds underwater. Is that correct?

RP: No, that's a mistake. Hydrophones were invented when I was still in grade school, but I did make quite a few hydrophones for my work.

A hydrophone allows you to hear whales—to hear underwater sounds. Otherwise, you can only hear an underwater sound that's very loud and only if the source is quite close to you and you are in a boat with no motors running. That's because there's a huge loss in the loudness of a sound when it passes from water into air; an Inuit hunter puts his paddle in the water and rests its handle against his head or jaw and that way he can hear a nearby whale through the paddle. Hydrophones are preferable, just because they allow you to amplify the underwater sound that is causing them to vibrate, just as a microphone produces a signal you can amplify.

LOC: Were you surprised by the great interest that so many people took in the whales and in your research?

RP: I was confident that there would be a huge interest in them—if I could just get people to listen to them. So I spent two years recording whales and lecturing about them and going around playing whale songs for anyone who'd listen. My aim was to try to build whale songs into human culture.

I'd play whale songs to human singers, composers, or musicians. I'd play them for parishioners in churches. To writers, actors, dancers, poets, ministers, to the press, to filmmakers, to anyone I thought might take enough interest in them to later express that interest in some imaginative form that might intrigue others. And I made a record and later a second one and both were best-sellers. I also went on every major late-night TV talk-show and radio program in the US and the UK, and the sounds spread like wildfire; people got into them, and when they heard them they were stunned.

After a while, Greenpeace became involved, and they found a wonderful way to get the world interested in stopping whaling; they drove their boats between the whalers' harpoons and the whales. And that made the world *really* sit up and take notice.

Early on I did more than just record sounds. I took photographers on all our expeditions so that the world would have stunning pictures to go with the whales' stunning sounds. I'm a terrible photographer myself; it's an art form, a great skill, that I lack completely.

Soon I started participating with others who were making films about whales. The last time I counted, I think I'd been involved in about 60 films, including an IMAX film called "Whales."

LOC: Did you think that the whale sounds would have such a commercial appeal?

RP: I knew they would fascinate people, but I'm no businessman. I only knew from the first moment I heard them that no one would be able to resist the strangeness and fascinating quality of those evocative sounds... I first heard them from Frank Watlington in the research vessel he used. We were in its engine room and a generator was roaring away so loud I couldn't hear him unless he shouted. He put some headphones on my head and said, "Listen to this." The headphones helped reduce the noise and the whale songs he'd recorded just blew me away.

Since then I've played whale songs to thousands of people—more than thousands—and there's always a stunned silence at first. They listen for 20 or 30 seconds, and then often talk—a few comments back and forth, but then listen again, this time for much longer. And when you turn off the recording it's as if the person is coming out from under a trance. It's clear that their lives have just been changed.

LOC: Judy Collins later turned the whales into a hit recording ...

RP: Yes, Judy Collins took them and used them as the only accompaniment behind her singing an old ballad called "Farewell to Tarwathie." It became a beautiful cut on her album "Whales & Nightingales."

From the start I sent copies of whale songs to all sorts of people—to the Beatles, Joan Baez, and Bob Dylan. I played them for Mary Hopkin, who had just had a big hit with "Those Were The Days My Friend." She was stunned by the sounds. There were two other people with her at the time—her manager and someone else—and they couldn't get her to take off the headphones. Afterwards, she said to me, "I wish I could sing like a whale."

LOC: Was the coverage in "National Geographic" that appeared the first major attention the whale songs got in print?

RP: No, but the flexible record they included in their magazine turned out to be the single biggest print order in the history of the recording industry. It still holds that record. Actually the first publicity was a lead article in "Science" magazine. We also had the cover of that issue but it wasn't a picture of a whale; instead, it was a spectrograph of a whale song. It came out in 1971.

LOC: What are you at work on now?

RP: Having talked about whales a lot on film, I'm focusing now on writing. I've written several articles and books on whales, although only two books were designed for a general audience.

I'm at work now on a third such book. It includes the story of how Carl Sagan and his wife Ann Druyan added one of my recordings of humpback whales to the golden record they persuaded NASA to attach to each of the Voyager satellites. Voyager I has entered interstellar space; it has passed through the heliopause—the transition zone (Voyager II is in that zone now) where, as Carl put it so well, "The wind from the sun is equal to the wind from the stars." Thus, have whales captured the hearts of an age-old enemy, man, and their songs are now bound on a 2.5 billion year voyage that will carry their message across the galaxy.

Meanwhile, back here on earth I suspect that I'll keep promoting the grace and beauty of whales and of their haunting songs until the day I die.

