

Listening to the Abyss

Noted whale researcher Roger Payne muses on the mysterious songs of humpbacks

MUCH OF MY LIFE has been spent among whales. Above all, I have tried to understand the messages that their songs and calls contain. Some of my happiest hours have been spent at night lying back in the cockpit of a sailboat, alone on watch, steering with one foot and watching the mast sweeping across vast fields of stars, while the songs of humpback whales poured up out of the sea, to fill my head, my heart and finally my soul as well.

Humpback whales adopt a head-down posture when they sing (perhaps to allow the flow of blood to their heads to better perfuse their brains, helping them to remember their long and dauntingly complex songs). When you swim up next to a singing whale through the blue water, the song is so loud, so thundering in your chest and head, you feel as if someone is pressing you to a wall with their open palms, shaking you until your teeth rattle. When you swim close enough to touch the singer, you doubt whether you will be able to stand the intensity of the sound. But you can.

The singer usually detects such an approach first, and when he does (I say "he" for it is the males that sing), he stops singing and slowly turns toward the intruder. The entire ocean seems to be rearranging itself, and you are washed willy-nilly this way and that by the currents he stirs in his turning.

At such moments, I have been made to feel smaller than I have ever felt otherwise. But such a feeling is a good thing for human beings to experience periodically, particularly when it is generated by some other nonhuman species, some fellow traveler on our mutual planet.

Although your heart may be trying

to beat itself out through your chest, the singer means you no harm. He appears simply curious to see what it is that has taken it upon itself to interrupt his reverie. The disconcerting part is that he sometimes investigates such interruptions rather closely before going on his way.

During their breeding season, humpback whales produce long, complex sequences of sounds that can be

swells—the rhythm of the sea. It is the beat most familiar to whales since they are immersed in it—are rocked gently by it. Throughout their lives, they rise and fall with it. In storms, the height of the swells is greater, but the pulse of the song persists. It would not be surprising to me if ocean swells set the rhythm of whale songs.

The first time I ever recorded the songs of humpback whales at night

was off Bermuda. It was also the first time I ever heard the abyss. Normally, you don't hear the size of the ocean when you are listening, but I heard it that night. It was a bit like walking into a dark cave, dropping your flashlight and hearing wave after wave of echoes cascading back from the darkness beyond, realizing for the first time that you are standing at the entrance to an enormous room. The cave has spoken to you. That's what whales do; they give the ocean its voice, and the voice they give it is ethereal and unearthly.

As you sit in your boat, lightly borne on the night sea, watching the weather and the stars and the sails, it all seems so simple, regular, ordinary, and you have no thought of how far beneath you the abyss extends. But then you put on headphones, and after a while a whale starts to sing, and the echoes from the abyss come tumbling and roaring back, and suddenly you are aware of the vastness of the mystery that underlies the boat. □

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HUMPBACK WHALES & CALF—DORIS TETTINGER / JIMMY WILKIE / RESEARCH FOUNDATION

heard by listening through a hydrophone, a kind of underwater microphone. In 1967, researcher Scott McVay and I discovered that these long sequences are repeated by the whales and are therefore properly called songs.

These songs are much longer than bird songs and can last up to 30 minutes, though 15 is nearer the norm. They are divided into repeating phrases called themes. When the phrase is heard to change (usually after a few minutes), it heralds the start of a new theme. Songs contain from two to nine themes, strung together without pauses so that a singing session is an exuberant, uninterrupted river of sound that can flow on for 24 hours or longer.

The pace of the song is very grand and extended and appears to me to be set by the slow rhythm of ocean

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