



Title: The Art of Human Navigation

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The Art of Human Navigation

"For the earth is ocean. And rising everywhere in it are islands. Go find the islands..."

From An Ocean in Mind.

KAREN CHANDLER

UCH WAS NATURE'S STRONG, PERSISTENT message for ancient Polynesian voyagers and native tribes of the Pacific Northwest Islands. Written in the stars, on flotsam, and in bird migration paths, came word of distant, undiscovered islands. Called seaward beyond the horizon clouds, native peoples of the Pacific Rim did indeed find islands scattered throughout a sea spanning half the surface area of the earth. Out they went and back they came, home again to Samoa and Tahiti, to the Prince of Wales and the Queen Charlotte Islands. How? asked western navigators centuries ago. Skillfully, the legends tell us, consistently tracking nature's guideposts.

Without instruments navigation was a human act. The map was in the mind of the wayfinder, whose whole being had been trained and opened by chants, long hours of observation and an elder's patient teachings. He or she learned to recognize and interpret nature's clues to judge direction, distance traveled, time and final landfall. Under sail in a circle of sea and sky, memory, awareness and the physical senses formed part of a dead reckoning system linked to ocean, atmosphere and sealife.

Wayfinding was a well-developed art according to Will Kyselka, astronomer and author of a book on Polynesian wayfinding. For him it was as precise as math and logic, with the magic of ritual and intuition. For Native American and social scientist, Dr. Pamela Colorado, founder of the Indigenous Science Network, it was and is, science in the full mean-

ing of the word, "a holistic way of knowing nature, fully human, aligned with self, nature, and spirit." It is proof, according to her and cultural anthropologists,



With a map in mind, the wayfinder stands in a circle of sea and sky, reading speed and direction in nature's signs.

of the intentional peopling of the Pacific through exploration, trans-Pacific gatherings and established trade routes.

For the ancient navigator apprenticed to the sea, wayfinding was a way of life embedded in his being. It was part of a culture that still watches, rearing seamen as meticulous observers of natural phenomena. These new wayfinders, schooled in modern astronomy and experienced in ways of the sea, are learning to trust their senses and their minds once again on a journey in search of the ancient mind. Their goal

is to sense and feel their way back into harmony with nature, a state of being so needed, many claim, in a high-tech western culture trained to dominate, not cooperate, with nature.

Each ocean voyage began with two points on the navigator's reference course.

canoe. "Between home and that distant island may lay thousands of miles of open sea," he says. "It did for us." It did, no doubt, for the Haidas people of Prince of Wales Island. They sailed, Dr. Colorado tells us, to Japan and back. Along such a route, everything had meaning: ocean swells, the color and shape of the clouds, currents, and the pitch and roll of the canoe.

"Native sailors knew what to expect," says Dr. Colorado. "They knew the wind and sea conditions all along the way from chants, personal accounts, and petroglyphs, or symbolic rock drawings." According to her research, Indians of the northwest Pacific coast may have planned their trips using star maps and tidal clocks written in the changing pattern of tideline rocks.

Navigators, like the Nootka women of Vancouver Island, had songs and special rhythms keyed to the surface movements of the sea. "Everything we ever knew about the movement of the sea was preserved in the verse of that song," writes Anne Cameron, quoting an elder in her historical novel on Nootka tribal history. "There was a song for goin' to China and a song for goin' to Japan. All she (the steerswoman) had to know was the song and she knew where she was."

"We had the rising sun and the swells to steer by too," says Na'ilima. "Like other wayfinders, we also knew where

KAREN CHANDLER

"You knew where you started, and where you wanted to go," says Hawaiian steersman Na'ilima. He recently returned from a wayfinding voyage to Tahiti on the *Hokule'a*, a modern replica of an ancient sailing

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reference islands lay along our path. And most of all, we had the stars. They showed the way."

According to Na'ilima and others, navigators set their course, their time, their latitude, and their distance traveled by the night sky. Each target island has its guiding stars, points along the margin of an imagined compass that was studded with other well known lights. In the center sat the wayfinder, watching and memorizing patterns. The steersman nosed the "compass needle" along a predetermined path of successively rising or setting stars. In the mind's eye of the crew, the sea and reference islands flowed past a stationary canoe, from beneath one star position to another. Synchronous pairs of rising or setting stars, charted just above the horizon, told latitude. Other stars at zenith marked the location of target islands like Tahiti and Hawaii.

At dawn the navigator read direction in the swells against the pattern of the morning sky. "We always knew where north was—our reference point for daytime steering," Na'ilima explains. It was never more than a few handwidths away from a sun that rose just north and south of east."

Wayfinding was very effective but less precise during the day. It required more clues and more concentration to assimilate and process them. But the swells were always there, and seasonal trade winds blew in consistent patterns written in the color and shape of horizon clouds. The wayfinder could estimate speed from the sound and feel of the canoe and determine currents from the shape and direction of waves. At times he or she just knew the direction to set—with or without external clues—drawing upon intuition, perhaps, or a subtle communion with the sea itself that was the

essential mark of a seasoned wayfinder.

The final destination lay to windward of the reference track,

carefully,
knowingly, the
crew tracked
the evening
seabird flight path and
the directional streaks
of transient deep
phosphorescence.



surrounded by what Kyselka calls "concentric circles of life", coastal fish and homing birds, land clouds, and wave defraction and refraction patterns. These diverse though predictable signs of a landmass could expand a small island into a sizable target or bridge island gaps in an archipelago, creating a large block to aim for. With a shift in focus to the nearfield, the wayfinder pieced together each island's signature. Carefully, knowingly, the crew tracked the evening seabird flight paths and the directional streaks of transient deep phosphorescence.

That final destination, Dr. Colorado reminds us, is also a mindset. It is a way of seeing and being in balance with nature, gleaned from living a ceremonial life. Each wayfinding voyage, she points out, reminds us of our human potential to integrate analysis with intuition, and ritual with western science. "The greatest thing we can accomplish in our science and in our lives," she concludes, "is to be in balance with the universe."

Renewed interest in wayfinding presages a time

when scientist and seaman alike are in balance and in open communication with nature. Recent voyages have proven that it can be done again. In Hawaii the *Hokule'a* has made three successful wayfinding voyages to Tahiti and back. The first was led by Mau Piaiug, a traditional Polynesian navigator; the last two by Hawaiian Nainoa Thompson, one of that new breed of wayfinders. Na'ilima's expedition, called "No Na Mamo" (For the Next Generation), symbolizes the intention of native peoples and organizations like the Indigenous Science Network, to share traditional knowledge. Other trips are planned. Canoes will gather from around the world on Vancouver Island in 1993 as native tribes convene to rekindle the art.

"We are still missing pieces of information", says Dr. Colorado. "Some of the art remains hidden. Some may have been lost." Or not yet found, at least by western culture. For we in the west may still not know how to ask the right questions or to understand the full meaning of each answer until our own minds begin to open and expand under the tutelage of elders and nature's wise persistent teachings.

Author's note—books cited or recommended: *An Ocean in Mind* by Will Kyselka; *The Daughters of Copperwoman* by Anne Cameron; and *We the Navigators* by David Lewis.

For more information on the Indigenous Science Network, contact Dr. Pamela Colorado, 573 Wainae St., Lahaina, Maui, Hawaii. Telephone (808) 661-3378

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