



# The Lost Art of Finding Our Way

*John Edward Huth*

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## **The Lost Art of Finding Our Way** John Edward Huth

Long before GPS, Google Earth, and global transit, humans traveled vast distances using only environmental clues and simple instruments. John Huth asks what is lost when modern technology substitutes for our innate capacity to find our way. Encyclopedic in breadth, weaving together astronomy, meteorology, oceanography, and ethnography, "The Lost Art of Finding Our Way" puts us in the shoes, ships, and sleds of early navigators for whom paying close attention to the environment around them was, quite literally, a matter of life and death.

Haunted by the fate of two young kayakers lost in a fogbank off Nantucket, Huth shows us how to navigate using natural phenomena the way the Vikings used the sunstone to detect polarization of sunlight, and Arab traders learned to sail into the wind, and Pacific Islanders used underwater lightning and read waves to guide their explorations. Huth reminds us that we are all navigators capable of learning techniques ranging from the simplest to the most sophisticated skills of direction-finding. Even today, careful observation of the sun and moon, tides and ocean currents, weather and atmospheric effects can be all we need to find our way.

Lavishly illustrated with nearly 200 specially prepared drawings, Huth's compelling account of the cultures of navigation will engross readers in a narrative that is part scientific treatise, part personal travelogue, and part vivid re-creation of navigational history. Seeing through the eyes of past voyagers, we bring our own world into sharper view."

## **The Lost Art of Finding Our Way Details**

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# From Reader Review *The Lost Art of Finding Our Way* for online ebook

David Dinaburg says

A physical book is a finite object, but the question of where it truly begins involves a more metaphysical debate. Does the book begin and end at the front covers? Should one eschew the informational precursors—publication and Library of Congress numbers, for example—to dive directly into the text in "Chapter One"? Perhaps a hardcover boundary of the summation located on the front flap and the early review blurbs on the back? For the average reader, these are no longer rhetorical but concrete and answerable questions: the simple metrics of reading have been laid to bare thanks to e-reader technology. Who looks at the dedication; who checks the publication dates; who reads the foreword; who reads the author's biography—and for how long. What's been highlighted; where you linger; where you stop. If you finish. If you skim. If you flip to the last page first.

A reader that skips or skims the dedication page of *The Lost Art of Finding Our Way* would miss out on a fascinating puzzle that adds depth to the book in a personal and unique way:

Dedicated to the memories of  
Sarah Aronoff and Mary Jagoda  
*No one is lost . . . to God*

A check of the back flap illuminates nothing—the author is not a theologian but a Harvard science professor. The mystery of the elegiac dedication remains shrouded by its peculiar specificity. Presented with no new information, the reader must abandon this page and move on, dedication unsolved. Comprehension presumably only available to those select few that know the author personally. *C'est la vie*.

But shortly thereafter, something happens: names are mentioned, a phrase pops up. How closely were you paying attention? Wait, let me flip back to the dedication—oh my, yes! They *are* the same names. Oh, what an absolutely stunning dedication page; what terrible, perfect use:

Unknown to me at that moment, two young women were lost in the same fogbank less than half a mile away, disoriented and struggling for their lives. Before they set out on what was supposed to be a quick paddle in Nantucket Sound, Sarah Aronoff, 19, and Mary Jagoda, 20, told their boyfriends that they would be back in ten minutes. When they didn't return forty-five minutes later, the boys contacted the authorities, triggering a massive search effort. The next day Coast Guard Helicopters flew back and forth across the Sound, eventually finding their two empty kayaks. The day after, Sarah's body was found. Mary's body was never recovered.

Weeks later I was crushed when I saw a memorial to Mary on the beach, reading "No one is lost...to God." What happened? No one really knows, but they probably got disoriented in the fog and mistakenly paddled out to sea rather than back to shore.

And so *The Lost Art of Finding Our Way* captures a peculiar sense of urgency; a need to deliver the didacticism that Ms. Aronoff and Ms. Jagoda never received to those still able to take advantage of it. But it is not all misty-eyed wistfulness; there is serious science delivered in a palatable way. When the scientific principles are woven into historical tapestry, the near-magical can become even more amazing:

In 1967 Danish archaeologist Thorkild Ramskou suggested that the Vikings used something called a “sunstone” to find the direction of the Sun using the polarization of the sky. Part of this was based on a section of one of the sagas, *Harafns Saga*: “The weather was thick and stormy....The king looked about and saw no blue sky....then the king took out the Sunstone and held it up, and then he saw where the Sun beamed from the stone.”

Calcite is also known as Iceland spar and is found in large quantities in eastern Iceland. According to a number of accounts, spar crystals were highly prized during the Viking era. Spar has an unusual *birefringence*, meaning that light is bent through the crystal at two different angles, depending on the polarization state of the light. This will give rise to two images of light from an object passing through the spar. Pure crystals of calcite are *rhomboidal* in structure, meaning that their sides each describe a rhombus. The sides of the crystal are associated with the polarization state, so when the side of the crystal is aligned properly, one of two polarization states is extinguished.

Further detailing—capturing the angle and height of the sun in the sky versus the heavy low-lying fogbanks of the Nordic regions—explains why the particular geographic location of the Norse would make such an object useful, while a culture such as the Pacific Islanders would not. But for every mystical “sunstone” that has its place in reality, another seemingly believable fantasy is dashed:

People should be suspicious about the moss-on-the-north-side folklore because many factors create a dark, damp environment. If trees are on the north side of a hill, their bases are perpetually shaded and the base of their trunks can be fully ringed with moss. In the middle of a dense forest where the floor is covered in shade, there is little distinction between the north and south side of a tree for favorable growth conditions. Prevailing wind directions and windbreaks also play a significant, if not dominant, role.

Another favorite aphorism, *Red sky at night, sailor’s delight. Red sky in the morning, sailors take warning*, is mostly debunked as conjecture. For some people, discovering that they are citing Jesus of New Testament fame—Matthew XVI: 2-3 “*When in evening, ye say, it will be fair weather: For the sky is red. And in the morning, it will be foul weather today; for the sky is red and lowering*”—might be a bit startling if you’ve been parroting it without knowledge of its provenance.

Etymology makes a strong showing as well:

Following to the east of Orion are his two faithful hunting dogs, Canis Major (big dog) and Canis Minor (little dog). Sirius, in Canis Major, is the brightest star in the sky. Its rising just before the Sun in the morning represented the season of the flood in the Nile to the ancient Egyptians. Many ancient Greeks and Romans thought that the combination of the heat of the Sun and Sirius’s appearance was responsible for summer, hence the name “dog days.”

If ancient Egypt isn’t your thing, perhaps some quasi-contemporary Americana:

The British Royal Navy created a standard for marking lead lines. Intertwined with the rope were markers of various colors coded for the depth. Black leather was tied at two and three fathoms, white at five, red at seven, and black at ten, with knots for greater depth tied every five fathoms. After retrieving the lead a leadsman would report back the phrase, “By the mark,” or “By the deep” followed by the depth in fathoms. So “By the mark, five,” would report a sounding of five fathoms. This was also a common phrase in the United States. The American author Samuel Clemens took his pen name from this phrase based on his experiences as a pilot

on Mississippi steamboats. “Mark twain” is a report of a depth of two fathoms.

Or another tidbit drawn from the Nordic regions:

The Norse used a *steering board*, or *starboard*, which is a long plank extended into the water from the right-hand side of the boat. By adjusting the angle of the steering board, the navigator could hold or shift the course of the vessel. In many ways the starboard acts like a wing, generating a force akin to lift for a wing to move the stern of the boat to left or right, depending on its orientation. The starboard was, by convention, on the right-hand side. When bringing the knarr to a dock or unloading onto land, the starboard side was kept to the water, and the left, or port, side was where the vessel was unloaded. This practice is the origin of the terms *port* for left and *starboard* for right.

The Lost Art of Finding our Way covers a very wide range, and does it all very well. Personal taste will, like most things, count for a lot. A reader who prefers history and word origins will be extremely pleased. The scientific discussions—while incredibly detailed—are interesting and remain comprehensible:

Waves will build slowly as wind first skims the surface, creating what’s called a *cat’s paw*: very tiny ripples. Once little ripples are created, wind gains traction on the vertical faces, causing the waves to build to progressively larger heights. As it builds in height, a wave crest becomes steeper and steeper, finally becoming unstable and tumbling over. This instability occurs when the wave height is greater than one-seventh of the wavelength and also when the interior angle of the peak of a wave is less than 120 degrees.

It makes logical sense that water waves would have a particular height-to-length ratio and a specific angle from which they will fall. The trick is in realizing that there is a question that *can* be asked in the first place, an order underlying the chaos—not just a collection of random water falling all over itself.

A feeling of wonder pervades The Lost Art of Finding Our Way; tales of “*sunstones*” and “*celestial huts*,” “*portolan charts*” and “*ecliptics*” make it hard to not get wrapped up in the obscure and the exotic. But it is the more mundane aspects of peregrination that can truly astound:

Our perceptions function in two roles: First, the sight of familiar landmarks helps us update our location in the internal map. Second, the sight of objects drawing nearer as we approach them and receding into the distance behind us gives us a sense of speed and motion. We usually take all of this for granted.

Technology—maps, astrolabes, GPS devices—may make finding our destination more simple every day. But finding our way rarely gets any easier.

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## Rasha | ??? says

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## **Karl says**

The virtue of this book is its breadth of information - it contains a wealth of information on all sorts of navigation techniques. There are a lot of tips and tools I was not aware of, and my skills are definitely improved with a few simple techniques (did you know that a line drawn from the horns of crescent will point south in the northern hemisphere?)

While there is something here for everyone, I did find that my limited sea experience left me a bit unprepared to fully absorb the contents of the book. These are techniques that sailors might spend years mastering, so I don't feel so bad about that. But I still had the feeling there was a lot there that I could have gotten a better handle on than I did.

The writing was solid and clear. The book overall was tolerably well organized, but the jumps from wave navigation to prevailing weather patterns to celestial navigation are big changes in perspective that the author's skills were not able to fully bridge.

I would most recommend the book to anyone with sailing and outdoor travel experience. Anybody interested in the outdoors or the fading skills of a bygone era will get a lot out of the book, but there is a lot there and without an intuitive sense based on real life experience, some of the book may be hard to fully internalize.

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## **Brett says**

It's a moment that you've always dreaded – you stepped away from your hiking buddies to take a photo, but on the way back you slipped down an embankment. Now you're isolated, you can't find the trail or your friends, and you're in unfamiliar woods. You try your phone – no signal. How did people navigate before GPS, anyway?

In *The Lost Art of Finding Our Way*, author John Edward Huth aims to show us just that. In a richly-illustrated 544 pages, Huth tries to illuminate the techniques that let man circumnavigate the globe, long before the first GPS satellite was launched.

The book is divided into roughly two halves, with the first being historical tales and discussions of techniques used by ancient navigators to find their way. The Norse are here, as are Pacific Islanders and European sailors: all have lessons to teach us about our environment, from the way that waves form around a cluster of islands, to how to use a cross-staff to estimate the position of a star on a heaving ship deck. Following this, the second half of the book is more abstract, dealing with factors useful to navigators: like weather prediction, or the factors that create the swell and tides in the ocean.

I found the first half of the book to be the most interesting, as the practical techniques for, say, triangulating your position with only a map and a compass are very interesting to a city-bound boy. The second half was much tougher reading as it is quite dry, often reading like a physics textbook.

Descriptions are clear, although I will note that if you were looking for a practical manual to teach you navigation, this book isn't it. It will, for instance, explain how dip angle and refraction in the atmosphere

complicate accurate estimates of the horizon and the elevation of stars—but stop short of pointing you a resource to help correct for these inaccuracies.

It's perhaps ironic that *The Lost Art of Finding Our Way* sometimes feels a little directionless. Maybe it's because the very scope of the book is so large: in the one book, you can find a discussion of how search parties can be most efficient; descriptions of the magnetic field variations across the Earth's surface, and their causes; speculation as to why many cultures have 'great flood' myths; and an explanation of the physics of wind interacting with sails.

Overall, this book is an impressive attempt to give a broad overview of a number of navigation techniques. Unfortunately it is marred by its own ambition, and the result is a book that can at times feel random, aimless and meandering.

## Sajjad thaier says

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## Carlos says

To be honest , I have no way of knowing what rating to give to this book. But I do have to warn everyone





almost total reliance on technology to find our way, and when technology fails, humans are lost, literally and figuratively. This book points out in vivid detail how "primitive" human societies were able to navigate over vast areas of the world (land and water) by using an extensive knowledge of nature. It teaches valuable lessons in finding our way, and shows how less technologically advanced societies were highly developed in living in and using the natural world. The book is packed with valuable information and is a pleasure to read.

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### **David Simmons says**

Fantastic book - equal parts compelling historical nonfiction and reasonably practical resource.

What I really enjoyed about this book was Huth's obvious personal passion in this field of inquiry. The broad scope of its content - blending anthropology, psychology, physics, personal stories, and even short fiction towards the end - feels like a reflection of the author's immense intellectual interest that's refreshingly interdisciplinary.

Other reviewers have noted that while it does provide solid theoretical explanations for the different navigational technology referenced, it doesn't go into much further detail as to how one might practically work toward honing their own navigational tool-set. Given the overall density of the book I can understand the decision to avoid going any deeper (though I personally would've loved it); a more 'how-to' version of the interesting methods introduced by Huth would be awesome!

All in all this is a very solid, information-dense, slab of a book that will satisfy the reader looking for more than just a surface-level overview of the subject area with a smattering of anecdotal cases.

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### **Mof says**

More than about directions, this book is about understanding the world in which we live. We need to look at the sky and think of questions like; why is the sun setting where it is? This book answers many of these questions. It makes one think and not just walk in the park.

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### **Hossam ElbaHrawy says**

-never get lost again.  
-the art of the stars.

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### **Steven says**

I've had this in my queue for nearly two years. I'm glad I got around to reading it.

Huth starts with the argument that basic knowledge of navigating the world around is slowly slipping away as we become more dependent on technology to get around. In this book, he looks at the science behind many navigational traditions. The focus is on traveling across water -- it seems to be a personal interest of his -- but many of the skills mentioned could be used anywhere.

This book doesn't go into great detail on any one method or tool -- but that's a good thing. Entire books could be written about using compasses or sextants, or navigating by the stars. Huth lays out the basic principles and then illustrates situations in which these skills could be useful.

There's a lot of good historical information here. He describes how to navigate by the stars moving across the sky, using the sun and moon to find your position, different methods of determining latitude and longitude, ways to avoid getting lost. There is much discussion of matters related to ocean travel, such as tides, waves, swells and the basics of sailing. He explains these concepts clearly without getting too technical. It's a great approach.

Historical methods such as using sun compasses and Pacific Islander stick charts are also described. And at the end, Huth uses a narrative of historical events in Kiribati that highlights many of the methods mentioned in the book. It neatly wraps up his theme, and illustrates the necessity of knowing more than one way to find your way.

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## **Greta says**

A lot of good information - but almost too much. It was pretty dense with fairly technical information and illustrations, which is great if you're planning on grabbing your sextant & heading out in uncharted waters, but not so much for the casual hiker who just wants to be able to find the way out of the woods if there's no GPS. Still, an interesting read.

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