

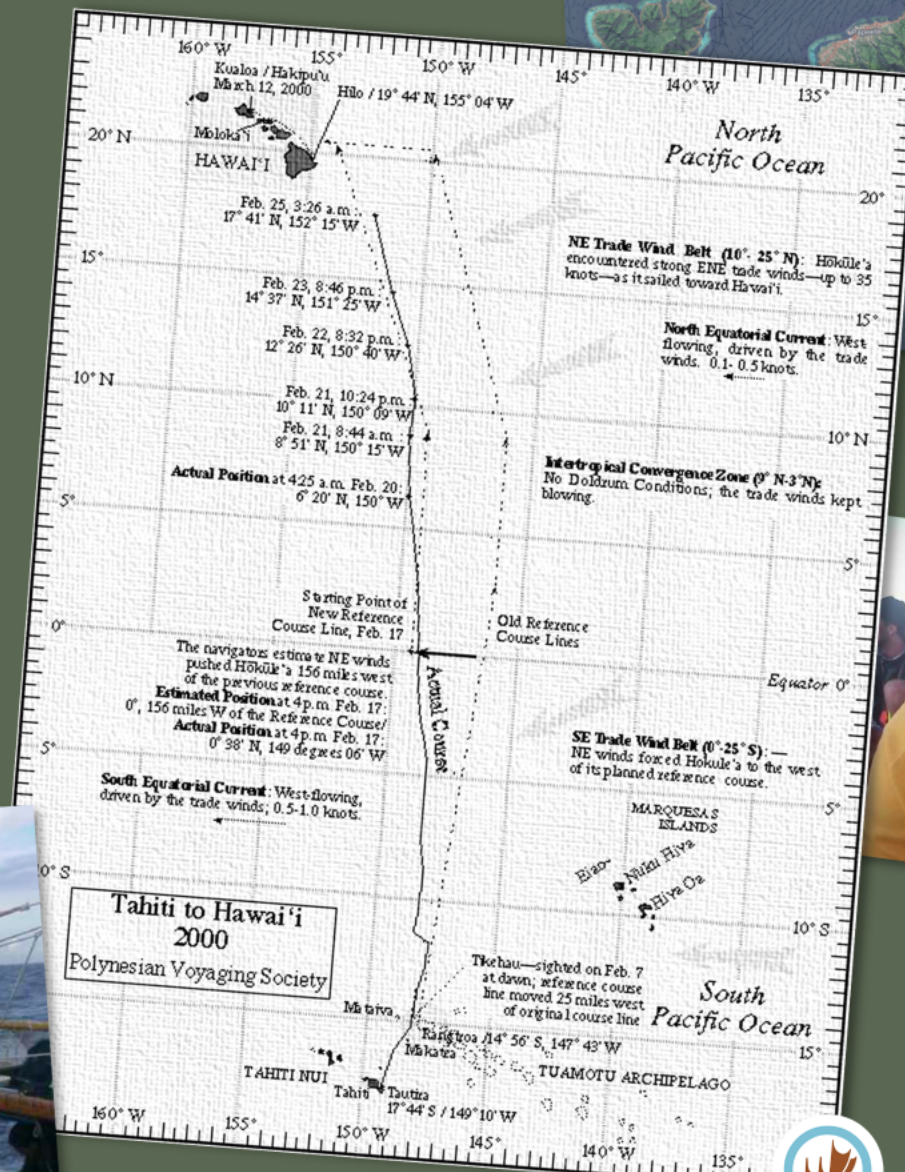
FROM THE ARCHIVES

READING THE CLOUDS

In February 2000, Hōkūle'a crewmember Sam Low records Nainoa Thompson reading the clouds after Hōkūle'a departs Tahiti

CLOUD
GALLERY

HAWAIIAN
CLOUD CHART



Wa'a Honua

CLOUD GALLERY

Nainoa reads the clouds throughout the day to help him make navigation decisions



FEBRUARY 11, PART 1



FEBRUARY 11, PART 2



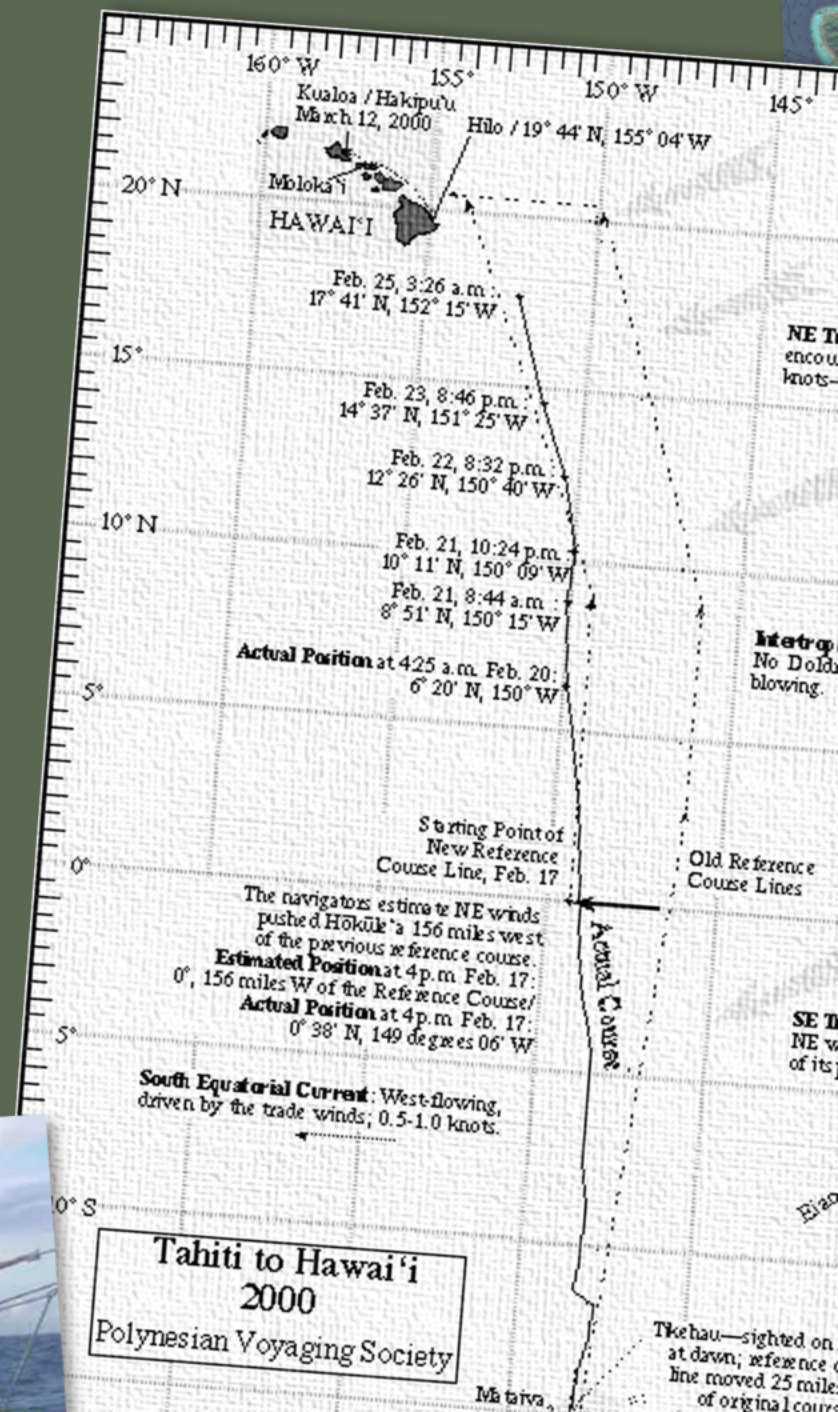
FEBRUARY 14



FEBRUARY 15



FEBRUARY 20



FEBRUARY 11, 2000

PART 1

A Navigator always looks for signs of weather at sunset and sunrise. Generally, at sunrise and sunset you try to predict the weather for the next 12 hours.

Today I see strong evidence in the clouds of a change in the weather from what we have experienced in the last two to three days. Looking to the east off the beam of the canoe [see photo], I see various complicated towering high cloud masses, which are the remnants of the squalls that we went through last night. Yesterday and the day before I looked out and saw actual squalls there; today there are no squalls evident.

You can't really predict the weather, as Mau taught me, from a single snapshot like this. You have to observe changes over time. In this case, I see a change from seeing squalls off the starboard yesterday to this view today where there are no active squalls. The wind definitely feels stronger today and I can see wind wavelets on the surface of the ocean. The wind is also coming from the normal direction of the southeast trades, so I can presume that the trades are reasserting themselves.

~ Nainoa Thompson



View from Hokule'a's beam: Towering cumulus clouds

FEBRUARY 11, 2000

PART 2

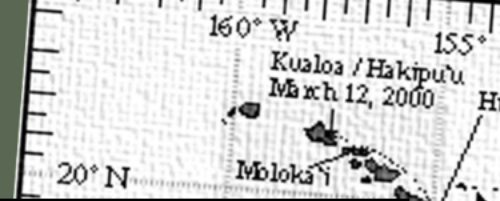
I see a lot of low level cumulus clouds ahead of us in the direction we are moving. There are no indications of any squalls in those clouds so I think I can predict we are approaching an area of clean flowing wind - trades from the southeast - which will be steady. That is quite different than the variable winds we have been experiencing. So, for the next 12 hours, I believe that the wind will remain steady from the southeast at a fairly constant speed, maybe 10 knots, so we will be able to sail north today."

Every time I attempt to predict the weather or sail on this canoe I am constantly reminded of how smart our ancestors were. My understanding of nature is feeble compared to theirs. We can have today only a glimpse into their world - into the strength and courage that made them the greatest navigators and explorers on earth. We sail in comfort with foul weather gear to protect us on a canoe partly made of modern materials, with all kinds of safety devices on board. They had none of that. They were attuned intimately to nature in a way that we cannot be. At best, our voyages are just beginning to give us a glimpse into their world.

~ Nainoa Thompson



View towards the bow of the canoe from roughly dead ahead to 45 degrees off the bow



8:26 a.m.
52° 15' N
23, 8:46
151° 2
22, 8:
6° N, 150
21, 10
11' N, 1
21, 8:
1' N, 1
25 a.m.
6° 20' N,
Equatorial Current: West-flowing
driven by the trade winds; 0.5-1.0 knot

FEBRUARY 14, 2000



Mau [Piailug, a master navigator from Satawal] taught me to call clouds that look like this "the road of the wind."

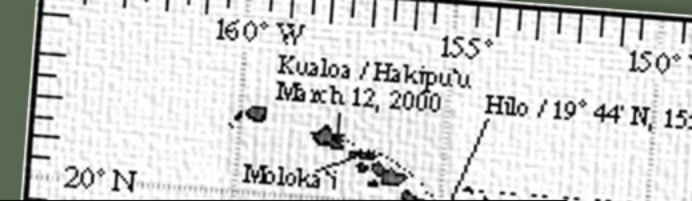
Imagine at the far horizon there is a factory producing the clouds and, like smoke from a haystack, they follow the wind. This road indicates the wind is coming from the horizon. And because the road is straight, the wind is steady. If you see the road curve, it means that the wind direction will change and the way it curves will tell you the new direction.

It is interesting to me that meteorologists call this kind of phenomenon "cloud streets"...pretty close to Mau's term.

~ Nainoa Thompson



Clouds forming the "road of the wind"



FEBRUARY 15, 2000

The sky where the sun is rising is very clear. I don't see any smoke (which is caused by strong winds stirring salt into the atmosphere), so I think the winds will be relatively light today.

Ahead of us, I see two squalls, but there are no squalls beyond them. We should have good weather once we pass through them.

~ Nainoa Thompson



Squall 1



Squall 2



View of the sea at sunrise



Tahiti to Hawaii
2000
Polynesian Voyaging Society

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17 41 N

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Hökūle'a
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FEBRUARY 20, 2000

On the horizon you see what we call zone-based trade wind cumulus clouds.

There is little vertical development, meaning no high clouds, and no squalls are visible. These clouds suggest to me a stable weather pattern. The wind is clean and predictable, blowing 20-25 knots. I judge the wind speed by the feel of the wind against my body...also by the fact there are a lot of white caps and wind streaks along the ocean surface and the size of the swells, which are about ten feet high.

~ Nainoa Thompson

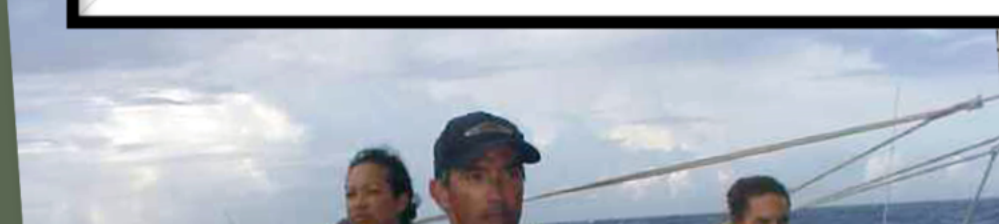
Note from Sam Low:

On February 20, the wind blew from the northeast, forcing us to steer too far to the west. Since then, the wind has shifted more easterly allowing us to head north.



20° N
Molokai
HAWAII
Feb. 25, 3:26 a.m.
17° 41' N 152° 15' W

6 p.m.
15° 25' W
8:32 p.m.
15° 40' W
10:24 p.m.
150° 09' W
8:44 a.m.
150° 15' W
Feb. 20:
N, 150° W
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Reference
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course.
Feb. 17:
Course/
Feb. 17:
06' W
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0° S
**Tahiti to Hawai'i
2000**
Polynesian Voyaging Society

