

Challenge I: Hawai'i to Rapa Nui

How will you stay on course?



Crew Name: POLLY CLASS OF 2009

Vessel Name: 09 POLLY

Date/season of embarkation: (Afternoon) February 7, 2009

Distance of voyage in nautical miles: 2,460 nautical miles

Expected length of journey: 2 to 3 months (speed depends on the winds)

General description of route:

The 09 Polly will first start at the farthest point of the island of Hawaii. The ride to one of the Marquesas Islands will take approximately a month. The crew will then re-supply their provisions for the rest of the journey. We will be stationed here for at least two days. Once we leave the island it will take another 25 to 30 days to get to our destination point, Rapa Nui.

	Location	Longitude	Latitude	Description
Start Point:	Hawaii	About 115 degrees West	19 degrees North	Go to the farthest part of Hawaii and sail toward Marquesas past the equator.
Half way point:	Marquesas	140 degrees East	8 degrees South	Re-supply here and then go down and follow the other islands.
Go to the end of:	Marquesas	139 degrees West.	11 degrees North	Then after the last one go toward Heragi. Then follow the star maps to find Rapa Nui.
End Point:	Rapa Nui	109 degrees West	38 degrees South	We have made it to Rapa Nui and settle here.

Methods of navigation:

Day:

Clouds: With clouds we will depend on the formations and where they are located. When clouds are drawn to land they are in a distinctive “V” form. Which is created by reflection of heat radiated from the island. The clouds color also changes over land. Using the clouds we are able to distinguish the landform from the color.

Slight Green Clouds- indicate a Lagoon Islands.

Bright Clouds- indicates sand.

Dark Clouds- indicate forest areas.

Motionless Clouds- could be hovering over mountains.

High Clouds- fair and passing weather.

Middle Clouds- good indication of a new storm development at sea with poor visibility, large waves and heavy swell.

Wind Currents: Winds are used to determine direction. The wind however, changes during the course of a day's voyage. To observe the change we will fix a lightweight win pennants made of feathers and bark to masts our canoes.

Sun: The rising and the setting of the sun will help us with direction. The sun is able to point out and direct sailors to where east and west is. The sun rises in the east and sets in the west.

Sea Marks: Drifting seaweed, debris, leaves and other plant materials can signal land nearby to navigators. The ocean is even a sea mark. Close to land, waters become calmer and ocean swells change direction.

Land Marks: Common land marks include islands, atolls, reefs, and submerged rock formations. Smaller landmarks are more visible and useful during daylight hours.

Sea Swells/Ocean Currents: Sea swells are waves that move beyond the wind or storms that form it. The swells tend to be more regular and persistent in their flow than waves. By observing them and understand the wind that created them we will steer our canoes according to the swell patterns.

Flight of birds: The flight patterns of specific species provided a reliable means of determining the direction of land. The fairy and noddy terns were especially important, as both species nest on land, neither swims. Both terns fly to sea in the morning and return to land at dusk. By observing the habits of these birds, we can not only determine the direction. Fairy terns have a flight range of about one hundred and twenty miles.

Night:

Star tracking: Star tracking will help us by showing us the direction we are going. Stars can show us where north and south is. Using our star maps and compass we can

identify which star shows us north. You can find north by locating the “True North”. We can do this by locating the little dipper and at the tip of its handle is where it is located.

Moon: The moon helps because at night the sun’s eastern light reflect off of the moon.

Other considerations:

We would have to carry many items on our trip. The tools are:

1. Hawaiian Star Compass
2. Rope
3. Hand Made Fishing Poles
4. Tools of Stone
5. Tools of Clam Shell

Navigation items are:

1. Stick Map-are usually concerned with patterns of swells
2. Star Map

Boat and other necessary materials:

1. Food
2. Water
3. Animal Skin
4. Fish Bait
5. Pottery to hold drinking water
6. Cord of Coconut
7. Lead line-used for measuring the depth of an ocean floor
8. Lead line
9. Breadfruit Picker Lashing-uses as a metaphor the pole for picking breadfruit, which has a short stick lashed to its end at an angle that permits engaging the stem of a fruit and twisting it loose. (In a navigators imagination a breadfruit picker reaches out in a straight line along a particular star course, from one place to the next, until it turns in a new direction on another courses, and so on until it has picked off along these courses all the known places, real and imaginary in the navigator’s repertoire. There are a number of breadfruit picker exercises, beginning at different places and following different star courses.)

We will have to know a possible weather of the areas that we are going.

Weather of Hawaii

Form November to April the weather in Hawaii is hot and humid. Between May and August the weather is constantly windy. January, February, March, and April are the months that coincide with the hurricane season. But, there can also be long periods of sunny and nice weather anytime of the year.

Weather in Rapa Nui

In Rapa Nui the hottest month is February and the coolest months are July and August. March to June are the rainiest months and July to October are generally the coolest. During August and December are the driest months of the year. The climate there is moist. It rains about 140 days a year. Most of the rain happens overnight; drizzles and mist are most common, though. Heavy dews form overnight and snow is unknown in Rapa Nui.

We must prepare the canoe in a way so that everything is fine while we are out at sea. We must do these steps:

1. Secure objects in the vessel so nothing is lost when traveling.
2. Travel light so there is no unnecessary stress on the canoe.
3. Balance the vessel equally with the objects on the canoe so the chance of tipping over is not prone.
4. Check the sails.
5. Check the supplies.
6. Check the condition of the Vessel.
7. Determine if the canoe is ready for the voyage.
8. When the vessel is prepared, the voyage will begin.

We must also prepare other things for the navigation.

1. Choose a destination.
2. Observe the areas you will pass or travel to.
3. With this, choose a time for your venture on the open sea.
4. Plot your courses to your destinations.
5. Plan other navigation strategies, just in case you encounter other several complications on the way.
6. Think thoroughly about this and study other routes and make sure you did not miss on any important details. (Freak accidents may occur anyway).
7. Prepare your vessel (In this case canoe).
8. Find a well trained and experienced crew up for job.
9. Keep track of the canoe at all times.
10. Find Land.
11. Other than that, pray and leave the rest up to God.

