



NAUTICOS

# Meridian Passages

Central Pacific Edition

March 1, 2017

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## Meridian Passages

Central Pacific Edition  
M/V Mermaid Vigilance  
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## WANTED: Wet or Dry

### The Floating Dock that Eluded Capture in the Pacific for 6 Years

**O**n March 11, 2011, an earthquake in Japan registering 9.0 on the Richter Scale shook the world. A tsunami event was generated sending walls of water over jetties and levees into seaside towns and villages along the Japanese coast. The toll of

Central Pacific region in an area near the Republic of Marshall Islands. You're right if that's where you think we're going next. If it is found, researchers want to tag it to that it can be tracked and eventually captured for scientific study. Alan Eustace who will be joining us in a few days will be bringing satellite tracking devices for this



death and destruction was devastating. Officially over 15,893 persons killed, 6,152 injured and 2,567 missing. Property losses were enormous. The Japanese Ministry of Environment estimated that 4.8 million tons of tsunami debris washed into the North Pacific; 68 percent sank and 32 percent remained adrift.

The city of Misawa Japan lost four sections of its steel floating dock each 60 feet in length. Three of these sections were later found in 2012 on the shores of Hawaii, Washington and Oregon. There is one that remains undetected. It is suspected to be in the

purpose. So if we encounter this runaway, we are equipped to tag it and bag it.

Researchers have already found about 70 species of seaweeds and 240 species of invertebrates and microorganisms living on debris, primarily along Washington and Oregon where most of the work is concentrated. Some of the species are known only from Asia, especially Japan; some naturally occur on both sides of the Pacific; some were previously introduced to North America; some are non-native to Japan; others require more study. Scientists appreciate that even one invader has the potential to cause serious environmental and

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## Plan of the Day March 1, 2017

- 0900** SEA School: Ops Ctr., Tom D.
- 1000** Daily Progress Meeting: Ops Ctr.
- 1200** Sunlines for Sunlovers: Bridge Deck.

## The Dalio Foundation

The first REMUS autonomous underwater vehicle (AUV) was developed in the Ocean Systems Lab at the Woods Hole Oceanographic Institution (WHOI) back in the early 1990's. The REMUS 6000 was developed in the early 2000's with grants from the Naval Oceanographic Office and the Office of Naval Research and has the deepest operational depth (6000 m) in a line of AUVs with depth ranges from 100 m to 6000m. There are very few REMUS



6000's in the world. Our vehicle is owned by the **Dalio Foundation** and operated by WHOI under a long term lease agreement. The connection between WHOI, Ray Dalio and the Dalio Foundation began with the search for the doomed Air France flight 447. In 2011, WHOI chartered the M/V *Alucia* for that mission, which culminated in the discovery of the plane by WHOI using the REMUS 6000 in nearly 4000 m water depth on the eastern flank of the Mid-Atlantic Ridge. Ray Dalio bought the *Alucia* shortly thereafter and the REMUS 6000 in 2013. The WHOI-Dalio partnership is now a

multifaceted collaboration involving ships, underwater vehicles, basic oceanographic research and advanced media that has resulted in new discoveries, new technologies and great stories that have enthralled the public. The partnership provides a wonderful example of the value of private investment in ocean science and engineering.



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economic harm. Yet history also shows that most exotics coexist with native species without becoming pests, at least in the short term. Identifying potential insurgents is the daunting challenge, given the continent's vast, corrugated coastline and the certainty of more debris yet to come.

### What is Meridian Passages?

For our search expeditions, Spence suggested that we have a daily ship's "newspaper," seeing it as a good way to promulgate details of the ship's schedule (the Plan of the Day). We saw it as a fun way to get people on the ship involved with each other, to help document the experience, and provide some working material for the Education Team. Thus was born *Meridian Passages, Central Pacific Edition*.

*Passages* was a newsletter we had been publishing at Nauticos since 1997, starting back when our company operated under the name Meridian Sciences, Inc. I coined the title *Meridian Passages* as sort of a triple pun. Our company name was Meridian; a passage is a story, and a meridian passage is the passing of a heavenly body (like the sun, moon, or a star) across one's meridian of longitude. Hence, the meridian passage of the sun is another name for "noon," and it is the moment when a body is highest in the sky. The astronomical reference appealed to me, as an

amateur astronomer operating a company whose specialties included the science of navigation.

So, the first edition of Volume XIII of *Meridian Passages* was issued on the day after we got under way. It features news of the day, the official Plan of the Day, a Spotlight on a crew member, a story or article, and a mock "Classifieds" section for fun.

Anyone can contribute, but we rely heavily on Reporter Marika for interviews, Teacher Sallie for SEA School, Photographer Sue for images, Spence for Plan of the Day, Joe for sea stories, and Bethany for layout. They and others have contributed articles and ideas for *Classifieds*. Of course, whatever happens out here is raw material.

Our first issue was received with raised eyebrows and puzzled looks. But after a few days, folks would come looking if we didn't roll the presses by our self-imposed deadline. — editor.

### STARGAZERS

Last night was a great night to enjoy the Equatorial sky. A group of us gathered on the fo'c'sle deck and tried our hand at identifying constellations. Bryan contributed a violently brilliant green laser to the proceedings, handy for pointing. A gorgeous thin crescent moon was setting, which we followed all the way down to the horizon, with Venus close behind. Directly

overhead was Orion in an unfamiliar location, and Leo was standing on its tail. Ursa Major was partly submerged in the sea. The Milky Way was stunning, but the highlight was seeing the Large Magellanic Cloud, one of only three extra-galactic objects visible to the naked eye. Early risers can see the Southern Cross (Crux) and Alpha Centauri, our nearest stellar neighbor.

## MERMAID CLASSIFIEDS

### PERSONALS 100

**SHORN BY SUE:** Variety of (short) hairstyles available. Be the first to sport that "Recon" look that's all the rage. Exclusive ocean view salon. First come, first shorn. Must have health insurance card.

### WANTED 200

**STORIES** for *Meridian Passages*. News, fake news, old news, welcome. Also bulletins, messages, accounts, disclosures, releases, announcements, communiqués, dispatches, or reports. Revelations, tidings, and even gossip will be considered. Dave 4031.

### FOR SALE 400

### LOST & FOUND 500

**FOUND:** Old spool of cable, on seafloor, only 3.4 miles deep. Available for salvage. See Tom D. at 3041 for recovery planning.

**Place New Ads by Friday – ed.**