



POINT SUR Operations on the Antarctic  
Peninsula

UNOLS Council

San Diego, CA  
March 6-7, 2013

Stewart Lamerdin  
Moss Landing Marine Labs

# The idea.....

## Science and Agency Support:

- Similar non-UNOLS ships have operated in the area in the past
- NSF has an opportunistic funding model
- A need from the science community

## R/V *Hero*, 1968 Palmer Station



# Other options.....



Ex USS *Spot* (built in 1944) arrives at Palmer in 1979

A wide-angle photograph of a calm, deep blue ocean stretching to the horizon. The sky is a clear, vibrant blue with scattered, thin white clouds. On the left side, a soft, multi-colored glow resembling a rainbow or a light flare is visible, adding a serene and hopeful atmosphere to the scene.

The Planning begins....

# Pre-Cruise Organization and Logistics

## Equipment added:

- GMDSS
- MSD
- OWS
- FLS
- Thermal imaging camera
- Water purification system
- Ice gear
  - Heaters, Ice handling equip
  - Spare parts
  - Survival equipment

## Planning:

- Risk Management Plan
- Surveys
  - NSF
  - ABS (5 year Special Insp.)
  - Independent Surveys
- Insurance Approval
- Agent Support
- Crewing Matrix
- Weather/Ice Forecasts

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**Captains Crew**



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May 10, 2012

## Wrecked Brazilian Ship Leaking Oil in Antarctica



A Brazilian ship is wrecked and now trapped in ice and spilling fuel in Antarctica. The only hopes of containing the damage will not come until the long South Pole winter eases next October.

The Endless Sea capsized and sank in 39 feet of water in April near where Chile and Brazil have navy bases. The crew was rescued to safety without injury, but poor weather kept



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# NOTES FROM SEA LEVEL

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## Antarctic Tourist Ship Foundering in Drake Passage

DECEMBER 7, 2010 BY JONBOWERMASTER 43 COMMENTS SHARE

The Antarctic tourist ship *Cielita II* is making slow headway north of the Shetland Islands, having yesterday lost power and communications in the midst of 30-foot seas in the notorious Drake Passage.



"Cielita II" In Trouble off Tip of Antarctic Peninsula, Photo Copyright Stewart/McIntosh

None of the 88 passengers on board, all from the United States, are reported injured; one of the 77 crew members apparently suffered minor injuries.

The ship was slowed in heavy seas after reported thirty to forty foot seas broke windows in its bridge, taking out its communications equipment. It left the Antarctic Peninsula 24 hours ago, headed for a two-day return to port in Ushuaia, Argentina. The ship's captain reported that in the 159 trips he'd made to the Peninsula he'd "never seen such weather."




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**Stricken Antarctic ship evacuated**


**More than 150 passengers and crew have been rescued from a stricken tourist ship after it hit ice off Antarctica.**

The M/S Explorer is now lying on its side close to the South Shetland Islands, in the Antarctic Ocean.

Gap Adventures, which owns the ship, said 91 passengers, nine guides and 54 crew members were safely evacuated to lifeboats and then to another ship.

After staying the night at a base on a Chilean island, they are expected to fly to Chile's mainland on Saturday.

Gap Adventures said 23 Britons, 17 Dutch, 10 Australians, 13 Americans and 10 Canadians were among the 154 on board.



The M/S Explorer has been listing for hours

Open Enlarge Image

**VIDEO AND AUDIO NEWS**  
The captain of the vessel talks about the rescue  
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### Sea Shepherd Returns for a Fourth Season of Whale Wars to Put an End to Antarctic Whaling

In the United States, Animal Planet's Emmy Award-nominated docu-reality series *Whale Wars* returns for a fourth captivating season beginning **Friday, June 3, at 9 PM E/P** with 10 exhilarating episodes documenting Sea Shepherd Conservation Society's dramatic whale defense campaign on the Antarctic high seas.

Sea Shepherd's interventions continue to enthrall audiences who have witnessed the cat-and-mouse game at the far end of the globe between the conservationists and the illegal whalers. For seven whaling seasons, Captain Paul Watson and his dedicated international crew of volunteers have taken to the high seas in attempt to stop the Japanese ships from illegally killing whales in the Southern Ocean Whale Sanctuary and this time there is no compromise – the bloodshed must stop once and for all.



The adrenaline-pumping new season features Captain Watson and several of his right-hand crew members including captain of the *Rob Raker* (Iv) Cornalecan and captain of the fast, new

**Join the fight  
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**Watch Whale Wars**  
USA Season 4 Premiere:  
• Friday, June 3rd, 9pm ET/PT

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Miss the first seasons?  
Buy the DVDs here

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# POINT SUR's Transit South

- Departs Nov. 28<sup>th</sup> 2012
- 31,000 Nautical Miles
- 38 Days Transit
- 31,000 Gallons Fuel used
- Two re-fueling stops
- 1 Christmas tree



# POINT SUR arrives in Punta Arenas, Chile



# Typical Drake Passage Crossing:



# The POINT SUR crossing.....



Crossing time: 4 days from Punta Arenas, Chile to Palmer Station

# Science Operations on the Antarctic Peninsula

## Research Disciplines Supported by the POINT SUR:

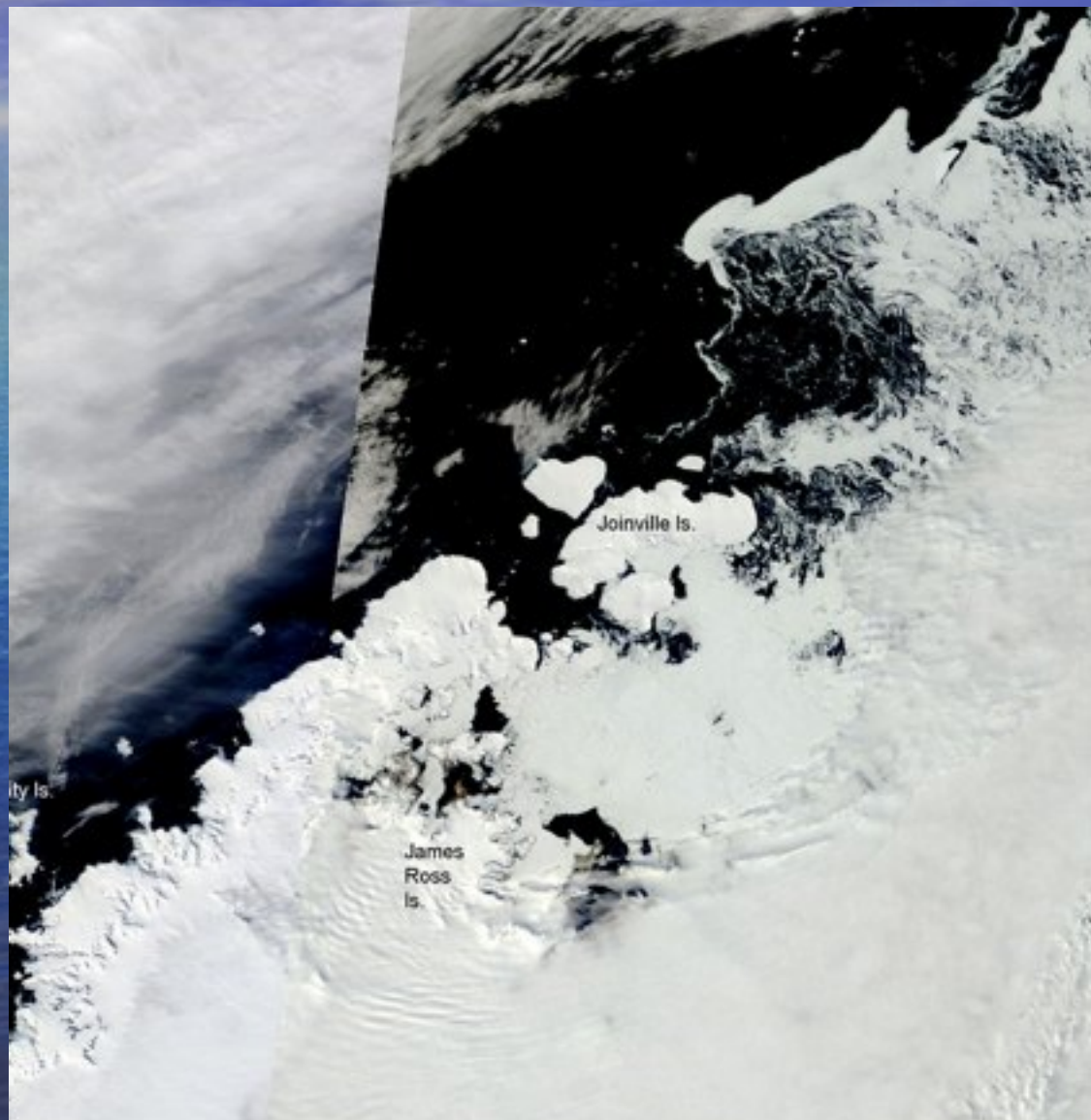
- Geology
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- Krill and Zooplankton
- Physical Oceanography
- Penguins
- Sub-Tidal

# Barbeau Team University of South Carolina





# Sea Ice imagery for Dodgers



# Friedlaender Team, Duke University



photo by Ari Friedlaender, Australian Antarctic Division Permit # C12-0006



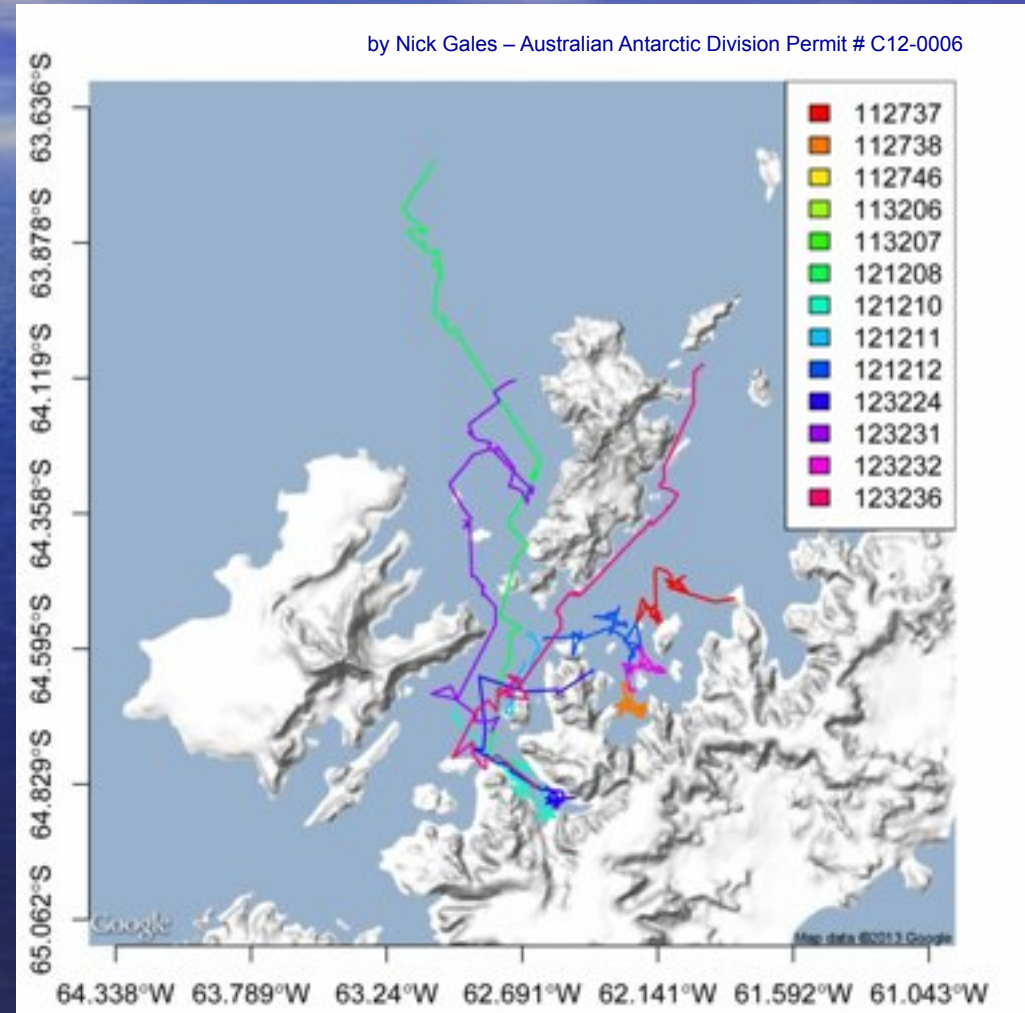
photo by Tara Pastuszek



photo by Ari Friedlaender, Australian Antarctic Division Permit # C12-0006

# Friedlaender Team (cont.)

- Tagged over 50 whales
- Minke, Humpback, Orca
- First confirmed Minke tagged
- First confirmed male Orca tagged



# Antarctic Peninsula LTER Group



Photos by TPastuszek

# Antarctic Peninsula LTER Group



# Amsler Dive Team University of Alabama



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### Long Stemmed Seaweeds, Magnificent Cliffs, with Memories of Old Heroes

Written by Chuck Amsler

I suppose that anyone who has once been with a hero would always want to be with one again. From 1968 until 1984, Palmer Station and US Antarctic research on the Antarctic Peninsula was supported by a beautiful 125 ft. in length, wooden research vessel called the *Nero*. Maggie sailed on the *Nero* during her first two seasons at Palmer in the early 80s and I was at the ship's decommissioning ceremony in California in 1984. You can see more about the *Nero* at the *Nero* page on [PalmerStation.com](http://PalmerStation.com).

The *Nero* was replaced by the *Polar Duke*, which I sailed on my first season here in 1985-86 and then by the *Laurence M. Gould* which just transported our group down to Palmer. Both were and are much more capable oceanographic vessels, but for some things like diving, whale research, field camp support, and similar "low tech" missions, a smaller vessel like the *Nero* was equally as good. In fact for getting close to shore, the 14 ft. draft (how deep the hull extends below the surface) of the *Nero* was even better. So lots of us in the US Antarctic science community have been hoping that there would be enough demand to justify another vessel of that size for Antarctic science.



Enter the *Point Sur*, which is a member of the National Science Foundation's (NSF) main (everywhere-but-Antarctica) research vessel fleet. The *Pt. Sur* is based out of Moss Landing Marine Lab in California and is very similar to the *Nero* in size, being 135 ft. in length and having a draft of only 9 ft. This year NSF decided to have the *Pt. Sur* come to the Peninsula as a test. The groups working here were able to submit requests with justification to use her during this test year, and our group was fortunate to be selected.

In our normal work from Palmer Station, we do our diving from rubber Zodiac boats that we launch from the station. The maximum distance we can safely go from the station is a bit over two miles. That gives us access to lots of small islands that are wonderful places to collect and do experiments, but we are always in the market for an opportunity to compare what we find

# Outreach and Education

## Public Interactions:

- Daisy Ingraham Elementary School (Westbrook, CT)
- Leesburg Elementary School (Leesburg, FL)
- Toro Park Elementary School (Salinas, CA)
- Numerous other science specific blogs

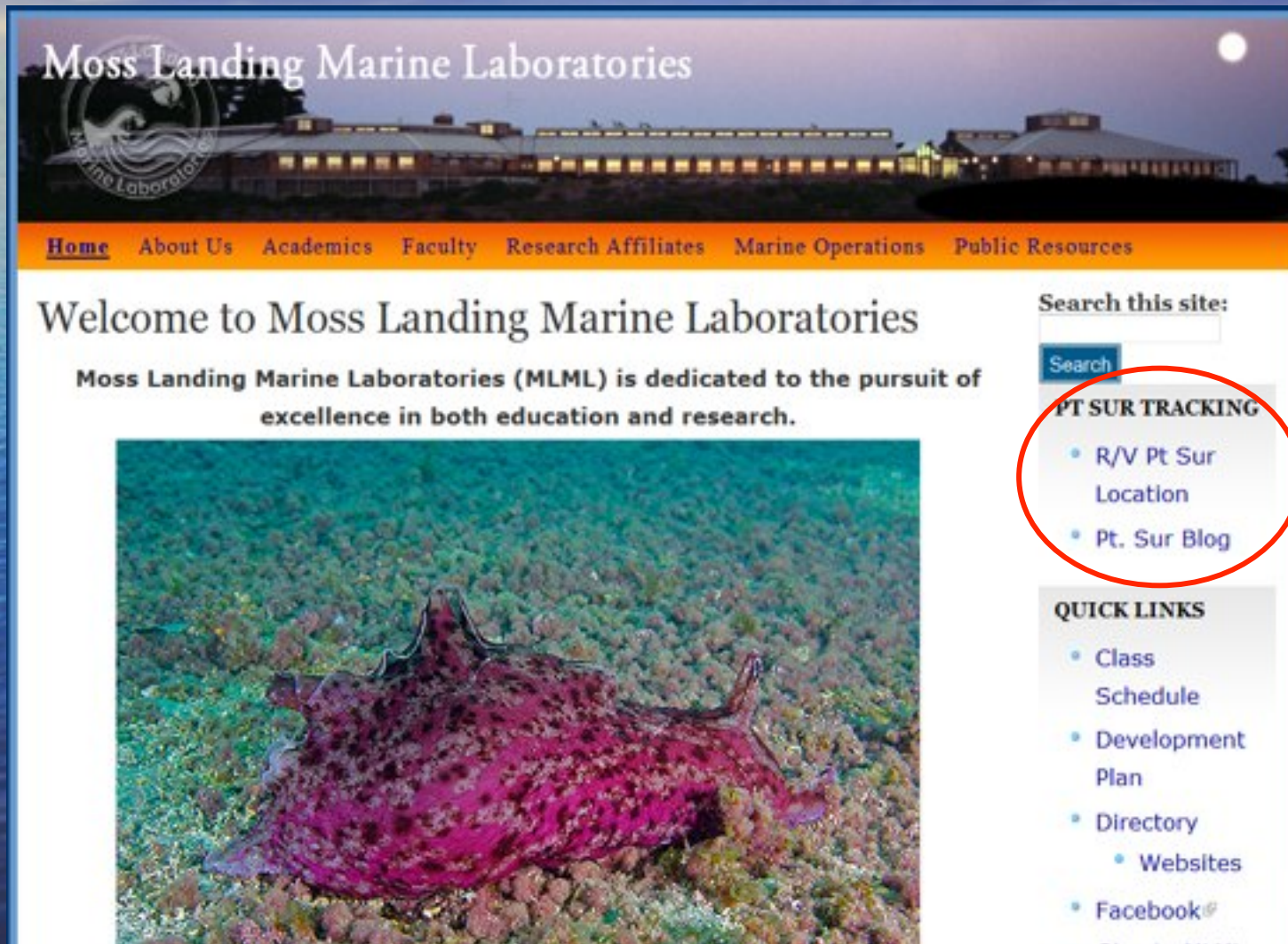
## POINT SUR blog stats:

- Over 14,000 hits since the ship departed
- Over 29,000 page views



# *Point Sur* Tracking and BLOG

<http://www.mlml.calstate.edu/>




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- Marine Chef, Tara Pastuszek

Not without challenges....



# Fueling while at Palmer Station

Two refueling operations:  
12,000 gallons  
5,000 gallons



# Weather is always a factor...



# Other Factors

**Environmental**



**Ice**



Still manage to have some fun...



# Who we are and where we came from....



# The crew of the POINT SUR





# Tara Pastuszek, Marine Chef, Chief Blogger and Morale Officer





In Summary

The POINT SUR remains a viable option  
for supporting future research on the  
Antarctic Peninsula



# Benefits of using a Regional-Class vessel on the Antarctic Peninsula and beyond

- Lower cost
- “Unique” project specific science opportunity
- Operate in shallow waters
- Available throughout the Eastern Pacific



