2009 Becoming the Year of the Whale:
Successful Joint Venture Extended, Grey Whale tours the Star of India

In the early days of March, a juvenile Grey Whale was discovered to be exploring San Diego Bay. Nicknamed Diego, the grey whale became a popular addition to an already successful whale watching season. A big plus, Diego seemed to prefer the vicinity of the Maritime Museum of San Diego as its area of choice.

The appearance of Diego coincided with the joint whale watching experience departing aboard the schooner America from the MMSD. The joint effort between the MMSD and Dennis Conner’s America’s Cup Experience has proven such a highly successful program, it has been extended into the month of May.

Typically, the whale watching season lasts from December until early April. The Cetacean Society of Los Angeles as of this writing, has recorded a total of 313 migrating whales. Making observations from the cliffs of Palos Verdes, volunteers record the whale migration from sunrise to sunset, seven days a week. “[W]e see only a small proportion of the total gray whale population, so our counts cannot be used to determine that population”.

On March 10th, the America first spotted the whale that would be named Diego, but according to America’s captain, Troy Sears, "appeared to have finally moved on."

“However, on returning from our daily sail we find that ‘Diego’ too has returned to the bay and has been seen here ever since.”…said Sears.

(Continued on Page 2)
By week's end, Diego the whale had begun sticking close to the Maritime Museum. The presence of the juvenile whale saw an increase in bay front economics as sightseers descended upon the waterfront and bay itself. On the water, the United States Coast Guard provided an escort vessel to prevent any accidents to the whale or other boaters.

By the end of March, the MMSD and Dennis Conner’s America’s Cup Experience had announced an extension of the whale watching experience. Warren Allen, spokesperson for the America said "that the public response to sailing on this yacht has been exceptional. The partnership with the famous ‘Maritime Museum of San Diego’, the ‘greener’ sailing experience on the yacht and the exciting addition of ‘Diego’ the wayward San Diego Bay whale, have certainly fueled public interest and awareness of the wonderful whale watching opportunities San Diego has to offer. With whales still migrating past San Diego it is obvious that we should extend the season to accommodate that public interest."

Towards the end of March, Diego was being seen less frequently, with one report of 2 additional juvenile whales near the bay's entrance at Pt. Loma. Still, with an exceptional whale watching season extended until April 26th, the MMSD has been the historical resource for San Diego, reminding us of a time when the bay was filled with migrating whales.

Although the 2008/2009 season saw below average counts of the Grey Whale, the unique experience garnered aboard America and the visiting Diego made for an unforgettable one.

As the 2009 whale watching season comes to a successful conclusion, the MMSD and Dennis Conner’s America’s Cup Experience and the City of San Diego can only hope that the 2010 season will bring additional highlights to the industry.
On Thursday evening about 6 o’clock p.m. we observed on the port bow some 2000 yards off spray arising at intervals out of the water, calling the attention of others to the circumstance we soon found almost alongside the ship two very large whales, moving forward their ponderous bodies; they ceased to blow when near to us, were soon astern of the Euterpe. They appeared to be not less than forty feet in length doubtless were those known as Cape Whales.

Whales, rising to the surface are seen to expel jets of water or spray from the blowhole and this water has long been alleged to consist of the water which has been taken in by the mouth and strained through the teeth or whale bone plates. This view is incorrect as the water taken into the mouth escapes by the sides of that aperture and is not taken into the pharynx at all. The emitted jets of water consists of the reexpired air from the lungs, the hot vapor being condensed by exposure to the colder atmosphere together with such water as may be above the nostrils before the whale begins to blow.

Whale Hunters on Western Shores

Whaling from rugged shore stations along North America’s West Coast began in the 1850s, and persisted for well over a century. Whale Hunters on Western Shores is the first publication ever devoted to this forgotten West Coast maritime industry and the transplanted New Englanders, Norwegians, Portuguese, Canadians, Chinese and Japanese who created it.

Contents

“The History and Archaeology of the Ballast Point Whaling Station”
by Ronald V. May

“19th Century Whaling On California Shores”
by Georgia Fox

“Japanese Whaling at Point Lobos”
by Sandy Lydon

“Power Whaling: Industrial Shore Whaling on the West Coast 1905-1972”
by Robert Lloyd Webb

(2001) 8 1/2” x 11”, 48 pages, 61 illustrations, notes

A Mains'l Haul Book

The MMSD was privileged to have amongst its many visitors, the Libertarian Party’s 2008 candidate for President, Bob Bar (shown here with Al Sorkin).
**America**

A replica of the 139 foot yacht low black schooner of the same name, the schooner America currently calls San Diego, CA home. The original America was legendary in her winning the One Hundred Guinea Cup around the Isle of Wight on August 22nd, 1851. The cup was put into the possession of the New York Yacht Club, who held it as a challenge cup, henceforth known as the America's Cup.

At a cost of more than 6 million dollars, the replica America was built in 1995 and is currently owned by Dennis Conner and Dennis Conner's America's Cup Experience.

In conjunction with the Maritime Museum of San Diego, the America is currently offering whale watching tours departing from the museum.

**Specifications**

Length: 139 feet  
Weight: 226,000 pounds  
Mast Height: 105 feet (main mast)  
Sail Area: 5,900 sq. feet.

**Courtesy of and Website:**

http://www.stars-stripes.com/index.html

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**Museum volunteers help ship regain Star status**

*Courtesy of the San Diego Union-Tribune, March 2nd, 2009*

I remember my first experience with the Star of India.

It wasn't pretty. And I mean the ship.

Today the Star of India is a San Diego icon. Fifty-plus years ago, when I first viewed the Star, she was a derelict.

Which is an odd way of getting around to one of my favorite things about San Diego – the men and women of the San Diego Maritime Museum.

Any boat is labor intensive. And the man hours needed to maintain a boat grow exponentially with the age, size and physical makeup of the vessel.

**Ray Ashley, CEO of the San Diego Maritime Museum, expects to add more vessels to the fleet. (2007 File photo / Union-Tribune)**

Which is why I am in awe of the people involved with the San Diego Maritime Museum.

Of course, the Star of India stands out. The three-masted barque is the centerpiece – and something of a piece de resistance. The Star is one of 18 restored historic ships worldwide recognized as Treasures of Humanity.

But the Star of India is not the only treasure in the collection.

Actually, every ship and boat in the collection is a treasure, although I personally could do without the Foxtrot-class submarine that once stalked the carrier Midway in the Sea of Japan for the Soviet Union.

Like the Star of India, the ferry Berkeley and steam yacht Medea are pristine restorations of a bygone era. And the replica pieces – the Californian (the state's official tall ship) and HMS Surprise – honor their heritage.
Star Status (cont)

Four of my favorite boats at the museum are on the barge out behind the Berkeley – the Butcher Boy (San Diego's first yacht), the PC-class sailboat Wings and the matched Monterey fishing boats Mary Ann and La Diana.

Beauties all. And well worth the $14 (adult) price of admission – and for another $3 you can take a trip on San Diego Bay on the museum's Pilot. The Maritime Museum also offers sailing trips on San Diego Bay aboard the Californian on Saturdays and Sundays and teams with Dennis Conner to offer whale watching voyages aboard the replica schooner America – of America's Cup fame.

But again, the best things about the Maritime Museum are its people and their vision.

Last year, 500 volunteers donated 75,000 hours to the Maritime Museum. I hear CEO Ray Ashley announce those numbers and I wonder how many hours have gone into the Star of India since the original restoration work began 50 years ago.

That project culminated in 1976 when the Star of India sailed July 4 – the first outing of what has become an annual celebration for the museum. By that time, the museum already had acquired the Berkeley and Medea.

Now, the San Diego Maritime Museum is approaching further expansion that will strengthen the museum's ties to San Diego's own maritime history.

Within months, Ashley expects the USS Dolphin will join the museum's fleet. Yes, the Dolphin is also a submarine. But the Navy's last diesel-electric sub also had the longest career of any Naval vessel operating out of San Diego.

Eventually, Ashley wants to add a tuna seiner to the collection to tie the museum to San Diego's departed fishing industry.

And then there is the San Salvador.

Ashley hopes to soon announce a viewable-by-the-public building site for the construction of the replica to the Spanish Galleon that Juan Rodriguez Cabrillo sailed into San Diego Bay in 1542.

“We are looking for displays that are direct ties to San Diego,” Ashley said.

As beautiful as the Star of India, Berkeley and Medea are, none of the three were ever near San Diego during their working lives.

Which brings us to the beginning of the San Diego Maritime Museum.

It started as an arm of the San Diego Zoological Society in 1927 when the zoo decided to build a bay-front aquarium as part of a San Diego Bay-to-Balboa Park project. The Star of India was purchased for $9,000 with the idea that it would house the aquarium tanks.

Star Status (cont)

Then came the Depression and World War II, during which the Star dodged two fatal bullets. The Navy considered towing the Star of India to New Caledonia as an ammunition barge. After the ship was declared unfit for that mission, she faced being scrapped.

But World War II ended with the decaying Star of India still sitting in San Diego Bay. The San Diego Maritime Museum was incorporated in 1948 in part to decide the fate of the Star. Eleven years later, the actual renovation began.

And for half a century, the work has continued nonstop along the Embarcadero.

Star of India to the Rescue!

A San Diego based aircraft carrier bears down on the Lady Washington.

Lady Washington was struggling to clear Point Loma against a 30 knot gale when a giant aircraft carrier suddenly appeared out of the mist and preempted the channel, ordering us to give way. Skipper veered hard right, heading straight for the rocky teeth of Point Loma.

High above, rangers at Cabrillo Monument, anticipating disaster, rushed to the telephone to call for help. But who?

Connecting square-rigger to square-rigger they called, who else, the Star of India.

Meanwhile, down below, skipper continued his right turn and headed back into port to safely wait out the storm.

And Star of India never had to make that rescue.

~ Roger Tilton, MMSD Volunteer Crewman
**Medea Arrives at Dry Dock**

At Marine Group Boat Works, the Medea rests comfortably in her cradle prior to lifting.

On March 31st, the steam yacht Medea arrived at The Marine Group Boat Works in Chula Vista. The Medea is the first of three MMSD Vessels to enter drydock for 2009.

After extensive down rigging, the HMS Surprise is slated next for drydock, which at this time has a tentative date of arrival.

The Star of India will be entering drydock from July 20th to August 10th for formal inspections and painting of her hull. The Star’s dry-docking will be performed at BAE System’s (formerly Southcoast Marine) concrete drydock. The Star will have the notoriety of being the last vessel dry-docked in the historic concrete structure.

Three dry docks in a single year comes with a hefty price tag, but as the MMSD strives to have its fleet ready for sail in November, staff and volunteers are hard at work.

**Annual Sea Chantey Fest**

On Board the Star of India

May 17th 2009

For centuries, sailor's have honed their shipboard skills to the cadence of songs recounting the adventure, tragedy and romance of life at sea. These "sea chanteys" come to life in a dramatic way on board the majestic sailing ship Star of India. The Maritime Museum of San Diego, along with San Diego Folk Heritage, presents the Annual Sea Chantey Fest. The lineup features favorites such as the Jackstraws, Gilman Carver, the Westlin Weavers and more. The museum sail crew will demonstrate various shipboard skills traditionally accompanied by sea chanteys and visitors will have a chance to join in and raise the sails of the historic ship.

Go to [www.sdmaritime.org](http://www.sdmaritime.org) for details.

**St. Patrick’s Day At the MMSD**

With MMSD staff on hand, the Medea is lifted from the water and moved to dry dock.

Paul Kay and Joe Keoghan are shown here enjoying the galley’s corned beef and hash in celebration of the Irish holiday.
LYNX to sail the 2009 Transpacific Yacht Race

SLEEK, WEATHERLY & POWERFUL, this 122’ square-topsail schooner will bring an exciting new dimension to racing across the broad Pacific to Diamond Head Light.

Relive the pride of America’s sailing heritage as you pit the traditional strength of Lynx against the technology and speed of 21st Century sail.

Honoring Lurline, the winner of the first Transpacific Yacht Race in 1906

Come! Sign aboard to experience the seaman’s world of the 19th Century and the power and grace of the clipper-schooner Lynx. Five berths available.

866/446-LYNX (5969)
www.privateerlynx.org
Delays for the *Falls of Clyde*

Still moored at the Hawaii Maritime Center, the *Falls of Clyde* waits patiently for dry dock and restoration of her hull.

The *Falls of Clyde* has encountered a delay in her dry-docking according to Susan Yamamoto, board member of the Friends of *Falls of Clyde*. Two environmental contamination issues have surfaced. Until these problems are corrected, the *Falls of Clyde* will be unable to enter drydock. At hand, are the logistical and financial dilemmas involved.

The pursuit of artifacts continues, as Susan states, "We are trying to track down items that were removed from the ship and are now missing. We would appreciate any information and assistance that would lead to their recovery."

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**Marinisms**

Mr. Weigelt’s Maritime Dictionary

**STEERSMAN,** (*timonnier,* Fr.) the helmsman, or person employed at the helm to regulate the ship’s course. He is reckoned the best steers-man who uses the least motion in putting the helm over to and again, and who keeps the ship best from making yaws, that is, from running in and out. For this purpose, he should diligently watch the movements of the head by the land, clouds, moon, or stars: because, although the course is in general regulated by the compass, the vibrations of the needle are not so quickly perceived, as the salies of the ship’s head to the right or left, which, if not immediately restrained, will require additional velocity in every instant of their motion, and demand a more powerful impulse of the helm to reduce them; the application of which will operate to turn her head, as far on the contrary side of her course.

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Reviving the *Thorne*

In preparation for a developing small craft program, the *Thorne* was moved from her place aboard the Star of India to the barge. Here, Capt. Chris Welton is seen re-rigging the *Thorne* with a fore-and-aft sail.
Our Steam Engine Plants

Steam engines work by using the expansion of high-pressure steam to push against moving pistons in the cylinders of reciprocating engines, or against the moving vanes of steam turbines. When the Berkeley and the Medea were built, steam piston engines, after a century of development, were universal for marine use, and they continued up through the Liberty Ships of World War II that deliberately used an old design that was easy to build.

Change was coming. In the year that Berkeley was being designed, an experimental turbine-powered vessel sneaked into the British Navy’s parade for Queen Victoria’s Golden Jubilee, and outran Britain’s fastest destroyers. Ten years later, the Diesel engine came into marine use, at first for small vessels, so that nowadays ships are powered either by turbines (steam or gas) or by diesels. The steam reciprocating engine, nowadays, is just a historical artifact, but it represented the very best that the technology of the time could produce.

The Berkeley’s steam engine and boilers are typical of almost the highest development of the marine reciprocating piston engine, the three cylindered triple-expansion engine supplied with steam from the oil-fired straight watertube boilers. The Medea’s steam engine and boiler, although built six years later, are typical of the previous generation of steam plants, the two-cylindered compound double-expansion engine supplied with steam from a firetube boiler, originally burning coal but since converted to oil.

The Berkeley was originally equipped with two firetube Scotch boilers, burning coal, similar in principle to the boiler of the Medea but different in design. After two years of service, the Berkeley was converted to oil, the same fuel used by the locomotives of her owner, the Southern Pacific Railroad. After twenty-six years of service, the two Scotch boilers were replaced by the present four watertube boilers.

The Steam Engine System

The steam engine plant consists of far more than the steam engine itself. The water and steam run through a continuous cycle of water boiled into steam, used in the engine, condensed back to water, and then pumped back into the boiler for reuse, a cycle first studied scientifically by the French engineer Sadi Carnot in 1824, about a century after the first steam engines had been built.

Therefore, the complete steam plant consists of a furnace in which to burn the fuel, the boiler in which the heat from the furnace is used to boil water into steam, the steam engine which turns the heat of the steam into mechanical power, the condenser which condenses the steam back into water, and the feed pump that pumps the water back into the boiler. We will look at each...
Marine Steam (cont)

“cold.” (That’s also explained by the Carnot cycle, for

A refrigerator is a heat engine run in reverse.) However, since a ship floats in an infinite supply of cold water, the temperature of the seawater is the lowest temperature we can use. With the temperature range that the Berkeley used, the theoretical efficiency could be no higher than about 30%. Probably, only about 10% or 15% of the energy in the fuel could be actually used in driving the ship.

Boiling Temperature

Now that you have learned that the engine must work between the highest usable temperature and the lowest obtainable temperature, you need to know the properties of water and steam between those temperatures. You probably know that when water boils into steam it gets much larger, occupies much more space or volume. You probably also know that the air pressure around you at sea level is about 15 pounds per square inch. You probably all know that the boiling temperature of water into steam is 212 °F, and some of you know that if you go to higher altitudes, where the air pressure is lower, water boils at a lower temperature, making cooking slower, while if you confine the steam in a pressure cooker the temperature goes up to make cooking quicker.

There is an easy explanation for this. As water, the molecules are very close together, sticking together in fact, although they slip past each other, roll over each other, with little friction, making water a liquid. As steam, the same molecules rush about independently of each other, taking up much more space and making steam a gas, just like any other gas.

Temperature really refers to the speed with which the molecules of water are moving. At room pressure, very few of the molecules move fast enough to jump into the air against the pressure of the air and take up much more space as cold steam, or water vapor, or humidity, whatever you want to call it. That’s room-temperature evaporation. As temperature increases, more and more of the molecules of water get fast enough to make the jump between the liquid and the gas against the pressure of the gas. At boiling temperature, enough of the molecules are going fast enough to push the air away and fill the space with steam. If the space is enclosed, as in a pressure cooker or a boiler, this increases the pressure. If the pressure is increased, then it is more difficult for the water molecules to jump into the gas, the steam, and take up more space, and some go slow enough to be captured again into the water.

Therefore, for every pressure there is a temperature at which water and steam can exist together. Contrariwise, for each temperature, there is a pressure at which water and steam can exist together.

The steam engine designer always works in absolute pressure, starting from zero pressure, as in the vacuum of outer space. This means that sea-level pressure is 15 psia, meaning pounds per square inch absolute. You must always remember that we exist at 15 psia. (The operating engineer considers ambient pressure to be zero. Thus his steam pressure gauges read pressure above ambient, or 15 psi less than the absolute pressure, and he measures pressure that is lower than ambient in inches of mercury of vacuum, which you will see on the gauges in the engine room. 30 inches of vacuum is substantially equal to zero pressure.)

Here is a short table of steam pressures, temperatures, and volumes.

<table>
<thead>
<tr>
<th>Pressure, Pounds per Square Inch, Absolute</th>
<th>Boiling Temperature Degrees Fahrenheit</th>
<th>Volume, Cubic Feet per Pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>102</td>
<td>335</td>
</tr>
<tr>
<td>2</td>
<td>126</td>
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<td>5</td>
<td>162</td>
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<td>193</td>
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<td>15</td>
<td>213</td>
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<td>20</td>
<td>228</td>
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<tr>
<td>40</td>
<td>267</td>
<td>10.4</td>
</tr>
<tr>
<td>60</td>
<td>293</td>
<td>7.1</td>
</tr>
<tr>
<td>80</td>
<td>312</td>
<td>5.4</td>
</tr>
</tbody>
</table>

When considering the volume of a pound of steam, consider that a pound of water has a volume of only 0.016 cubic feet. Therefore, even at 200 psia, when water turns into steam, its volume increases by about 14 times.
You can see that if you can use the cold seawater as the lowest temperature, say 60 °F, the pressure would be less than 1 psia, and 1 pound of steam would require more than 340 cubic feet of space. The high-pressure cylinder of the Berkeley would hold about 2 pounds of steam, so that if that were expanded all the way to less than 1 psia pressure, it would occupy about 700 cubic feet, about the volume of a bathroom. That’s just too large a cylinder to be practical. Therefore, the steam was not expanded to this volume, but to the volume allowed by the largest practical cylinder.

However, that doesn’t say that the lowest cylinder pressure was about 5 psia. That was the pressure at which the steam was exhausted from the cylinder, but all during the stroke the back side of the piston was under the least pressure that it was possible to obtain, that of steam at the temperature of the cooling seawater, and hence less than 1 psia. If the condenser had any significant pressure in it, that is, it was showing less than 30 inches of vacuum, the engineer investigated to see what was wrong.

The very earliest engines didn’t run on any significant steam pressure, only on the difference between steam at room pressure, 212 °F, and the vacuum of steam at room temperature, 60 °F. They were very inefficient, partly because of the small temperature range, which Carnot’s cycle showed could not be efficient. However, they showed that it was important to have as good a vacuum as possible as the lowest pressure in the system.

Multiple Expansion Cylinders

You have learned the relationship between the temperature and the pressure of steam for containers in which both steam and water exist together. This is called wet steam, because if the temperature drops at all, some of the steam condenses into a fog of water droplets. For the moment, consider that the engine is running on wet steam direct from the boiler.

Suppose that the boiler steam is at 180 psia, which is approximately the pressure in the Berkeley’s boilers, and 373 °F (assuming wet steam for this discussion). This steam could be allowed to fill a cylinder, pushing its piston all the way down, and doing a lot of work. However, when it was time for the piston to come back up the cylinder, the steam would have to be allowed to escape from 180 psia and 373 °F into either the atmosphere or into the condenser. That would waste much of the energy that the boiler had worked so hard to put into the steam.

Instead of wasting that energy, only a small amount of steam is allowed into the cylinder at the top of the piston stroke. Then the supply of steam is cut off, and the pressure of the steam gradually drops as the steam pushes the piston downward, until the steam has expanded to about 5 psia and 162 °F, while the pressure against the opposite side of the piston is maintained at effective zero. Then all the energy is got from the steam that it is practically possible to get.

There are several troubles with having all the expansion in one cylinder, but the big theoretical problem that it is impossible to overcome is that the cylinder must start at 373 °F at the start and will be cooled by the steam inside to 162 °F by the end of the stroke. Then, for the next stroke, the cylinder has to be heated up again with steam at 373 °F, thus wasting a lot of steam that condenses into water as it heats up the metal of the cylinder and piston. Furthermore, that cylinder and piston must be very large and very heavy, heavy because they must be strong enough to withstand the initial pressure, but large enough to contain the fully expanded steam. This means that it will take an enormous amount of steam to heat them up for the start of each stroke.

The answer to this problem is to have multiple cylinders, each of which operates over only part of the total range of temperatures and pressures. Thus each cylinder is heated and cooled only part of the total range for each of its strokes.

The highest pressure that was used for single cylinder marine engines, (in marine engines efficiency of fuel is the paramount consideration), was about 45 psia and 275 °F. The first development was an engine in which the expansion occurred in two cylinders, the high-pressure cylinder and the low-pressure cylinder, called the compound engine. This is the type of engine installed in the Medea.

As technology advanced to make higher boiler pressures and temperatures practical, the number of expansions was increased to three, with the high-pressure, intermediate-pressure, and low-pressure cylinders, as in the Berkeley and on into the Liberty ships of World War II.

Later Developments

Some ships went to even higher boiler pressures and temperatures and used quadruple-expansion engines, but this
development was cut off by the introduction of the turbine in place of the reciprocating piston engine. Some of the triple-expansion engines actually had four cylinders, with two low-pressure cylinders of medium size, to keep the reciprocating weights down and to reduce vibration and bearing loads.

In the highest power applications of the reciprocating piston marine engine, as in warships, the engine room at full power was full of vapors of oil and water. Some of the bearings had to be water-cooled with hoses spraying on the rotating crankshaft. The forces required to change the direction of the pistons at each stroke limited the speed at which the engine could be run. The vibration was terrific. While oil was pumped into the steam for lubricating the valves and pistons, lubrication was still a problem and the oil had then to be removed from the condensed water before it could be returned to the boilers. The engines needed frequent maintenance.

The turbine engine had many advantages. Because it had pure rotational motion, it didn't produce vibration. It could be made with an enormous number of steam expansions, like a piston engine with many expansion cylinders. Because its wearing parts, the shaft bearings, were outside the steam chambers, their lubrication did not limit the steam temperatures that it could use. Because its vanes moved at very high speed, it took much less space for a given horsepower than the reciprocating engine with its slow-moving pistons. It cost more because it was more difficult to manufacture, but it did a much better job.

(Continued Next Month)

Board the Star of India and experience a fun, unique movie venue.

Pick a date, grab a jacket, take a blanket to snuggle up in, and get ready to be entertained by this grand old lady (the Star of India) in a way unlike any other. Her projection sail raised, her decks set up for your comfort, her staff and volunteers ready to help her put on the show; the Star of India invites you to her 15th Movies Before The Mast Film Festival.

Friday nights are Date Nights. Bring a date, win prizes and snuggle under the stars as you watch:

- July 10th The Perfect Storm (rated PG-13)
- August 14th Deep Blue Sea (rated R)

Saturday nights are Family Nights. It's a fun night for the whole family. Come a little early, explore the ship, join in the pre-movie activities and win prizes, and then watch:

- July 11th Sinbad: Legend of the Seven Seas (rated PG)
- August 15th The Sea Gypsies (rated G)

Ticket Prices
Adults: $13, Children (12 and under): $8
Adult Members*: $11, Member's Children* (12 and under): $6

Show Times
Box office opens at 6:30 p.m., Gates open at 7:00 p.m.
Movies begin at 8:00 p.m.

There are NO REFUNDS or EXCHANGES so please select carefully.
*Member's must show their membership ID at the box office when they check in.

We would like to thank Anthony's for their continued participation and support.

Go to www.sdmaritime.org for details.
By the end of 1874, the Bronx officially became part of New York City, Saint-Saëns premiered the Danse Macabre and Levi Strauss and Jacob Davis patented the blue jean. In 1874, Mathew Evans and Henry Woodward patent the first incandescent light bulb, later selling their patent to Thomas Edison. In 1874, cartoonist Thomas Nast first represents the Republican Party as an elephant, gold was discovered in the Black Hills of South Dakota. In Europe, the term impressionism is used for the first time and John D. Rockefeller, Jr., Honus Wagner and Sir Ernest Shackleton were born. In December, 1874 at Belfast Ireland, the ship *Star of Russia* was launched.

She was the 9th in the line of nearly identical iron-hulled ships constructed at the yards of Harland & Wolff in Belfast, Ireland. Launched as yard No. 88 on December 12th, 1874, she would be the largest of James P Corry & Co.’s so named "Star Line." Assigned the official British Reg. No. 63958, she measured 275 feet 5 inches in length, 40 and 1/2 feet abeam and 24 feet 2 inches in depth. Measuring 1,981 Gross Weight Tons, her size would not be eclipsed until the Corry’s subsequent steamships.

She was designed for the Calcutta jute trade and the Australian routes. Between her initial voyage in 1875 and 1880, she averaged a 95 day passage to Calcutta. Beginning in 1881, the *Star of Russia* would continue her work life between London and the shores of Australia, carrying various cargoes. In 1884, loaded primarily with cement, she made Melbourne in 75 days. Struggling through numerous fierce weather patterns, blowing out her main tops’l, she managed at one point 16 1/2 knots. It would be her finest voyage.

Fifteen years late in 1895, a similar voyage would end in disaster. As a gale rose during a night's passage, the mate of the watch hesitated to furl any sail until the ship was steering uncontrollably. In an instant, with the watch forward, the helmsman allowed the ship to luff. The mate and two crewmen were washed overboard and vanished.

Recounted in the 1923 anthology of the sea, Fenceless Meadows, the helmsman's account was recorded by author Bill Adams:

"The sail reefed, they [the second mates watch] descended to the deck. Each man in passing me either avoided me or scowled savagely. The second mate hastened aft to the poop. I, most cold and hungry, a horrid fear upon me, followed his men along the swamped deck to the forecastle. I entered the forecastle behind the last of them. They stared at me. 'Where are Scot, Dougal and the mate? Where are my watch? A sailor then stepped towards me, then, 'They're drowned,' he said 'You luffed!'"

**WIND AND TIDE MAKE TROUBLE.**

From November of 1880, J.P. Corry’s Star Line was at the front of the pack.

In 1897, sailing from Antwerp, Belgium to her first call on San Francisco, the *Star* had another rough voyage. “On March 4 she ran into a hurricane and the vessel was thrown on her beam ends, the bulwarks were carried away, sails were blown from the gaskets, everything movable on deck was washed overboard, and finally 300 casks of cement had to be jettisoned in order to get the ship on an even keel. Several more gales were encountered...”
Published in 1923, Bill Adams recounted the disastrous voyage of the Star of Russia’s 1895 voyage.

In 1898, now with the cursed with the Mark of Cain, the Star of Russia was sold to Shaw, Savill & Co. where she began running cargo to European ports. In October, after arriving in San Francisco from Antwerp, the Star was struck by the brig Lurline as she was at anchor awaiting quarantine.

It was during this brief period that the Star of Russia came into the temporary fold of Hawaiian registry and a new owner, J.J. Moore and Company. During this time of temporary Hawaiian registry, she began running general cargo from the west coast of the United States and Hawaii.

With the annexation of Hawaii in the summer of 1898, the subsequent Hawaiian Organic Act of 1900 brought the issue of registry to a close as, “That all vessels carrying Hawaiian registers, permanent or temporary, on August 12, 1898, together with the following-named vessels claiming Hawaiian register, Star of France, Euterpe, Star of Russia, Falls of Clyde, and Wilscott, shall be entitled to be registered as American vessels, with the benefits and privileges appertaining thereto.

Now under the American flag, on April 1st, 1901, she arrived in San Francisco after a 19 day voyage from Hawaii. By the end of the month, she was setting sail north for the Bristol Bay region of Alaska as an Alaska Packer.

Her size made her worth. By 1902, the investment in the Star of Russia was noted in the San Francisco Call:

“In addition to her cargo she carried 500 employees, who will be distributed in their numerous capacities among the canneries...The Star of Russia’s cargo is valued at $200,000. It includes 20,000 boxes of tin plates, which will all come back in the shape of cans, well filled with choice cuts of cooked salmon...In addition to the tin plate the Star carries 80,000 pounds of pig tin and an endless variety of equipments...”

In that year, the Star of Russia would be the first of the fleet to return with 69,000 cans of cooked salmon in early August. By

The Honolulu courts are busy considering the demands of the owners of five vessels for Hawaiian registry. The San Francisco owned ships Star of Russia, Star of France, Euterpe, Wilscott and Falls of Clyde all want to fly the Hawaiian flag and are determined to secure the privilege.

Courtesy of the San Francisco Call February 4th, 1899

Remaining a full-rigged ship through her life, the Star of Russia is seen her in September of 1920.

August 29th, it was announced that she would make a second run for Bristol Bay. In addition to her capacity, the Star’s ability and speed made it one of the few APA vessels to routinely make two runs spring each season. After a rough decade in the 1890s, the Star of Russia had returned to her glory as a reliable workhorse, a windjammer in the classic sense. By 1910, her speed and reliability to climax in an 11 day run from Karluk to San Francisco.
Star of Russia (cont)

Through the teens and twenties, *Star of Russia* repeatedly proved herself, averaging sails of 14 days or less.

With the heyday of the windjammer coming to a close, *Star of Russia* made her last sail for the Alaska Packers’ in 1925.

The following year on March 24th 1926, she was sold to the Burns-Philp Company of San Francisco. Very quickly she was in the hands of French interests to be used as a cargo hulk, renamed *La Perouse*, she arrived in Apia, Samoa.

The stern of the *Star of Russia* and her steering gear as she lies 36m underwater at Port Vila Harbour, Vanuatu.

*Russia*, once a famous Belfast clipper, and to quote the Captain "one of the smartest ships that ever sailed the seas."

Capt. Frank W. Weidemann with unidentified ladies at Wrangell, Alaska, aboard *Star of Russia*, around 1925.

Again, she would be sold and renamed, becoming the *Bougainville*. Relocated to Noumea, New Caledonia she would serve her remaining years as a coal barge. A temporary stay in Sydney, Australia, she found herself in the New Hebrides, an South Pacific Island group now forming the nation of Vanuatu.

Looking down her fallen main mast from the main top, the ship’s profile emerges from the depths.

Sitting for another two decades, exposed to repeated cyclones and weather, the *Star of Russia*, by 1953 had sank to the bottom of Port Vila Harbour.

Once, one of the greatest windjammers afloat, she would continue to serve the sea as an artificial reef. Today, home to countless sea life, she has also become a popular site for recreational tourists.

**Acknowledgments**

The editor would like to thank Steve Lawson for his never-ending knowledge of the Alaska Packers’ Association and Nautilus Adventure Tours, Port Vila, Vanuatu
A younger sibling of Wings, the Kettenburg PC #72, named Yankee was in full sail in March. Launched circa 1941, she is currently owned by Diane Schneider & Dave Grundies and berthed at the San Diego Yacht Club.
Sir Edward Hamilton, of the Surprise frigate, who distinguished himself with so much gallantry at the recapture of the Hermione frigate, was a passenger on board the Carteret Packet, from Jamaica, which has been captured. He was returning home to get cured of his wounds.

Morning Post and Gazetteer (London) April 4th, 1800

The Great Potatoe Tragedy
(Comedy)
In Five Acts & Epilogue

Act I

Like Oliver Twist who asked for some more
The "second" had harboured a wish
To eat fresh potatoes and not the preserved
And on Monday collared a dish

They were watching a caseful labeled "saloon"
Being brought up for "Cookey" to boil
When the casing gave way & spuds strewed the ????
And everyone grabbed for the spoil.

They discussed how they'd cook some savory mess,
Whether roasts ones or fried ones were best
By unanimous they decided that boil
They would help the pork to digest.

Walter Peck - Euterpe Times Volume 1, No.10 November 15th 1879, Lat. 43.15 S, Long. 66.67 East long.

Late From The Sandwich Islands

Arrival of the U.S. Revenue Brig Lawrence. By the above arrival last night we have received dates to the 9th of April, and a large package of letters from our correspondent PEREGRINE. We have little news to report except the subsiding of the French excitement. We have it however on very good authority, that the Hawaiian Government has decided to apply to the Government of the United States for annexation, and that an officer of our national government is now in our city, on his way to Washington entrusted with the mission. We not only hope this is true, but also that the cloak of Uncle Sam may be folded around this beautiful sea nymph of the Pacific and she be domesticated in the great family.

Courtesy of the Daily Alta California, May 7th 1851

Descendants of the Euterpe

Shown here in 1915 at Doyleston, New Zealand is the extended family of George and Mary Ann Maw. George and Mary Ann arrived in Otago, New Zealand aboard the Euterpe. Sighted at the Heads on April 3rd 1877, she completed a passage of 122 days, the first month consisting of heavy gales.

Courtesy of the Evening Post, April 5th, 1873

In illustration of the careful manner in which Press messages are transmitted by the Telegraph Department, we may mention that the name of the ship "Euterpe" which arrived at Port Chalmers on Thursday, was changed into "Asterope" in a telegram delivered to the Anglo-Australian Press Telegraph Agency.

Courtesy of the Evening Post, April 5th, 1873
additional excitement, however, served as a counter irritant. In their haste to get from under the beating hoofs passengers forgot the watery grave that had yawned so wide a moment before, and by the time the horse was pacified the Encinal had disappeared in the fog and the Berkeley was on its way. Although extensive damage was done to each boat nobody was seriously injured and both boats were able to continue to their journeys' end.

CAUGHT IN A SUDDEN FOG

The Encinal, crowded on both decks with men and women, boys and girls on their way to work, left Alameda mole at 6 minutes past 7.

The Berkeley, headed for Oakland, left its slip at 7:21. The collision occurred three minutes later.

The sun was shining when the Encinal passed Goat Island, and although misty, it was still clear when the Berkeley left its slip. Suddenly the mist was transformed into a fog so dense that vision was limited to less than a boat's length. The Berkeley was in charge of Chief Officer Nick Nelson, Captain Blaker being at breakfast. Captain William Murphy was in charge of the Encinal.

The meeting of the boats was unexpected as the fog. Narrow as was the margin, however, and short the time at their disposal, both pilots acted with a promptness which probably prevented a fearful tragedy. Although the steamer was still going ahead with considerable speed when they came together, the Berkeley's engines were backing at full speed. Captain Murphy threw over the Encinal's wheel, with the result that the Berkeley, although it hit the Encinal amidships, struck a glancing blow. It was a heavy blow even at that and the big Encinal heeled to an angle so acute that those on board feared their ship was going to capsize.

EXCITEMENT AMONG PASSENGERS

The fog lifted quickly as it had come. Although one wing was completely disabled, the Encinal was able to navigate under its own steam into its slip at the ferry depot, where the passengers cheerfully laid down their life preservers and rushed ashore. Although the Berkeley was not so crowded as the Encinal, the excitement among passengers was even greater. Many of the women developed hysterics, and one of them was still screaming when she boarded the Oakland train at the mole. The Encinal made the trip to the other side under its own steam and is now being repaired at the Southern Pacific shipyard on Oakland creek. The Berkeley made regular trips, all the damage being of such a nature that it can be repaired without laying up the vessel. The damage to the Berkeley is estimated at $450, and to the Encinal at $2,500.

The forward corner port side of the Berkeley's cabin on the lower deck was stove in and an extensive stretch of rail and gingerbread work smashed to splinters. The Encinal's port side was laid wide open for about 50 feet. The wheel flanges were smashed. The frame that supports the wheel was broken and the spring beam which protects the hub of the wheel was also smashed in.
Collision (cont)

The government inspectors will hold an investigation into the collision at 10 o'clock this morning.

HIT BY A PLANK

A heavy plank ripped off the upper works of the Berkeley, and, falling endwise, struck J. W. Johnson, a negro barber, on the jaw and laid him low. Johnson stood just back of the ropes on the forward deck and said that until the crash came he had no idea of being in danger, and did not know the name of the steamer with which the Berkeley had collided. Johnson was landed at the Oakland mole and removed to the Oakland receiving hospital. Examination failed to reveal any injuries except rapidly forming lumps about the jaw, which were laid to the sever bruises which he sustained. He lives in Stockton street.

BLAME ENCINAL'S CAPTAIN

The Southern Pacific board of inquiry, which met in Oakland last night, held that Captain Murphy of the Encinal was responsible for the collision. Two reasons were assigned. The first, that he had sounded the signal course before he had learned the exact location of the Berkeley and, secondly, not knowing where the Berkeley lay, he failed to stop the Encinal and give the alarm whistle. The ruling was somewhat modified by the statement that unusual atmospheric conditions prevailed.

The board of inquiry was composed of Superintendent J. H. Young, Captain E. M. Freeman, state pilot commissioner; P. M. Walsh, Fred Sandelin, a druggist, and several officials of the Southern Pacific. The report will be filed with the federal authorities and also with the main office of the railway company.

Courtesy of the San Francisco Call April 16th, 1909

More Salmon Ships Go to Sea

Two ships of the salmon fleet sailed yesterday and three others cleared and probably will go to sea Sunday. The schooner Glendale sailed for Nelson's lagoon and the ship Star of India put to sea for Bristol Bay. The ships Tacoma, Indiana, and bark Star of Peru, which cleared yesterday, are all going to Bristol Bay. In this year's salmon fleet there will be 44 vessels of all sorts and sizes and from reports so far received the catch this season will be good. It has been below normal for two years and the packers expect that this year the balance will be restored.

Courtesy of the San Francisco Call April 11th 1908

Medea Preps for American Waters

On the hard at Vlaardingen, Holland on April 21st, 1971, the steam yacht Medea would be shipped to Los Angeles by August of the same year.

Ship's Historical Narrative 1984

USS DOLPHIN (AGSS 555)

Departed on 8 April to provide extensive oceanographic services to the Naval Postgraduate School in Monterey, CA for four weeks. Significant information was collected concerning current action and the "upwelling" seen in the Monterey Canyon.

Enroute San Diego, DOLPHIN assisted the USS POINT LOMA (AGDS-2) in her role as the Pacific Launch Area Support Ship.
**April**

1796, April 1st - The French frigate *L’Unite* is captured by the British Navy and renamed *HMS Surprise*.
1906, April 9th – The schooner *Fay Templeton* collides with the steam ferry *Berkeley*.
1971, April 12th - The diesel-powered research submarine *U.S.S. Dolphin* deploys to the Bay of Alaska with the *U.S.S Baya* and *U.S.N.S S.P. Lee* on a sonar and oceanographic expedition.
1982, April 12th - The diesel-powered research submarine *U.S.S. Dolphin* deploys in support of Upper Ocean Turbulence Experiments sponsored by the Naval Post Graduate School in Monterey, CA and the University of British Columbia in Vancouver, B.C.
April 14th, 1543 - The fleet of Juan Rodriguez Cabrillo’s Pacific Coast expedition returns to Navidad, Mexico. Led by the flagship, *San Salvador*, Cabrillo had died from an injury in January.
1873, April 14th - The full-rigged ship, *Euterpe* completes her first circumnavigation arriving in the city of Dunedin.
1909, April 15th - The steam ferry *Berkeley* collides with the steam ferry *Encinal*.
1899, April 17th – Due to a rip current, the steam ferry *Berkeley* gets sideways and jams itself in her slip.
1906, April 18th - After the 8.3 earthquake in San Francisco, the steam ferry *Berkeley* joins 30 other ferries in disaster relief.
1992, April 22nd - Underway for a two part exercise to test a new high resolution Radar system under development by Naval Ocean Systems Center., the *U.S.S. Dolphin* submerged to periscope depth off the Point Loma coast while tests were conducted to determine the detectibility of submarine periscopes by radar.
1988, April 25th - While conducting a Fast Cruise, the *U.S.S. Dolphin* experiences a runaway engine. Requiring a replacement engine block, the *Dolphin* required a dry-dock and hull cut.

**From the Editor**

As the museum prepares for the arrival of the *U.S.S. Dolphin*, I've made an effort to remind myself that the museum isn't just tall ships. In currently working my way though Alex Roland et al's tome, *The Way of the Ship: America's Maritime History Reenvisioned 1600-2000*, the authors carefully remind the reader that the maritime history has been more than naval engagements, building bigger and more importantly that as a nation, we are not a truly oceanic maritime country. Influenced by the country's historical development, America's maritime history rests more in that of cargo, the container ship and its coastal and inland waterways. We are described as a "brown water" nation.

It has given me a different insight to the museum. The museum represents that brown water nation. From the *Star of India* hauling timber, then salmon from Bristol Bay to San Francisco, to the *Berkeley* shuttling commuters across San Francisco Bay, to *Pilot* enabling ships to enter San Diego Bay. The spirit of the *C.W. Lawrence* residing in the *Californian*, the west coast's first beat cop, her job to enforce import custom laws.

Then there is the floating barge formerly known as *Big Blue*. There is evidence that she may have been built at Union Iron Works in San Francisco, the same shipyard that launched the *Berkeley*. Her main task in life, to load railway cars for transport.

Being a continuation of the Southern Pacific Railway, the steam ferry *Berkeley* along with the barge exemplifies the interaction between railroad, automobile and maritime transportation for the simple goal of commercial enterprise, capitalism being one of the major founding attributes of the United States.

The maritime portion of this commercial history is represented even better than one might expect at a quick glance here at the MMSD. That history of this "brown water" nation is here.

As a reminder, there is a Yahoo group available at: [http://groups.yahoo.com/group/starofindia/](http://groups.yahoo.com/group/starofindia/)

If you have any thoughts, news or contributions, please send them along to: euterpetimes@yahoo.com