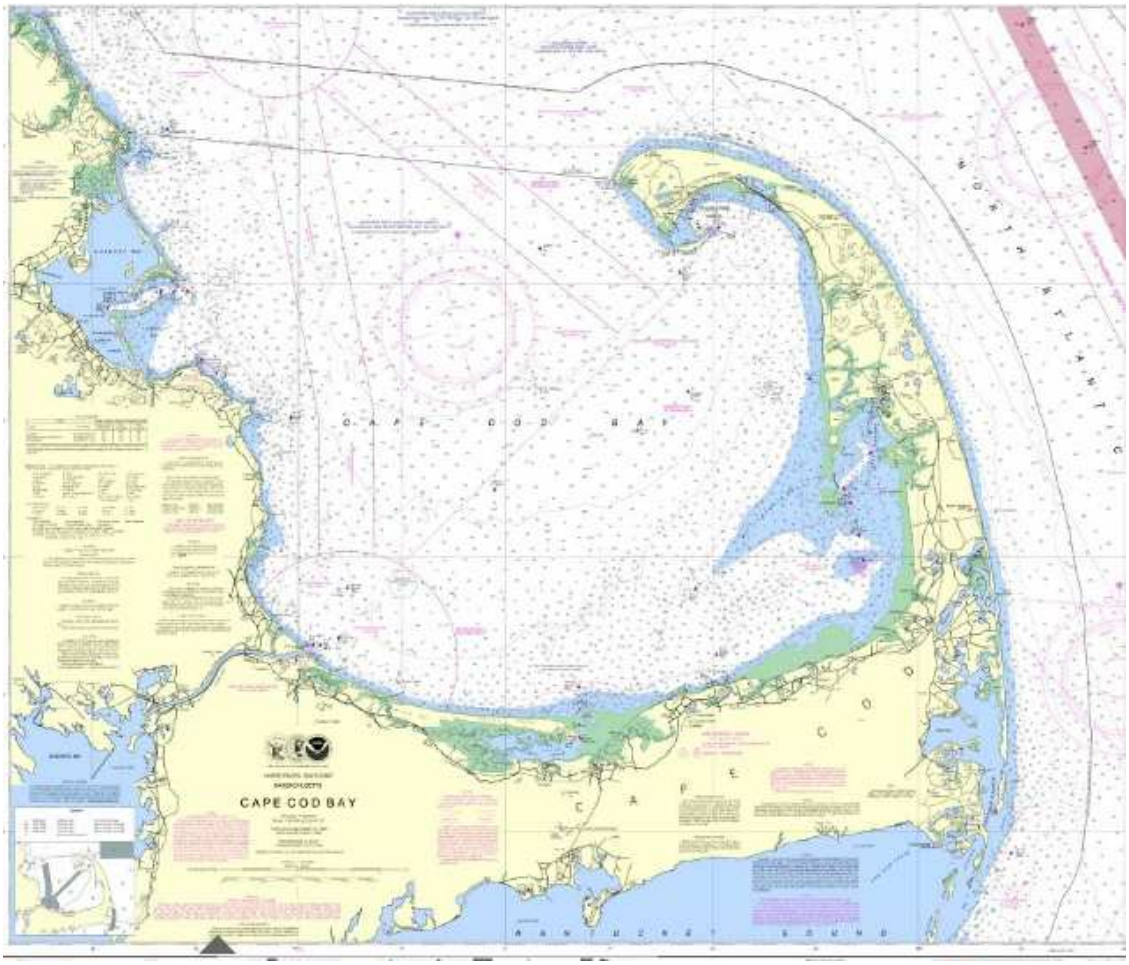
Jamestown Yacht Club
2011 Annual Cruise Guide



Hello and welcome to the 2011 Jamestown Yacht Club annual cruise.

We expect a wonderful trip into Buzzards Bay, through the Cape Cod Canal, and onto Provincetown, Massachusetts. This document is your reference for the cruise. The goal is to provide information and structure, but you can of course set your own schedule.

Our motto this year is "**Tide waits for no man**!!". It was planned so we could have favorable current through the canal. A special thanks to Vic Calabretta for his help on this critical part.

Our fleet consists of 10 boats and 23 sailors. Everybody is welcome and everybody is included. Its likely that not all will want to do the same thing at the same time. We will have several happy hours and are planning two events in Provincetown. One is a whale watch tour and the other is a scavenger hunt. We traditionally have one night out for a nice dinner. We encourage everyone to participate, but respect if you want to go off on your own.

If you have any questions please email me at patriot367@yahoo.com. While underway I will be monitoring Channel 16 and on the top of each hour we will broadcast on Channel 72.

We look forward to sailing with you and very happy that you are part of this great adventure.

Edward Doherty
Sailing Vessel *"Patriot"*
JYC Cruising Chair

Boat Name	Manuf.	Length	Sail #	Crew	Crew
Katie C	Island Packet	35	88	Vic	Judy
Blackbird	Corsair	28	71	Nick	Sue
High Spirits	Bristol	35.5	none	Steve	Rita
BonVivant	Valiant			Mike	Marilyn
				Gavin	
Magic Roundabout	Jeanneau	35	41Y-2	Winston	Judy
Patriot	Beneteau	36	78	Ed	Melanie
				James	Madeline
Pooka	Catalina	36	1339	John	Joe
Mio Sogno	Jeanneau	36		Tony	Carol
Seyanna II	Person	31	38	Bruce	Hazel
Voyager	Tashiba	40	60262	Clifford	Susan

Please fly your JYC Burgee while at anchor or on a mooring.

General Comments: The JYC cruise is traditionally a low key, relaxed event and this year will be no different. We do have a couple of long sail days and schedule does matter. While underway please participate in the hourly check in on Channel 72. Those that arrive first should have fenders out ready to take on a fellow JYC boat. While we asked you to make reservations, if possible we will try to get a group of moorings together. This may mean rafting up with a boat you may not know well. That's a benefit of a cruise, meeting new and interesting people.

Safety is our number one concern. If the weather is not cooperating, we may adjust our plans. Each skipper is responsible for the decision to get underway. If the weather is questionable for the next day, please monitor channel 72 at 2000 and 2100 hours. We will broadcast the weather and ask each boat their intentions and to pair up boats with similar plans.

Many of the items in this guide we pulled off the web, please use your judgment. One source we pulled from was the Boston Sailing Center. www.bostonsailingcenter.com

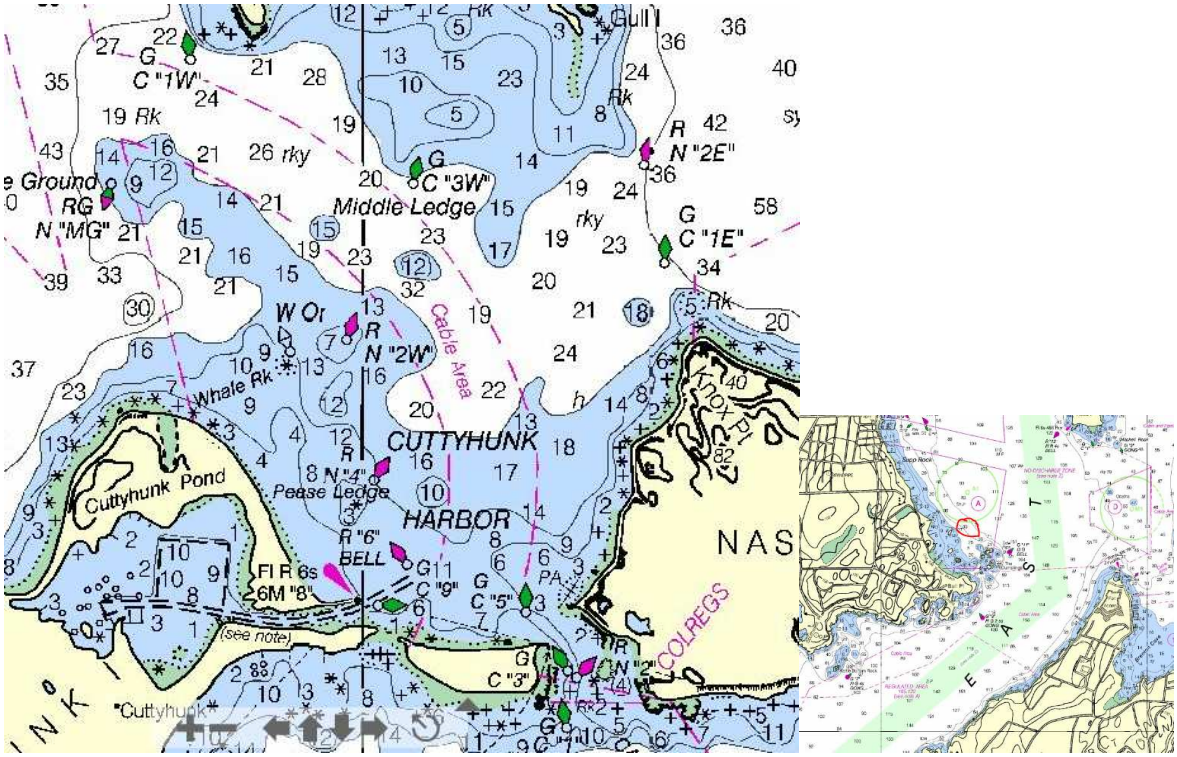
Current Weather Resources:

Dial-a-Buoy 888-701-8992, hit "1", enter 5 digit number below then hit "1"

Buzzards Bay Tower	28963 (BUZM3)
Woods Hole	29263 (BZBM3)
Boston Entrance	44013

Block Island Airport Weather AWOS	1-401-466-5495
Provincetown Airport Weather AWOS	1-508-487-6435

Day 1 - Saturday July 30, 2011
Destination: Cuttyhunk
Nautical Miles: 23 nm



Almanac:

Sun:	Sun Rise: 0535	Sun Set: 2006
Moon:	Moon Rise: 0525	Moon Set: 1950 New Moon

Tidal Information: Around 0900 the current starts to ebb from Narragansett Bay. The current switches in Buzzards Bay around 1400 hours. High tide at Cuttyhunk is 1008 with a height of 4.4 feet and a low at 1536 at a height of -0.2 feet.

Fleet Rendezvous Time and Place: 1000 Near JYC racing mark "Z", see the red circle in the small chart above

Commentary: Our first day begins with a rendezvous at the JYC Racing Mark "Z" off of Jamestown Boatyard and near the house on the rocks. The departure time of 1000 is based on not having adverse current on the way to Cuttyhunk. Using a 5 knots Velocity Made Good (VMG) speed we arrive around 1500 hours. Some of our fleet are planning to go out earlier in the week to get moorings. If possible we can raft up. I would plan on anchoring for the night as this is a very busy time of the year.

Approaches

You can approach Cuttyhunk either from the east (Buzzards Bay) or from the west (Rhode Island Sound). In both cases you pass between Cuttyhunk Island and the smaller Penikese Island to the north. The ledges extend three quarters of a mile south and east from Penikese but they are clearly marked and not hard to avoid.

If you're arriving from the south (Vineyard Sound), Quicks Hole is the simplest route through the Elizabeth Islands. Canapitsit Channel - narrow, twisty and ambiguously marked - is right next to Cuttyhunk but used mostly by shoal draft boats with local knowledge.

The entrance to Cuttyhunk Pond is a dredged channel between breakwaters. In 2003 we found a controlling depth of 10 feet at an average low tide. A can marks the southern breakwater, which is frequently awash. The northern breakwater, with its prominent light, is a more certain guide to the channel, though soft shoals do accumulate on its shoulder.

Once inside the Pond, remember that the mooring area is a dredged-out square prone to shoaling at the edges. It is usually marked with small uncharted buoys, but straying much beyond the moorings will land you in shallow water fast.

Anchorages

In fair weather it is possible to anchor in the outer harbor, between Cuttyhunk and Nashawena Island to the east, but it is mostly exposed from northwest to northeast. Boats frequently anchor inside the pond, at the northern edge of the mooring area. It's tight - with room for only a handful of boats - and the holding is reported to be poor.

Moorings

The town maintains 40 or 50 moorings for visitors inside the pond. The moorings are first-come first-served, and generally fill up on summer weekends, although the pond's flat calm waters do make rafting practical. Pick up an empty mooring when you arrive and the harbormasters will come around to collect the fee. Two private companies, Frog Pond Marine (508-992-7530) and Jenkins (508-996-9294), maintain transient moorings in the outer harbor.

History: The island was originally named Poocuohhunkkunnah (probably from the Wampanoag for “Point of departure” or “Land’s end”) by the native Wampanoag tribe. In 1602 English explorer Bartholomew Gosnold renamed the island. On March 6, 1602, Gosnold set out aboard the barque The Concord from Falmouth, England to plant a colony in the new world of America. Gosnold and his men landed near Kennebunkport, Maine, then explored Cape Cod, Martha's Vineyard, and Cuttyhunk. They established a modest fort on Cuttyhunk where they planned to harvest sassafras, a valuable commodity in Europe at the time.[2] After exploring the islands for less than a month, the men returned with The Concord to England.

In 1606 the King granted the Elizabeth Islands to the Council of New England, which dissolved in 1635. After this, they became the property of Alexander, Earl of Sterling. Sterling sold the islands to Thomas Mayhew in 1641, and in 1663 the Duke of York assumed proprietorship over them.

In 1668, Mayhew sold Cuttyhunk to Philip Smith, Peleg Sanford, and Thomas Ward of Newport, Rhode Island. In 1688, Peleg Sanford acquired his partners' rights in the island, and sold half of it to Ralph Earle of Dartmouth. He in turn immediately sold his property to his son, Ralph Jr., who became the island's first permanent English settler. He and other colonists harvested the island of all of its lumber, leaving it bare and wind-swept.

In 1693, Peleg Slocum purchased all of the holdings on Cuttyhunk, and became its sole owner. The Slocum family continued to live on Cuttyhunk for the next two hundred years. Several generations were slaveholders of Africans transported to the English colony for labor.

In 1858, William C.N. Swift, Thomas Nye, and Eben Perry bought Cuttyhunk from Otis Slocum for fifty dollars. In 1864, the town of Gosnold was finally incorporated.

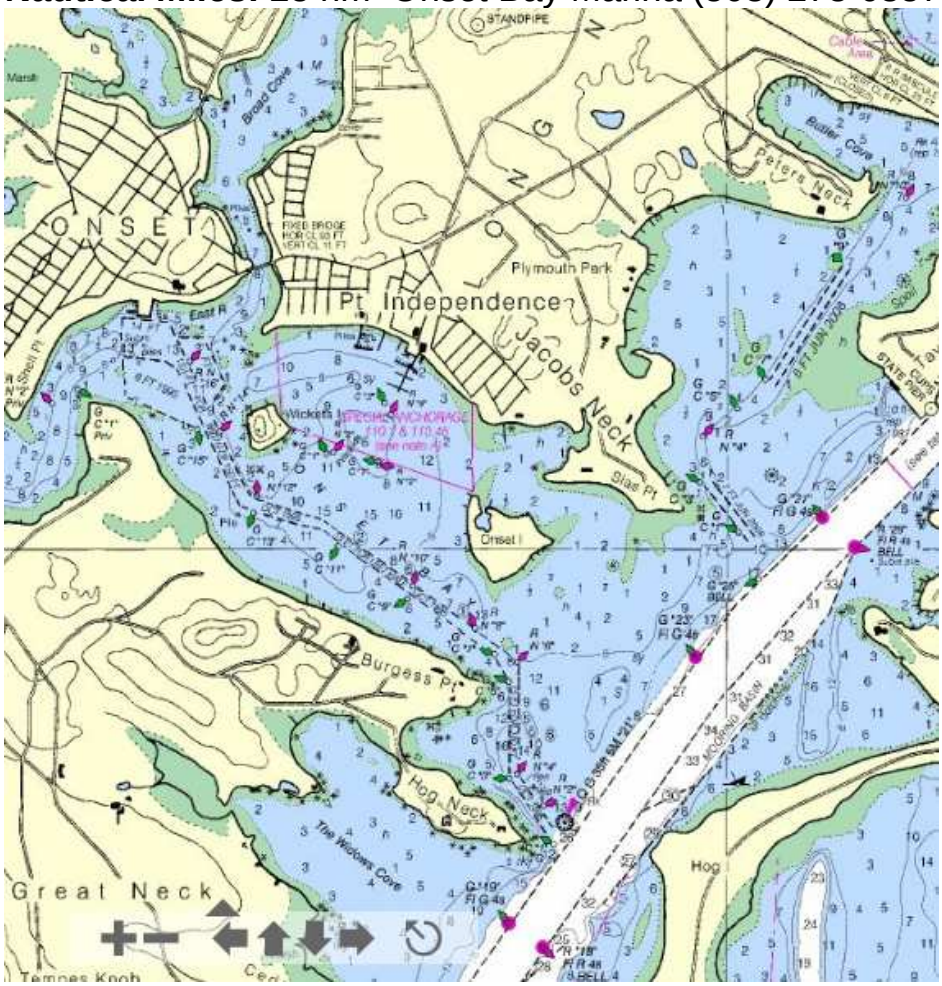
Cuttyhunk is about a mile and a half long, and three quarters of a mile wide, with a large and excellent natural harbor at the eastern end of the island. Fully half of the main part of the island is set apart as a nature preserve. It is home to a wide variety of birds, as well as deer and rabbits. Cuttyhunk has most varieties of New England's wildflowers, as well as bayberry, sweet peas, and a host of other plant life.

Two large peninsular arms extending from the main body of the island, named Canapitsit (the southern arm) and Copicut Neck (the northern arm). The shore is made up of largely of rocks, testimony to Cuttyhunk's glacial origins. Cuttyhunk is covered with rocks and stones that are elsewhere found only in the mountains of Vermont and New Hampshire.

There are three stretches of sandy beach: along the channel that leads to the harbor (Channel Beach), around the sunken barges that connect Canapitsit to the main body of land (Barges Beach), and at "Church's beach," which connects Copicut to the main island. Much of Cuttyhunk's rocky shore is bounded by steep cliffs made of rock, sand, and clay. The western end of the island is taken up by the West End Pond, much of which is currently used for shellfish farming. A monument to Bartholomew Gosnold's 1602 landing stands on a small island in the Pond.

The highest point on the island is Lookout Hill, standing at 154 feet (47 m) above sea level. The Lookout is home to one of the six (one now buried) defensive bunkers built by the United States Coast Guard in 1941 to watch the surrounding ocean for Nazi U-boats. Stripped of their observation equipment and weaponry at the end of World War II, the bunkers are now picnic areas. They offer stunning views of the island and its surrounding waters. The Coast Guard station has not been active since 1964.

Day 2 - Sunday July 31, 2011
Destination: Onset
Nautical Miles: 25 nm Onset Bay Marina (508) 273-0357 VHF CH 9



Almanac:

Sun:	Sun Rise: 0536	Sun Set: 2005
Moon:	Moon Rise: 0638	Moon Set: 2022

Tidal Information: High tide is around 0843 with a height of 3.8 feet. 1546 is low with a -0.2 feet height.

Fleet Rendezvous Time and Place: We meet at 0730 with a location approximately 0.25 miles SW of C "1E". A second rendezvous could happen around 1100. See commentary below

Commentary: This day allows each boat to determine their plans. The shorter distance allows those who wish to explore Cuttyhunk to leave later, while those who want to see Onset can leave early. The current is not

much of an issue for lower Buzzards Bay. As you approach Onset, the current out of the canal will adversely affect your boat with a low tide of 1711. The high was 1023, so the current will be pushing you back pretty hard between 1200 and 1600 hours. If your VMG is 5 knots, this trip will take about 5 hours. We suggest leaving at 0700 or 1100.

Approaches

Following the channel into Onset doesn't require much more than a careful eye on the chart and the numerous buoys. Note that the fixed green light QG "21" is a mark for the Hog Island Channel. As you head in to Onset, leave G "21" to starboard and green can "1" to port.

Be sure to make plenty of allowance for whatever current is running when you turn in. Except around slack water, the Canal currents will sweep you past the entrance to Onset in a hurry.

Anchorages

There may be room to anchor outside the moorings between Wickets Island and Onset Island.

Moorings

Onset has 3 possible sources for transient moorings. At the head of the channel, just off the Town Wharf, the town maintains 3 or 4 moorings. The Onset Dockmaster oversees them from his office on the wharf. Nearer the Canal, both the Point Independence Yacht Club and Onset Bay Marina have moorings in the bay between Wickets and Onset Islands. All the moorings are sheltered and convenient to town. Onset Bay Marina has an online reservation request form for both slips and moorings.

History: Onset was developed in the 1880s as a summer camp meeting for Spiritualists. Many of the existing cottages in Onset were built as second homes for individuals from Boston, Taunton, Brockton and other northeastern cities who gathered to hear mediums communicate with the dead. While it was run by the Spiritualists, the village was known as Onset Bay Grove.

Whether you call it Pine Point, Old Pine, Onkowam, Pine Neck, or Onset, Onset Village is rich in history. You can pick up a brochure at the Onset Bay Association office at 4 Union Avenue or the Wareham Public Library entitled "Tour the historic Victorian Village of Onset." A detailed map and description of historic sites will lead you on your own walking tour and provide you with even more history.

Onset really started to flourish in 1848 when trains arrived from Boston to carry industrial goods to market, thus introducing Bostonians to Onset. Cottages were built, hotels constructed; and as the tourist population grew, the tourists arrived daily by train, sailboat, and steamers. Onset was once a major terminus for the old side wheeler steamboat ferries. The route included New Bedford, Woods Hole, Martha’s Vineyard and Nantucket.

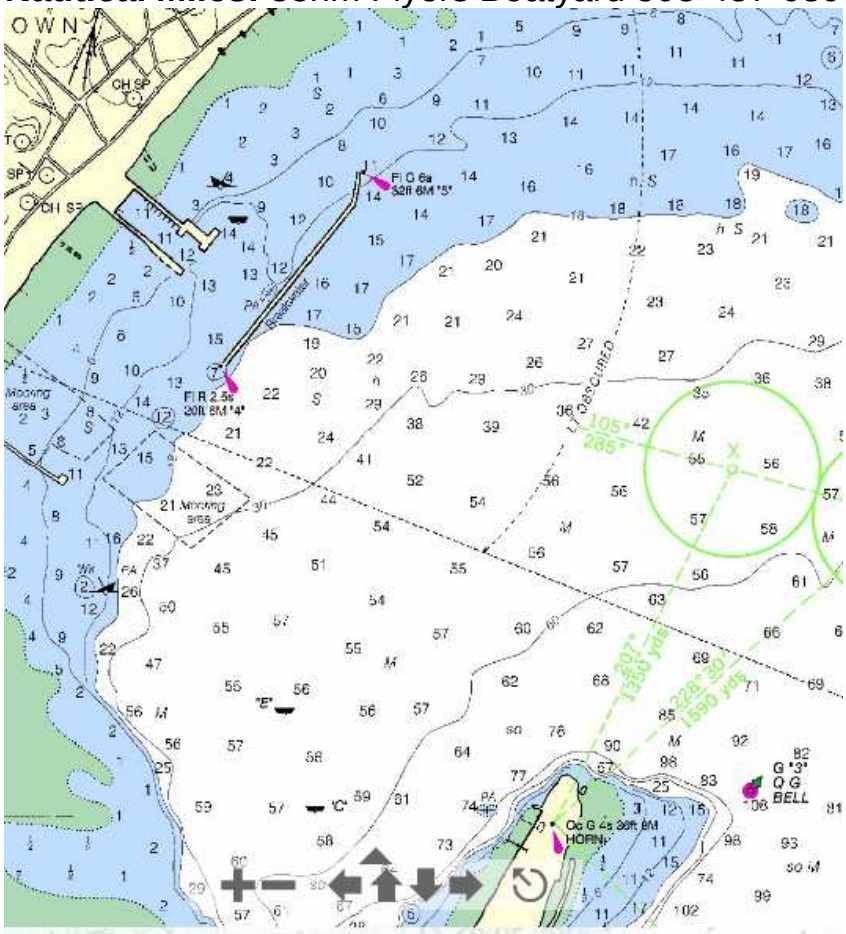
Tourists enjoyed hotels (the Oak Crest and Anchor Inn on Onset Avenue were the filming sites for the movie, "Kennedys of Massachusetts"), restaurants, theaters, stores, shops, trolley cars, and a casino where people danced to the likes of Tommy Dorsey, Cab Calloway and Duke Ellington. The bathing pavilion had the capacity to give 1,000 bathers woolen suits (word has it tourists rented the suits), comfortable dressing rooms and large Turkish towels.

To wind up the summer season, a Harvest Festival was held in the fall complete with a clambake and dancing.

Other events through the years included fireworks, illumination of the beach; and in the 1950's, bonfires on Shell Point became a July 4 tradition. Some were 50 feet high and, once ignited after the fireworks were over, burned all night.

Around 1930, with the advent of the automobile and highways opening up the Cape Cod areas, tourists began bypassing Onset. An urban revitalization coupled with the crowded Cape Cod areas and traffic congestion are causing people to rediscover Onset.

Day 3 - Monday August 1, 2011
Destination: Provincetown, MA
Nautical Miles: 35nm Flyers Boatyard 508-487-0898 x205 VHF - 11



Almanac:
Sun: Sun Rise: 0537 Sun Set: 2004
Moon: Moon Rise: 0752 Moon Set: 2052

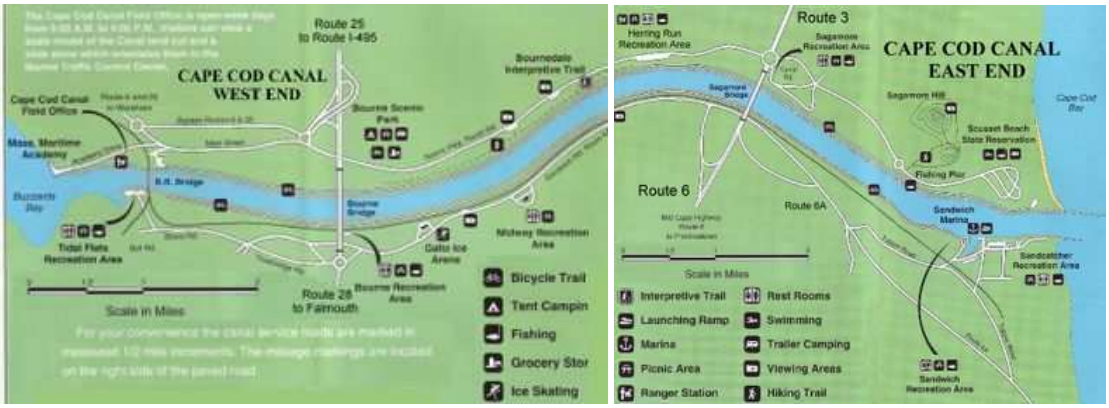
Tidal Information: Favorable Current in Canal from 0504 to 1135 with a max current of 4.7 knots. The high tide at Provincetown is 1324 with a height of 10 feet, low is 1930 with a height of -0.5. With a 10 foot swing in tidal height one should tie your dingy only to floating docks or move way up on a beach.

Fleet Rendezvous Time and Place: 0800 in the Onset Harbor. The channel is narrow and winding. The fleet should get underway and fall in line to exit toward the canal. It will take about 1 hour to reach the canal

Commentary: We need to time this one correctly for favorable current through the canal. This departure time should give us 3-4 knots of favorable current. The canal is about 8 nm long and expect to make it though in about an hour. Then we have 23 nm to Provincetown. A VMG of 5 knots, gives us about 5 hours of sailing with an anticipated arrival around 1500 into Provincetown. Once out of the canal keep a lookout for whales and any other wildlife. If you spot some please announce it to the fleet on VHF CH 72.

Flyers has unlimited launch service 0800 to 2000, after hour fee $2 per head

Happy Hour: To celebrate our long journey there will be a happy hour at 1730. *Patriot* will be hosting.



Navigation

Approaches: The Mayflower's passengers observed of Provincetown: "The bay is so round and circling that before we could come to anchor we went round all the points of the compass." {Mourt p16}

The unmistakable fist of sand that the Pilgrims encountered at the end of Cape Cod still forms a winding entrance to the harbor, offering greater protection around every turn.

At the center of this whorl is the Pilgrim Monument, 348 feet above high tide and visible over twenty miles away. A series of bearings on the monument is a reliable way to measure your progress against the coastline's succession of near-identical dunes and beaches.

From the canal to G "1" the course is 60 degrees magnetic. G "1" to G "3" its 55 degrees M. From there its a course of 323 M to the breakwater. At this point call Flyers on VHF 11 for directions to your mooring.

It's more difficult to gauge distance off shore. On both sides of the Cape near Provincetown the depth contours are abrupt and the curving shoreline is more disorienting from the water than it looks on the chart. Pay careful attention to the Shank Painter Bar. It makes out from shore over a half mile, and depths go from more than a hundred feet to barely ten in a hurry. As you aim for the bell off Wood End, the typical southwesterly can push you closer inshore than you'd like.

Anchorages

"*It is a harbor wherein a thousand sail of ships may safely ride.*"
Mourt's Relation 1622 {p 16}

"*It is one of the best harbors on the Atlantic Coast, having a sizable anchorage area in depths of 12 to 57 feet with excellent holding ground. Coasters and fishermen find protection here in gales from any direction.*"
Coast Pilot 2001{p 273}

Thousands of sail do in fact visit Provincetown every summer, but very few end up anchoring. The water of moderate depth close to town is filled with moorings, and inside the breakwater, the bottom is reported to be littered with the debris of a busy harbor. {CP 273}

Outside the breakwater the depths increase steeply. And the harbor is large, so that wherever you anchor, you'll be exposed to considerable fetch in at least two directions. Most boats that do anchor find swinging room outside the mooring field and south of the breakwater.

Moorings

The moorings directly inside the breakwater are private. The large field of transient moorings begins south of Fisherman's Wharf and runs nearly to the Coast Guard wharf. These moorings are adequately protected, but given the fetch within the harbor, they can feel a bit exposed if it's blowing anywhere from south to northeast. In a strong easterly, you'll want to get behind the breakwater.

Within this field, Provincetown Marina, Flyer's, and Provincetown Yacht and Marine all maintain guest moorings. Call when you arrive, and their launch will direct you to an appropriate mooring. On summer weekends you can try your luck, but reservations are recommended.

History: Provincetown is located at the tip of Cape Cod. The town's total area is 17.5 square miles (45 km^2), 9.7 square miles (25 km^2) of it being land and 7.8 square miles (20 km^2) of it water. The town is bordered by the town of Truro to the east, Provincetown Harbor to the southeast, Cape Cod Bay to the south and west, and Massachusetts Bay to the north. The town is

45 miles (72 km) north (by road) from Barnstable, 62 miles (100 km) by road to the Sagamore Bridge, and 115 miles (185 km) from Boston via roadway.

Nearly two-thirds of the town's land area is covered by the Cape Cod National Seashore. To the north lie the "Province Lands," the area of dunes and small ponds extending from Mount Ararat in the east to Race Point in the west, along the Massachusetts Bay shore. The Cape Cod Bay shoreline extends from Race Point to the far west to the Wood End in the south, eastward to Long Point, which points inward towards the Cape, and providing a natural barrier for Provincetown Harbor. All three points are marked by lighthouses. The town's population center extends along the harbor, south of the Seashore's lands.

The area was originally settled by the Nauset tribe, who had a settlement known as Meeshawn. Provincetown was incorporated by English settlers in 1727 after harboring ships for more than a century. Bartholomew Gosnold named Cape Cod in Provincetown Harbor in 1602.[5] In 1620, the Pilgrims signed the Mayflower Compact when they arrived at the harbor. They agreed to settle and build a self-governing community, and then came ashore in the West End.[6] Though the Pilgrims chose to settle across the bay in Plymouth, Provincetown enjoyed an early reputation for its fishing grounds. The "Province Lands" were first formally recognized by the union of Plymouth colony and Massachusetts Bay colony in 1692, and its first municipal government was established in 1714.[7] The population of Provincetown remained small through most of the 18th century.

Most of Cape Cod was created by the Laurentide Glacier between 18,000 and 15,000 years ago. However, the Provincetown Spit, i.e., the land surrounding Provincetown Harbor from High Head in North Truro through all of Provincetown, consists largely of marine deposits transported from farther up the shore during the last 6,000 years.[5]

A stone wall[6] discovered in Provincetown in 1805 is thought to have been built by Viking Thorvald Eiriksson about 1007 AD,[7] when according to Norse sagas, the keel of Ericson's ship was repaired in the harbor.[8]

Bartholomew Gosnold explored the harbor in 1602, and his mate Gabriel Archer wrote:

"The fifteenth day of May we had again sight of the land, which made ahead, being as we thought an island, by reason of a large sound that appeared westward between it and the main, for coming to the west end thereof, we did perceive a large opening, we called it Shoal Hope. Near this cape we came to anchor in fifteen fathoms, where we took great store of codfish, for which we altered the name, and **called it Cape Cod**. Here we saw sculls of herring, mackerel, and other small fish, in great abundance. This is a low sandy shoal, but without danger..."[9]

John Smith explored the harbor in 1614 and wrote:

"Cape Cod... is only a headland of high hills of sand, overgrown with shrubby pines, hurts, and such trash, but an excellent harbor for all weathers. This Cape is made by the main sea on the one side, and a great bay on the other, in form of a sickle..."[10]

Provincetown Harbor was the initial anchoring place of the Pilgrims traveling on the Mayflower in 1620, before they proceeded to Plymouth, Massachusetts. Thoreau later observed[11] that Smith's description of the harbor may have been less colored by the hardships of transoceanic troubles than the Pilgrims'. Mourt's Relation describes the harbor as,

"a good harbor and pleasant bay, circled round, except in the entrance, which is about four miles (6 km) over from land to land, compassed about to the very sea with oaks, pines, juniper, sassafras, and other sweet wood; it is a harbor wherein 1000 sail of ships may safely ride, there we relieved ourselves with wood and water, and refreshed our people, while our shallop was fitted to coast the bay, to search for an habitation: there was the greatest store of fowl we ever saw."[12]

The Mayflower held several different passengers in addition to the Pilgrims on its first transoceanic voyage. Before coming ashore at the extreme northwest corner of the harbor, the Pilgrims and other settlers signed the Mayflower Compact in the harbor on November 21, 1620.[13] Dorothy Bradford, the first wife of William Bradford, was one of the first adult Pilgrims to die in the New World. According to the only known written description of her death[14] from close to when it actually occurred, she fell overboard from the Mayflower in Provincetown Harbor on December 7, 1620 and drowned.[15] Peregrine White, the first child born to the Pilgrims in New England, was born while they were in Provincetown Harbor

Following the American Revolution, however, Provincetown grew rapidly as a fishing and whaling center.[7] The population was bolstered by a number of Portuguese sailors, many of whom were from the Azores,[8] and came to live in Provincetown after being hired to work on US ships. By the 1890s, Provincetown was booming, and began to develop a resident population of writers and artists, as well as a summer tourist industry. After the 1898 Portland Gale severely damaged the town's fishing industry, members of the town's art community took over many of the abandoned buildings. By the early decades of the 20th century, the town had acquired an international reputation for its artistic and literary output. The Provincetown Players was an important experimental theater company formed during this period. It was an example of intellectual and artistic connections to Greenwich Village in New York that began then.

The town includes eight buildings and a historic district on the National Register of Historic Places.

In the mid-1960s, Provincetown saw population growth. The town's rural character appealed to the hippies of the era; furthermore, property was relatively cheap and rents were correspondingly low, especially during the winter. Many of those who came stayed and raised families. Commercial Street gained numerous cafes, leather shops, head shops — various hip small businesses blossomed and many flourished.

By the mid-1970s a substantial number of members of the gay community began moving to Provincetown. However, homosexuality had been prevalent in Provincetown as early as the turn of the century with the introduction of the artists' colony and further accentuated by the arrival of the "beatniks" in the 1920s. Drag queens could be seen performing as early as the 1940s in Provincetown. In 1978 the Provincetown Business Guild (PBG) was formed to promote gay tourism. Today more than 200 businesses belong to the PBG and Provincetown is perhaps the best-known gay summer resort on the East Coast.

Since the 1990s, property prices have risen significantly, with numerous condo conversions, causing some residents economic hardship. The recent housing bust (starting in 2005) has so far caused property values in and around town to fall by 10 percent or more in less than a year.[9] This has not slowed down the town's economy, however. Provincetown's tourist season has expanded to the point where the town has created festivals and weeklong events throughout the year. The most established are in the summer: the Portuguese Festival and PBG's Carnival Week.

What To Do When In Provincetown (From the Web)

Provincetown Art Association and Museum: Since 1914, the Provincetown Art Association and Museum has anchored the Provincetown arts community, serving as both a collecting museum and a professional artists' association

Provincetown Theater: The Provincetown Theater continues the legacy of Eugene O'Neill and Tennessee Williams by mounting plays and musicals

Shop Therapy: The dirtiest (and I don't mean dusty) store in Provincetown is Shop Therapy, 346 Commercial St, a store with wild murals (or is it graffiti) that are filled with all manner of erotica. You'll want to wander in just for the sheer outrageousness ...

Race Point Beach: If you can get oversands and you like a quiet beautiful beach, don't miss it.

Herring Cove Beach

Expedition Whyndah Pirate Museum: Shiver your timbers with the jewels and treasures recovered by world-renowned explorer Barry Clifford.

Pilgrim Monument: This tower was built in 1910 to commemorate that landing, and a climb to the top affords one of the best views on the entire Cape.

Province Lands Visitor Center: Features an observation deck overlooking 360Â° of the surrounding heath and moors, a theater where informative introductory films are shown

Provincetown Whale Watches

Provincetown Heritage Museum: Provincetown's former role as the third largest whaling center in the world is documented in the exhibits

Day 4 - Tuesday August 2, 2011
Layday: Provincetown, MA

Almanac:
Sun: Sun Rise: 0538 Sun Set: 2003
Moon: Moon Rise: 0906 Moon Set: 2121

Activity: This is the day of for the whale watching tour. Please let Ed Doherty know if you want to attend. We are doing this as a group to get a lower rate.

Happy Hour: TBD

Day 5 - Wednesday August 3, 2011
Layday: Provincetown, MA

Almanac:
Sun: Sun Rise: 0539 Sun Set: 2003
Moon: Moon Rise: 1020 Moon Set: 2151

Activity: There will be a scavenger hunt beginning at 1000 at the town dock. This activity is to get familiar with the history of this area and participate in a special event.

Happy Hour: TBD

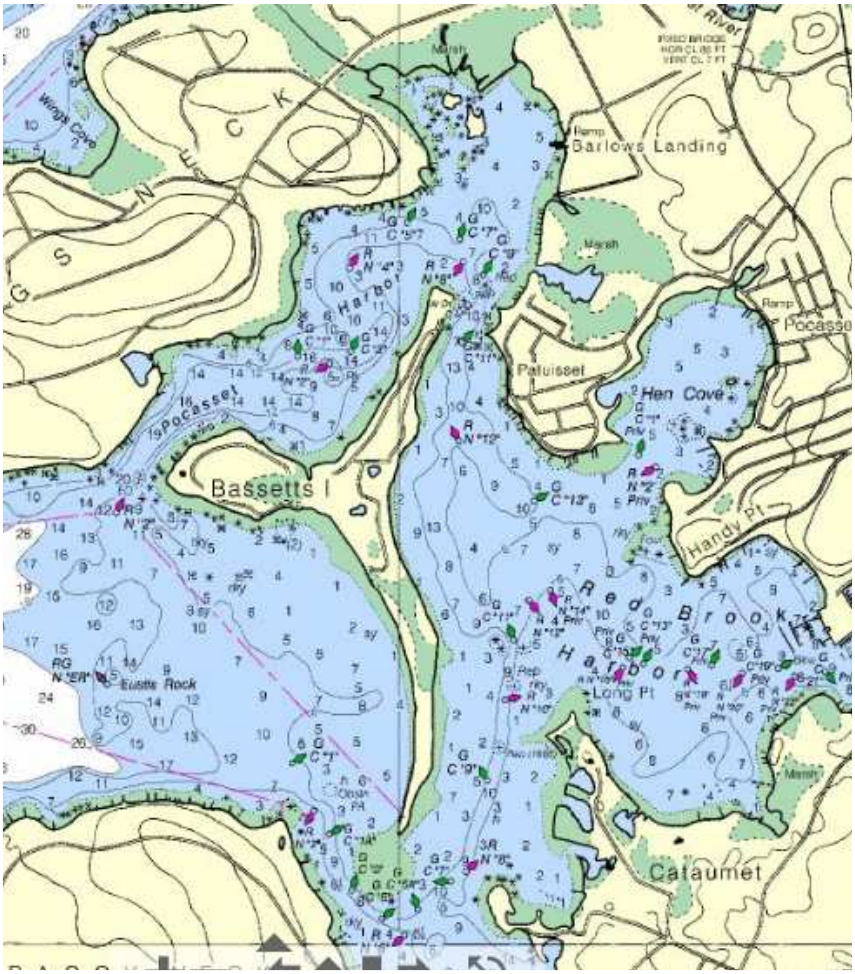
Day 6 - Thursday August 4, 2011
Layday: Provincetown, MA

Almanac:
Sun: Sun Rise: 0540 Sun Set: 2000
Moon: Moon Rise: 1134 Moon Set: 2223

Activity: This day is all yours. No activity planned during the day.

Happy Hour: TBD

Day 7 - Friday August 5, 2011
Destination: Red Brook Harbor
Parker (508) 563-9366 VHF CH 69, Kingman (508) 563-7136 VHF CH 9
Nautical Miles: 35nm



Almanac:

Sun:	Sun Rise: 0541	Sun Set: 1959
Moon:	Moon Rise: 1248	Moon Set: 2300

Tidal Information: Favorable current in the canal begins at 1440 and ends at 2041 with a max current of 4.6 knots. The high tide is around 1321 with a height of 5.1 feet. The low is 1918. Remember the depths you see to determine the time you can leave the next day. Use tide tables for Newport. High tide and low tide at Barlow's Landing in Pocasset Harbor is 25 minutes later.

Fleet Rendezvous Time: 1000 just outside Provincetown Harbor, approximately 1/2 mile SE of the Flashing Red 2.5 seconds at the east end of the breakwater.

Commentary: Using a VMG of 5 knots means about 5.0 hours of sailing to get to the canal entrance. The goal is to arrive at the east end of the canal around 1530. This will give you a favorable current of 3-4 knots. The canal is about 8 nm long, its takes 1 hour to transit. Exiting at 1630 its about 30 minutes to reach Red Brook harbor.

If draft is an issue read approaches below. We arrive about 2 hours before low. Also, remember the depths going in and determine when you can leave the following day.

Happy Hour: The fleet will likely arrive around 1700 into Red Brook Harbor. To celebrate the trip another happy hour will occur. Host boat will be announced on Channel 72.

Approaches

Red Brook and Pocasset harbors offer some of the best natural protection in Buzzards Bay. Shaped like a four-leaf clover with its stem pointing west, these harbors share a common entrance between Wings Neck to the north and Scraggy Neck to the south. The junction buoy RG N "ER" at Eustis Rock, marking the turning point to the harbors, is 5.7 miles from Onset pier, 4 miles from Megansett Harbor's town pier, and 6 miles from Ram Island in Sippican Harbor.

Bassetts Island sits smack in the center of the two harbors and, together with Scraggy Neck, protects the inner harbor area from the prevailing southwesterly winds. Pocasset Harbor is north of Bassetts Island; Red Brook Harbor is east of it, with Hospital Cove off its southern tip. Overnight anchoring requires permission of the harbormaster (VHF 9). The town of Bourne has two pumpout boats that can be reached through the harbormaster.

All marked inner channels and harbors are headway speed only. There is a 15-minute limit to tie up at town landings and floats.

From the north via the Cape Cod Canal and the Hog Island Channel, be cautious when rounding Wings Neck, giving it 500 yards of clearance. Be sure to consider the fast current from the Cape Cod Canal when navigating this area.

From the south and west, the approach to Pocasset and Red Brook would be straightforward were it not for Southwest Ledge and Seal Rocks, which extend to R N "2," about .9 miles west of Scraggy Point. To clear these rocks, continue northeast in the Cleveland Ledge Channel until you are more than 1 mile north of R "8" Fl R 4s. This gives you clearance of Southwest Ledge as you turn east into the harbor.

CAUTION: Avoid Southwest Ledge and Seal Rocks. While they are well marked, the buoys don't really identify the end of the danger zones. Give these a berth of at least 500 yards, and do not cut inside Southwest Ledge. Also check the direction of the fast currents from the Cape Cod Canal so you don't get pushed into the rocks.

As you enter the outer harbor heading toward Bassetts Island, give RG N "ER" plenty of room. This junction buoy identifies Eustis Rock, which has a 5-foot spot just east of the buoy.

At RGN "ER" you have a pick of two entrance channels north and south of Bassetts Island, both boasting deep water. The north channel, with an 8-foot controlling depth, takes you through Pocasset Harbor. The south channel (controlling depth at 6 feet) leads you directly to Red Brook Harbor. Local boaters recommend the latter, because Scraggy Neck protects the south channel from southwest currents and winds—those waves can chase you clear into Pocasset Harbor. The south channel is also a little less convoluted and confusing.

At the south end of the south channel is Hospital Cove, an excellent anchorage, where you'll find 8 feet of water at mean low. Anchoring space may be at a premium, since this is a popular area for many boaters from surrounding harbors. You need permission from the harbormaster (VHF 9) to anchor overnight. When taking the channel, honor the nuns and cans; there is a wide shoal extending south from Bassetts Island.

Red Brook Harbor: The south channel into Red Brook Harbor carries depths of 6 feet. Stay mid-channel to avoid the rocky shoreline and the shoal extending south of Bassetts Island. Once you round the south side of Bassetts Island, follow the channel through its narrowest stretch along the island's eastern shore. Make sure to go north of the red nuns west of Handy Point before turning toward Hen Cove or Red Brook Harbor.

The marinas have slips and moorings available for transients, as well as gas dock and pumpout. **Launch service is free with a mooring rental**; there's a small fee if you drop your own hook. You may find some room to anchor east-southeast of Long Point in 7 feet of water. You can come ashore with your dinghy at the town landing south of Kingman's.

Another View Point...

The entrance to Red Brook is not especially difficult, but it is intricate. There are two channels; one passes to the north of Bassetts Island and the other to the south. Both are narrow and twisting, but are well marked with frequent government and occasional private buoys. Controlling depth in the south channel is reported to be 7 feet on an average low tide, but with various obstructions (both charted and rumored) strewn throughout. It is frequently used by local boats, although there's little margin for an unfamiliar navigator to experiment.

Bottom line: The north channel is wider and straighter, with 6 feet if you follow the buoys and avoid a drain tide. A boat drawing 7 should not try either channel on the back end of a falling tide. And with the 4 foot tidal range, a boat drawing 8 feet should be able to get in and out the north channel if the tide is halfway up and rising. Once inside you'll find adequate depth at the moorings and slips.

Again, the entrance to Red Brook is not difficult - hundreds of keelboats are moored here - but a navigator unfamiliar with the harbor who tried to enter without proper charts and good daytime visibility would be flirting with a grounding.

Anchorages

Hospital Cove, off the south channel, is well-sheltered with depths of 7 to 10 feet. If it's too crowded, the narrow finger of deep water just east of Bassetts Island is a popular alternative. South of nun "12" it's unmarked, so it requires a little groping around with the depthsounder. More convenient, though less protected, is the large open cove between the south end of Bassetts Island and Scraggy Neck. This outer anchorage is more useful as a short stop before or after transiting the Canal than as a cruising destination. Finally, in the little cove just inside the northern entrance there is typically room to anchor a boat or two on the edge of the mooring field.

Moorings & Slips

Both Parker's and Kingman have moorings and launch service. Parker's is a 3 generation, family-run yard that has for years specialized in sailboats. Kingman is a full-service marina with gift shop and restaurant. Their extensive float system makes them the primary source for slips in Red Brook, though Parker's may also have tie-up space available.

As you enter, Kingman's moorings are to the left (north) of the fairway and Parker's to the right.

History: The villages of Pocasset, Red Brook, and Cataumet—all part of the town of Bourne—are beautiful summer oases nestled along the eastern shore of Buzzards Bay. Many cruisers planning to transit the Cape Cod Canal stop in these popular harbors, often lingering a day or two more than they originally planned.

The harbors are also a handful of miles away from the expansive Massachusetts Military Reservation. Among the many operations there you'll fi nd the Coast Guard's Air Station Cape Cod. Don't be surprised if you hear the thunderous whirr of helicopters overhead, as they are dispatched from here to cover the waters from the Canadian border to New York City.

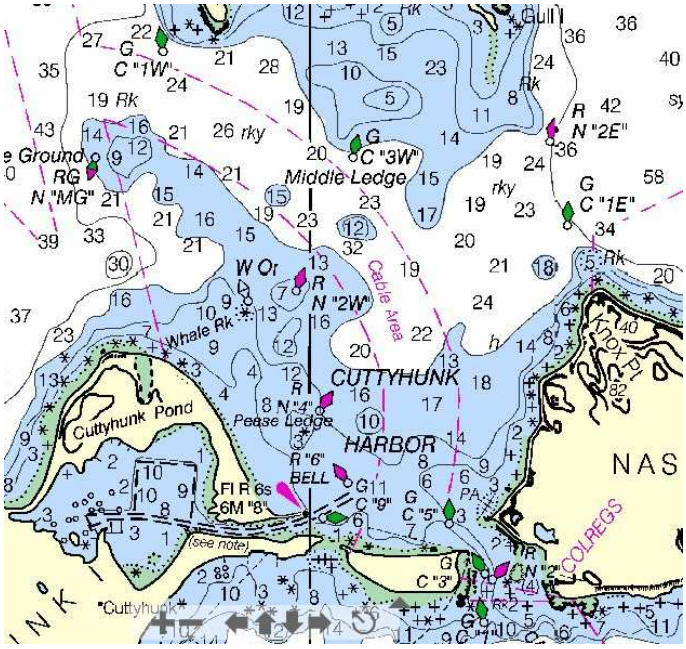
A whirr of a different sort dominated the mid 19th century when Perry Macomber had a windmill that sharpened lances and harpoons for New Bedford whalers. His ambitions stretching eastward, Macomber saw the market rising for grinding grain on Cape Cod, but his mill was in Fairhaven. If only it were on the east shore of Buzzards Bay, he

thought.

On a cold winter day in 1853, Macomber slid the mill by oxen across the frozen Buzzards Bay to Red Brook Estate, where it became the largest wind-powered grist mill on Cape Cod. Business boomed until a storm damaged the mill arms in 1869. It never operated again, but it was restored in 1906 for its historical value and moved again to its present site south of Red Brook Harbor. The mill is now part of a private home.

In the 1870s, the railroad replaced passenger packet ships on the east shore of the Bay. Flour shipped in from the Midwest supplanted the product of local grist mills, and thus began the area's decline. It wasn't until the turn of the century, when Bourne became a popular summer community that the area's economy got back on its feet. Today, the villages of Pocasset, Red Brook, and Cataumet, all part of the town of Bourne, are beautiful summer oases.

Day 8 - Saturday August 6, 2011
Destination: Cuttyhunk
Nautical Miles: 20nm



Almanac:

Sun:	Sun Rise: 0542	Sun Set: 1958
Moon:	Moon Rise: 1400	Moon Set: 2341

Tidal Information: To leave Red Brook Harbor, the low is at 0714 and high tide is 1418. This may impact your departure Current is slack in Buzzards Bay around 9 am and then will be against you for most of the day until 1500. Its not a big factor and should not affect your departure time. Reducing your average boat speed by 1/2 knot should help you determine your arrival time into Cuttyhunk. High Tide at Cuttyhunk is at 1522 with a height of 4.2 feet. Low tide is at 2138.

Fleet Rendezvous Time: 1030 just outside Red Brook Harbor, RG "N" just west of Eustis Rock

Commentary: The Buzzards Bay Regatta is going on, so be aware of race courses that might impact your routing.

Happy Hour: TBD

Day 9 - Sunday August 7, 2011
Destination: Jamestown
Nautical Miles: 23nm

Almanac:

Sun:	Sun Rise: 0543	Sun Set: 2057
Moon:	Moon Rise: 1508	Moon Set: 0030 Aug 8th

Tidal Information: Around 3pm is high tide with max flood around 1200.

Fleet Rendezvous Time: At skippers discretion

Commentary: As there is not a set departure time, we encourage skippers to pair up with other boats with similar sailing/motoring characteristics.

Fleet Disbands: Upon Arrival at Narragansett Bay "R6" passing Castle Hill Lighthouse.

Visible Satellites for the Cruise

We have ideal opportunity to see satellites pass overhead. The moon will not be out and some nights up to 50 are visible. The list of satellites for the cruise is presented in a evening report.

How to read the Satellite Report

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	**Time**	Alt.	Az.	**Time**	Alt.	Az.	**Time**	Alt.	Az.
Cosmos 1408	2.9	20:26:22	10°	S	20:30:20	85°	NW	20:34:14	10°	N

From the table above for the first satellite for Sat July 30:

Name = the satellite.
MAG = Brightness. The **lower** the number the brighter the satellite. 1.5 is much brighter than 3.5, and thus easier to pick out.

At **20:26** the satellite would first become visible **10 degrees** above the horizon and you need to look to the **SOUTH**. It will move from the south to the **NORTHWEST** with a maximum altitude of **85 degrees** above the horizon (or almost directly above you). It will continue from the NW to the **NORTH** and finally disappear when its **10 degrees** above the horizon.

The time is exact, but our timepieces are likely to have some error. .

What to Look For: A satellite does not blink, airplanes do. Its one color, white and moves in a very steady motion. In the example above it takes 8 minutes to move from horizon to horizon. Look in the general direction at the right time and pick a spot to stare at. This light enters that spot or moves against the background of the stars.

To increase your odds have a several set of "eyes" looking for them. You can also have several drinks while looking for them. Both seem to yield equal results.

At the very end of this document is a 'Whole Sky Chart" to know what stars you are looking at.

Saturday July 30 Evening Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
Cosmos 1408	2.9	20:26:22	10°	S	20:30:20	85°	NW	20:34:14	10°	N
COSMOS 2428	2.7	20:28:34	10°	S	20:34:13	67°	ESE	20:39:55	10°	NNE
Cosmos 1184 Rocket	3.2	20:33:10	10°	S	20:36:57	63°	E	20:40:40	10°	NNE
ADEOS II	2.1	20:40:07	10°	SSE	20:45:22	81°	ENE	20:50:41	10°	N
Cosmos 2263 Rocket	2.5	20:46:44	10°	NNW	20:52:12	52°	ENE	20:57:31	11°	SE
Cosmos 2360 Rocket	2.2	20:52:32	10°	SSW	20:58:11	84°	ESE	21:03:55	10°	NNE
Abrixas rocket	3.4	20:57:11	10°	WNW	21:00:55	45°	SW	21:04:09	13°	SE
CZ-2C R/B	3.5	21:00:50	10°	NNE	21:05:18	37°	E	21:09:55	10°	SSE
Cosmos 1975	3	21:02:48	10°	S	21:06:50	56°	E	21:10:53	10°	NNE
Cosmos 1939	3	21:05:50	10°	SSE	21:09:20	76°	ENE	21:12:52	10°	N
Cosmos 2237 Rocket	3.3	21:08:06	12°	SSE	21:12:04	23°	E	21:16:27	10°	NE
Rosat	2.5	21:18:35	10°	SW	21:21:13	67°	SE	21:23:54	10°	ENE
USA 129	2.3	21:19:22	18°	S	21:21:00	66°	W	21:23:22	10°	NNW
CZ-4C R/B	3.2	21:20:22	12°	S	21:23:37	73°	WSW	21:27:05	10°	NNW
Lacrosse 5	2	21:26:08	10°	SSW	21:30:57	48°	SE	21:35:47	10°	NE
Cosmos 2219 Rocket	3.4	21:26:45	19°	ESE	21:28:19	22°	E	21:32:30	10°	NE
IGS 1B	2	21:30:28	27°	ESE	21:31:45	40°	ENE	21:34:59	10°	N
CZ-4C R/B	2.9	21:49:15	25°	SSE	21:51:34	33°	ESE	21:56:55	10°	NE
CZ-4B R/B	1.7	21:50:23	37°	SE	21:51:37	63°	E	21:55:36	10°	N
Cosmos 1844 Rocket	3.3	21:53:23	10°	NNW	21:58:41	42°	ENE	22:01:03	28°	ESE
Cosmos 2278 Rocket	2.2	22:00:48	10°	NNW	22:06:27	69°	ENE	22:08:49	36°	SE

Cosmos 1763 Rocket	3.5	22:10:56	10°	NNW	22:16:13	84°	WSW	22:18:16	39°	SSE
Terra	2.4	22:12:29	36°	ESE	22:13:36	43°	ENE	22:18:05	10°	N
CZ-2D R/B	2.2	22:21:16	48°	SSE	22:22:35	79°	ENE	22:27:23	10°	N
H-2A R/B	3.1	22:25:03	47°	SSW	22:25:59	62°	WSW	22:30:00	10°	NNW
Cosmos 2333 Rocket	2.6	22:26:33	41°	ESE	22:26:57	41°	ESE	22:32:16	10°	NE
Cosmos 1867	3.5	22:32:52	10°	NW	22:38:21	83°	WSW	22:39:35	55°	SSE
ERS-2	2.8	22:39:28	61°	SE	22:40:15	75°	ENE	22:45:08	10°	N
Cosmos 1633 Rocket	3.4	22:42:19	10°	N	22:46:29	51°	ENE	22:46:29	51°	ENE
SPOT 5	3.1	22:42:35	52°	S	22:43:55	85°	WSW	22:49:22	10°	NNW
Meteor 2-10 Rocket	3.4	22:48:38	10°	NNW	22:53:38	78°	W	22:54:27	64°	SSW
Cosmos 2237 Rocket	3	22:50:16	10°	SW	22:55:46	50°	WNW	23:01:17	10°	NNE
SL-16 R/B	2.1	22:51:47	41°	SSW	22:53:47	86°	WSW	22:59:38	10°	NNE
Sich 1	3.3	23:05:46	10°	N	23:09:49	66°	NNE	23:09:49	66°	NNE
H-2A R/B	2.6	23:07:06	45°	E	23:07:28	46°	ENE	23:12:28	10°	N
Cosmos 2219 Rocket	2.8	23:08:24	23°	SW	23:11:50	53°	WNW	23:17:23	10°	NNE
Lacrosse 5	3.4	23:09:21	10°	W	23:13:57	35°	NNW	23:18:34	10°	NNE
ALOS	3.4	23:18:26	34°	WSW	23:18:53	35°	W	23:23:13	10°	NNW
CZ-4C R/B	3.3	23:34:19	10°	WSW	23:39:55	44°	NW	23:45:49	10°	

Sunday July 31 Evening Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
Cosmos 1812	3.4	20:26:21	10°	N	20:30:15	40°	ENE	20:34:07	10°	SSE
Cosmos 405 Rocket	3.4	20:27:36	10°	N	20:31:22	38°	ENE	20:35:02	10°	SE
Cosmos 2263 Rocket	2.6	20:30:16	10°	NNW	20:35:41	48°	ENE	20:41:06	10°	SE
Lacrosse 5	2.8	20:32:31	10°	S	20:36:35	25°	ESE	20:40:40	10°	ENE
FREGAT/IRIS	3.1	20:35:58	10°	SSE	20:39:30	66°	ENE	20:43:06	10°	N
Cosmos 2360 Rocket	2.2	20:37:06	10°	SSW	20:42:45	79°	ESE	20:48:28	10°	NNE
SL-16 R/B	3.3	20:44:40	10°	N	20:50:43	57°	WNW	20:56:43	10°	SSW

Cosmos 2237 Rocket	3.3	20:53:14	10°	SSE	20:57:30	22°	E	21:01:47	10°	NE
IGS 1B	3.4	20:55:16	11°	ESE	20:57:04	15°	ENE	20:59:06	10°	NNE
CZ-2C R/B	2.5	21:03:58	10°	SSE	21:09:00	87°	SSE	21:14:06	10°	NNW
Cosmos 1975	2.8	21:07:36	10°	S	21:11:44	81°	E	21:15:51	10°	N
Cosmos 2219 Rocket	3.5	21:09:38	15°	SE	21:12:14	20°	E	21:16:13	10°	NE
CZ-4C R/B	2.9	21:10:00	12°	SSE	21:13:10	79°	E	21:16:44	10°	N
USA 129	2.7	21:24:20	19°	S	21:25:47	52°	WSW	21:28:13	10°	NNW
Cosmos 1844 Rocket	3.4	21:36:31	10°	N	21:41:45	39°	ENE	21:44:34	24°	ESE
CZ-4B R/B	2.2	21:39:23	31°	SE	21:40:48	46°	ENE	21:44:38	10°	N
Cosmos-2242	2.9	21:43:53	20°	S	21:46:45	73°	E	21:51:05	10°	NNE
Cosmos 2278 Rocket	2.3	21:46:27	10°	NNW	21:52:05	67°	ENE	21:54:54	30°	SE
Cosmos 2228 Rocket	3.3	21:54:58	35°	SSE	21:56:32	52°	E	22:00:55	10°	NNE
Cosmos 1842 Rocket	3.4	22:00:47	30°	S	22:02:56	82°	E	22:07:19	10°	N
CZ-2D R/B	2.6	22:02:29	36°	ESE	22:04:00	50°	ENE	22:08:35	10°	N
Thor Agena Rocket	3.5	22:05:10	34°	SSE	22:07:29	81°	ENE	22:12:44	10°	NNW
Cosmos 2333 Rocket	2.6	22:13:43	38°	SE	22:14:41	41°	ESE	22:20:00	10°	NE
Lacrosse 5	2.5	22:14:11	10°	WSW	22:19:08	57°	NW	22:24:07	10°	NE
Envisat	2.9	22:16:57	41°	SSE	22:18:46	87°	E	22:23:54	10°	NNW
CZ-4C R/B	2.2	22:19:12	10°	SSW	22:25:15	75°	E	22:31:08	10°	NE
ALOS	2.4	22:20:40	49°	ESE	22:21:42	61°	ENE	22:26:20	10°	N
SPOT 5	3.2	22:23:07	44°	SE	22:24:41	66°	ENE	22:30:02	10°	N
Meteor 2-10 Rocket	3.3	22:24:46	10°	N	22:29:51	74°	E	22:30:54	55°	SE
H-2A R/B	3.2	22:26:23	48°	SSW	22:27:14	60°	W	22:31:13	10°	NNW
IGS 1B	3.1	22:28:55	26°	WSW	22:29:35	29°	W	22:32:36	10°	NW
Cosmos 1680 Rocket	3.4	22:29:22	10°	NNW	22:34:39	83°	WSW	22:35:54	53°	S
IDEFIX/ARIANE 42P	2.7	22:34:42	42°	S	22:36:26	68°	W	22:41:36	10°	NNW
Cosmos 2237 Rocket	2.9	22:35:38	10°	SW	22:41:10	52°	WNW	22:46:43	10°	NNE
H-2A R/B	3.5	22:36:57	25°	E	22:37:48	26°	ENE	22:42:04	10°	N
SL-16 R/B	2.1	22:37:10	30°	SSW	22:40:07	89°	NE	22:45:49	10°	NNE
UARS	3.5	22:42:57	10°	NNE	22:43:11	10°	NNE	22:43:11	10°	NNE
Cosmos 1689 Rocket	2.9	22:43:47	64°	WNW	22:43:47	64°	WNW	22:47:13	10°	NNW

Cosmos 2219 Rocket	2.7	22:51:16	16°	SW	22:55:41	57°	WNW	23:01:17	10°	NNE
IGS 1A	2.7	22:52:39	55°	NNW	22:52:39	55°	NNW	22:55:34	10°	NNW
Terra	1.8	22:55:49	66°	SW	22:56:11	71°	WSW	23:01:02	10°	NNW
Cosmos 2221	3.2	22:59:17	45°	NE	22:59:17	45°	NE	23:02:46	10°	NNE
Cosmos 1633 Rocket	3.1	22:59:54	10°	N	23:04:07	77°	NW	23:04:07	77°	NW
Cosmos 540 Rocket	3.3	23:14:11	10°	NNW	23:19:13	85°	NW	23:19:13	85°	NW
COSMOS 2406	3.5	0:10:43	59°	NE	0:10:43	59°	NE	0:15:25	10°	NNE
Cosmos 2369 Rocket	2.6	0:15:47	10°	NNW	0:21:10	56°	NE	0:21:10	56°	NE
H-2A R/B	3	0:17:40	40°	W	0:17:40	40°	W	0:22:01	10°	NNW
Cosmos 1943	3.4	0:43:37	68°	N	0:43:37	68°	N	0:48:34	10°	NNE

Monday August 1 Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
Cosmos 2360 Rocket	2.2	20:21:40	10°	SSW	20:27:19	75°	ESE	20:33:00	10°	NNE
Cosmos 1812	3.2	20:24:02	10°	N	20:28:01	46°	E	20:31:58	10°	SSE
Cosmos 405 Rocket	3.2	20:25:24	10°	N	20:29:15	45°	ENE	20:33:01	10°	SSE
Helios 1B	3.3	20:26:16	10°	S	20:30:38	69°	WSW	20:35:02	10°	NNW
Cosmos 2237 Rocket	3.4	20:38:47	10°	SSE	20:42:57	21°	E	20:47:07	10°	NE
CZ-4C R/B	3.1	20:59:39	11°	SSE	21:02:52	56°	ENE	21:06:18	10°	N
CZ-4C R/B	3.2	21:05:54	10°	SSE	21:10:42	27°	ESE	21:15:39	10°	NE
Cosmos 1975	3.1	21:12:30	10°	SSW	21:16:35	72°	W	21:20:45	10°	N
Cosmos 841 Rocket	3.5	21:12:39	10°	NNW	21:17:51	77°	ENE	21:22:02	16°	SSE
Lacrosse 5	1.8	21:19:27	10°	SW	21:24:31	82°	SE	21:29:33	10°	NE
COS B Rocket	3.4	21:25:52	25°	ENE	21:25:52	25°	ENE	21:27:50	10°	NNE
ARGOS	3.2	21:26:16	14°	SSE	21:31:06	88°	WNW	21:36:32	10°	NNW
CZ-4B R/B	2.6	21:28:23	24°	ESE	21:29:57	34°	ENE	21:33:36	10°	N
USA 129	3.2	21:29:16	19°	SSW	21:30:38	41°	W	21:33:02	10°	NNW

Cosmos 2278 Rocket	2.3	21:32:06	10°	NNW	21:37:44	64°	ENE	21:41:01	25°	SE
CZ-2D R/B	3.2	21:43:41	25°	ESE	21:45:26	33°	ENE	21:49:38	10°	N
CZ-2C R/B	3.2	21:52:17	10°	N	21:57:05	68°	WNW	22:02:06	10°	SSW
IGS 1B	1.3	21:53:42	47°	SSE	21:54:37	87°	NE	21:58:00	10°	N
Terra	2.8	22:00:16	29°	E	22:01:27	33°	ENE	22:05:41	10°	N
Cosmos 2333 Rocket	2.6	22:00:41	33°	SE	22:02:25	41°	ESE	22:07:44	10°	NE
IDEFIX/ARIANE 42P	2.6	22:06:43	38°	SE	22:08:44	68°	ENE	22:13:53	10°	N
Cosmos 2228 Rocket	3.3	22:17:56	31°	SSW	22:20:05	71°	W	22:24:34	10°	N
Cosmos 2237 Rocket	2.9	22:21:01	10°	SW	22:26:34	54°	WNW	22:32:08	10°	NNE
SL-16 R/B	2.1	22:22:12	20°	SSW	22:26:10	86°	SSE	22:32:01	10°	NNE
Cosmos 1689 Rocket	2.6	22:24:36	68°	ENE	22:24:36	68°	ENE	22:28:09	10°	N
H-2A R/B	3.2	22:27:43	48°	SW	22:28:28	58°	W	22:32:27	10°	NNW
IGS 1A	2.8	22:29:06	43°	NE	22:29:06	43°	NE	22:32:06	10°	N
Cosmos 2219 Rocket	2.6	22:34:00	10°	SW	22:39:33	61°	WNW	22:45:11	10°	NNE
ERS-2	2.8	22:41:28	66°	SE	22:42:04	78°	ENE	22:46:57	10°	N
UARS	3.4	22:50:12	10°	NNW	22:50:51	14°	N	22:50:51	14°	N
CZ-4C R/B	3.1	22:53:07	10°	SW	22:58:51	52°	NW	23:04:52	10°	NNE
ALOS	2.8	23:01:39	50°	WSW	23:02:06	52°	W	23:06:43	10°	NNW
BREEZE-M DEB (TANK)	3.4	23:07:46	10°	WNW	23:18:49	83°	SSW	23:19:24	73°	SE
Cosmos 2221	2.9	23:15:59	64°	NNW	23:15:59	64°	NNW	23:19:50	10°	N
Terra	3.4	23:39:09	26°	W	23:39:11	26°	W	23:43:11	10°	NW
H-2A R/B	2.2	23:47:31	74°	NW	23:47:31	74°	NW	23:52:22	10°	NNW
COSMOS 2406	3.5	23:59:44	61°	NE	23:59:44	61°	NE	0:04:29	10°	NNE
Cosmos 2369 Rocket	2.6	0:00:41	10°	NNW	0:06:05	53°	NE	0:06:05	53°	NE
Cosmos 1943	3.4	0:29:05	67°	N	0:29:05	67°	N	0:33:58	10°	NNE

Tuesday August 2, 2011 Evening Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
Cosmos 1812	3.1	20:21:43	10°	N	20:25:46	54°	E	20:29:47	10°	SSE
Cosmos 405 Rocket	3	20:23:13	10°	N	20:27:09	54°	ENE	20:30:58	10°	SSE
Cosmos 2237 Rocket	3.4	20:24:20	10°	SE	20:28:23	20°	E	20:32:26	10°	NE
Lacrosse 5	2.2	20:25:15	10°	SSW	20:30:00	44°	SE	20:34:47	10°	ENE
Cosmos 1939 Rocket	3.4	20:38:55	10°	SE	20:42:35	40°	ENE	20:46:22	10°	N
ADEOS II	2.6	21:03:43	10°	S	21:08:55	62°	W	21:14:09	10°	NNW
ARGOS	3.2	21:07:53	12°	SSE	21:12:52	64°	ENE	21:18:16	10°	N
CZ-2C R/B	2.5	21:08:30	10°	SSE	21:13:35	83°	WSW	21:18:34	10°	NNW
CZ-4B R/B	3.1	21:17:24	19°	ESE	21:19:07	26°	ENE	21:22:30	10°	NNE
Cosmos 2278 Rocket	2.3	21:17:45	10°	NNW	21:23:22	62°	ENE	21:27:11	21°	SE
IGS 1B	2.6	21:18:28	22°	ESE	21:19:45	28°	ENE	21:22:42	10°	NNE
Cosmos 1939	3.2	21:18:43	13°	S	21:21:46	71°	WSW	21:25:25	10°	NNW
CZ-2C R/B	2.9	21:28:09	10°	NNE	21:33:00	71°	E	21:38:05	10°	S
CZ-4C R/B	2.3	21:38:19	10°	SSW	21:44:05	62°	ESE	21:50:05	10°	NE
IDEFIX/ARIANE 42P	3.3	21:38:44	25°	ESE	21:41:07	38°	ENE	21:45:54	10°	N
COS B Rocket	2.1	21:41:58	62°	ENE	21:41:58	62°	ENE	21:44:21	10°	N
Cosmos 2333 Rocket	2.6	21:47:21	25°	SSE	21:50:09	41°	ESE	21:55:28	10°	NE
ALOS	2.9	22:03:54	35°	ESE	22:05:01	41°	ENE	22:09:27	10°	N
Cosmos 1689 Rocket	3.3	22:05:24	38°	ENE	22:05:28	38°	ENE	22:08:53	10°	N
Cosmos 2237 Rocket	2.8	22:06:24	10°	SW	22:11:58	57°	WNW	22:17:34	10°	NNE
SL-16 R/B	2.1	22:06:47	10°	SSW	22:12:30	85°	ESE	22:18:13	10°	NNE
Lacrosse 5	3.4	22:08:16	10°	WSW	22:12:56	37°	NW	22:17:37	10°	NNE

Cosmos 2219 Rocket	2.5	22:17:50	10°	SSW	22:23:25	66°	WNW	22:29:05	10°	NNE
H-2A R/B	3.3	22:29:03	48°	SW	22:29:43	56°	W	22:33:40	10°	NNW
Terra	1.7	22:43:36	74°	SSE	22:44:04	86°	ENE	22:48:49	10°	NNW
Envisat	3.5	22:43:53	40°	SSW	22:45:16	53°	W	22:50:15	10°	NNW
CZ-2D R/B	3.1	22:59:38	41°	WSW	23:00:17	43°	W	23:04:48	10°	NNW
H-2A R/B	2.3	23:17:22	56°	ENE	23:17:22	56°	ENE	23:22:25	10°	N
Cosmos 2369 Rocket	2.7	23:45:35	10°	NNW	23:51:02	51°	ENE	23:51:02	51°	ENE
COSMOS 2406	3.4	23:48:42	63°	NE	23:48:42	63°	NE	23:53:33	10°	NNE
Cosmos 1943	3.4	0:14:31	67°	NNE	0:14:31	67°	NNE	0:19:22	10°	NNE

Wednesday August 3, 2011 Evening Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
Cosmos 405 Rocket	2.8	20:21:04	10°	N	20:25:06	66°	E	20:28:53	10°	SSE
CZ-2C R/B	3.2	20:22:16	10°	SE	20:26:50	36°	ENE	20:31:19	10°	N
CZ-4C R/B	3.4	20:25:31	10°	SSE	20:29:51	22°	ESE	20:34:18	10°	ENE
SL-16 R/B	3	20:33:46	10°	N	20:39:54	69°	WNW	20:46:00	10°	SSW
ADEOS II	2.1	20:38:13	10°	SSE	20:43:28	79°	ENE	20:48:47	10°	N
Cosmos 1939 Rocket	3.3	20:43:05	10°	SE	20:46:51	45°	ENE	20:50:41	10°	N
Cosmos 1939	3.4	20:51:37	10°	SSE	20:54:59	47°	ENE	20:58:26	10°	N
Cosmos 2278 Rocket	2.4	21:03:24	10°	NNW	21:09:00	59°	ENE	21:13:24	16°	SE
CZ-2C R/B	3.4	21:04:14	10°	NNE	21:08:52	41°	E	21:13:41	10°	S
CZ-4B R/B	3.4	21:06:24	15°	ESE	21:08:18	20°	ENE	21:11:19	10°	NNE
Lacrosse 5	2.4	21:13:10	10°	WSW	21:18:09	61°	NW	21:23:10	10°	NE
Cosmos 1763 Rocket	3.5	21:15:07	10°	NNW	21:20:26	79°	ENE	21:24:31	17°	SSE
Cosmos 2228 Rocket	3.4	21:26:10	20°	SSE	21:29:01	46°	E	21:33:20	10°	NNE

Cosmos 2333 Rocket	2.6	21:33:31	15°	S	21:37:53	41°	ESE	21:43:12	10°	NE
UARS	3.2	21:34:15	10°	NNE	21:34:23	10°	NNE	21:34:32	10°	NNE
Terra	3.1	21:48:02	22°	E	21:49:19	25°	ENE	21:53:12	10°	NNE
Cosmos 2237 Rocket	2.8	21:51:46	10°	SW	21:57:22	59°	WNW	22:02:59	10°	NNE
SL-16 R/B	2.1	21:52:59	10°	SSW	21:58:35	82°	SE	22:04:24	10°	NNE
COS B Rocket	3	21:58:00	46°	W	21:58:04	46°	W	22:00:30	10°	NNW
Cosmos 2219 Rocket	2.4	22:01:41	10°	SSW	22:07:17	71°	WNW	22:12:58	10°	NNE
Envisat	3	22:07:13	41°	SE	22:08:58	71°	ENE	22:14:03	10°	N
CZ-4C R/B	2.8	22:11:59	10°	SW	22:17:48	63°	NW	22:23:54	10°	NNE
Cosmos 1633 Rocket	3.2	22:15:11	10°	N	22:19:35	56°	E	22:19:56	54°	E
Cosmos 44	3.4	22:16:36	10°	NNW	22:21:44	68°	NE	22:22:44	53°	ESE
IGS 1B	2.4	22:16:53	38°	SW	22:17:24	42°	W	22:20:41	10°	NNW
H-2A R/B	3.4	22:30:22	48°	SW	22:30:57	53°	W	22:34:53	10°	NNW
CZ-2D R/B	2.4	22:40:49	58°	SSW	22:41:29	69°	WSW	22:46:13	10°	NNW
CZ-4B R/B	3.3	22:41:40	28°	WSW	22:42:22	30°	W	22:45:57	10°	NNW
Sich 1	3	22:42:02	10°	N	22:46:34	88°	ENE	22:46:34	88°	ENE
ERS-2	2.8	22:43:27	72°	SE	22:43:54	80°	ENE	22:48:47	10°	N
ALOS	2.3	22:44:53	69°	SSW	22:45:23	77°	W	22:50:06	10°	NNW
H-2A R/B	3.2	22:47:13	30°	ENE	22:47:37	31°	ENE	22:52:08	10°	N
Cosmos 540 Rocket	3.4	22:49:04	10°	NNW	22:54:11	73°	WSW	22:54:37	68°	SSW
IDEFIX/ARIANE 42P	3.2	22:51:37	39°	SW	22:52:56	47°	W	22:57:58	10°	NNW
Cosmos 968 Rocket	3.3	22:54:14	75°	ESE	22:54:14	75°	ESE	22:59:20	10°	NNE
Terra	2.9	23:26:56	35°	W	23:26:56	35°	W	23:31:15	10°	NNW
Cosmos 2369 Rocket	2.7	23:30:29	10°	NNW	23:35:58	48°	ENE	23:36:02	48°	ENE
COSMOS 2406	3.3	23:37:36	67°	NE	23:37:36	67°	NE	23:42:36	10°	NNE
Cosmos 1943	3.4	23:59:54	67°	NNE	23:59:54	67°	NNE	0:04:45	10°	NNE
H-2A R/B	3.4	0:27:56	32°	WNW	0:27:56	32°	WNW	0:31:43	10°	NNW

Thursday August 4, 2011 Evening Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
Lacrosse 5	1.8	20:18:30	10°	SW	20:23:32	76°	SE	20:28:34	10°	NE
FREGAT/IRIS	3	20:41:43	10°	SSE	20:45:20	80°	ENE	20:48:55	10°	N
Cosmos 1939 Rocket	3.1	20:47:15	10°	SSE	20:51:05	51°	ENE	20:54:59	10°	N
Cosmos 2278 Rocket	2.4	20:49:03	10°	NNW	20:54:38	57°	ENE	20:59:40	13°	SE
CZ-4C R/B	2.5	20:57:31	10°	SSW	21:03:08	51°	ESE	21:08:59	10°	NE
Cosmos-2242	2.9	21:12:40	10°	S	21:16:57	74°	E	21:21:17	10°	NNE
CZ-2C R/B	2.6	21:13:03	10°	S	21:18:06	75°	WSW	21:23:02	10°	NNW
Cosmos 2333 Rocket	2.6	21:20:18	10°	S	21:25:37	41°	ESE	21:30:55	10°	NE
Cosmos 2237 Rocket	2.7	21:37:10	10°	SW	21:42:46	62°	WNW	21:48:25	10°	NNE
SL-16 R/B	2.1	21:39:11	10°	SSW	21:44:49	81°	ESE	21:50:36	10°	NNE
UARS	2.5	21:40:40	10°	N	21:42:30	17°	NE	21:42:50	17°	NE
IGS 1B	1.5	21:41:37	43°	SE	21:42:24	58°	ENE	21:45:47	10°	N
Cosmos 2219 Rocket	2.3	21:45:32	10°	SSW	21:51:09	76°	WNW	21:56:51	10°	NNE
ALOS	3.4	21:47:07	25°	E	21:48:24	29°	ENE	21:52:27	10°	N
Cosmos 2228 Rocket	3.2	21:48:56	16°	SSW	21:52:34	80°	WNW	21:57:02	10°	N
Cosmos 1666 Rocket	3.4	22:10:59	10°	N	22:15:22	75°	E	22:16:01	61°	SE
CZ-2D R/B	2.2	22:22:00	58°	SE	22:22:51	77°	ENE	22:27:28	10°	N
IDEFIX/ARIANE 42P	2.5	22:23:38	47°	S	22:25:11	85°	W	22:30:25	10°	NNW
Cosmos 2221	2.8	22:28:50	53°	ENE	22:28:50	53°	ENE	22:32:54	10°	NNE

CZ-4B R/B	2.8	22:30:40	37°	SW	22:31:24	41°	W	22:35:15	10°	NNW
Terra	1.8	22:31:22	61°	ESE	22:31:48	65°	ENE	22:36:34	10°	N
H-2A R/B	3.4	22:31:42	48°	SW	22:32:11	51°	W	22:36:06	10°	NNW
Cosmos 1633 Rocket	3.1	22:32:49	10°	N	22:37:16	76°	W	22:37:38	70°	SW
SPOT 5	3.1	22:46:45	60°	S	22:47:42	79°	WSW	22:53:08	10°	NNW
IGS 1A	3.1	22:52:56	46°	NNW	22:52:56	46°	NNW	22:55:35	10°	NNW
Cosmos 2369 Rocket	2.8	23:15:23	10°	NNW	23:20:50	46°	ENE	23:21:03	45°	ENE
COSMOS 2406	3.2	23:26:27	73°	ENE	23:26:27	73°	ENE	23:31:40	10°	NNE
Cosmos 1943	3.3	23:45:15	68°	NNE	23:45:15	68°	NNE	23:50:08	10°	NNE
H-2A R/B	2.5	23:57:47	57°	WNW	23:57:47	57°	WNW	0:02:11	10°	NNW
ATLAS 3B R/B	3.3	0:53:52	46°	E	0:53:52	46°	E	0:59:58	10°	NE

Friday August 5, 2011 Evening Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
Helios 1B	3.1	20:17:49	10°	SSE	20:22:21	83°	NW	20:26:39	10°	NNW
CZ-2C R/B	3.1	20:26:41	10°	SE	20:31:18	39°	ENE	20:35:52	10°	N
Cosmos 2278 Rocket	2.5	20:34:42	10°	NNW	20:40:16	55°	ENE	20:45:47	10°	SE
Cosmos 1939 Rocket	3	20:51:27	10°	SSE	20:55:17	57°	ENE	20:59:17	10°	N
IGS 1B	3	21:06:20	17°	E	21:07:35	20°	ENE	21:10:09	10°	NNE
Lacrosse 5	3.4	21:07:12	10°	WSW	21:11:55	39°	NW	21:16:40	10°	NE
Cosmos 2333 Rocket	2.6	21:08:03	10°	S	21:13:21	41°	ESE	21:18:39	10°	NE
Cosmos 1076 Rocket	3.4	21:08:05	10°	N	21:12:20	74°	ENE	21:16:02	14°	SSE
Cosmos 2237 Rocket	2.7	21:22:33	10°	SW	21:28:10	65°	WNW	21:33:50	10°	NNE
SL-16 R/B	2.1	21:25:24	10°	SSW	21:31:04	78°	ESE	21:36:48	10°	NNE
ADEOS II	3.4	21:27:41	10°	SSW	21:32:32	37°	W	21:37:25	10°	NNW

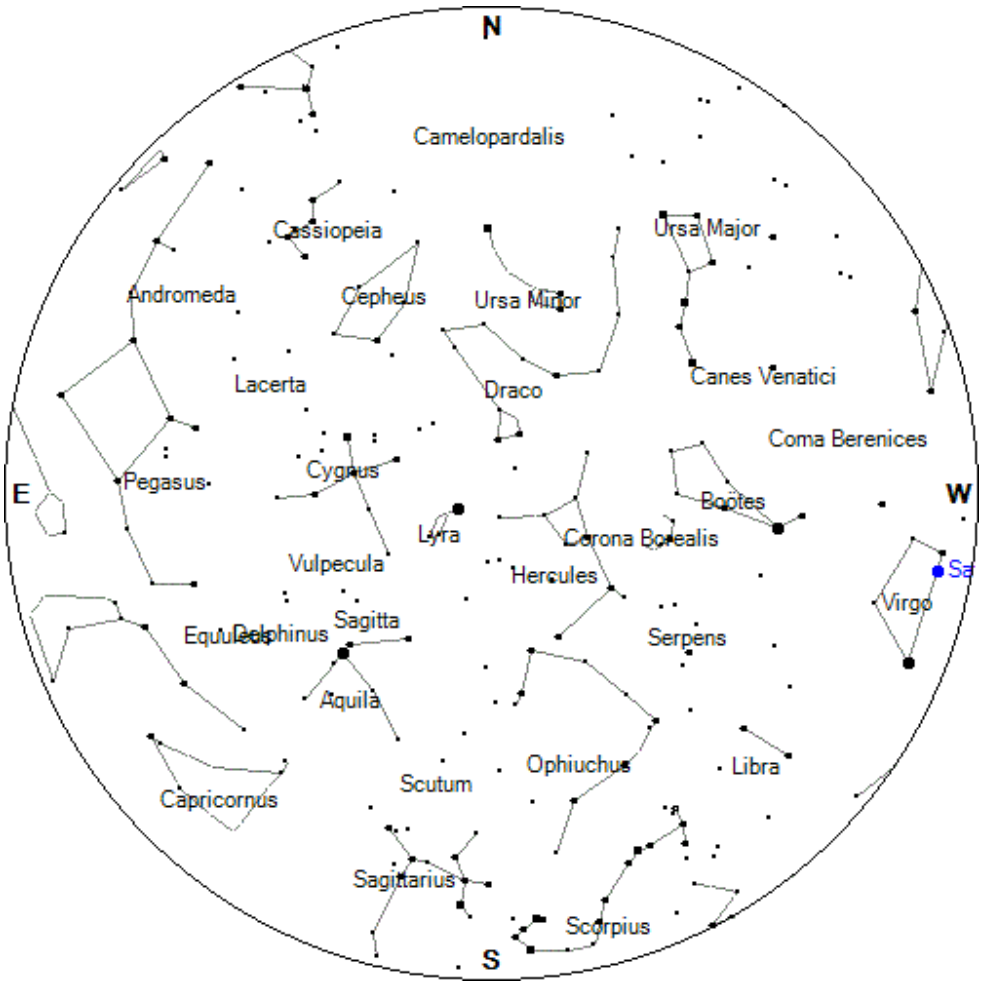
Cosmos 2219 Rocket	2.3	21:29:24	10°	SSW	21:35:01	81°	WNW	21:40:44	10°	NNE
CZ-4C R/B	2.5	21:30:54	10°	SW	21:36:45	75°	NW	21:42:55	10°	NNE
Terra	3.5	21:35:49	17°	E	21:37:13	20°	ENE	21:40:37	10°	NNE
UARS	1.4	21:47:57	10°	NNW	21:50:08	32°	NNE	21:50:08	32°	NNE
Cosmos 44	3.3	21:52:21	10°	NNW	21:57:29	77°	NE	21:59:08	42°	SE
IDEFIX/ARIANE 42P	2.8	21:55:40	35°	SE	21:57:31	54°	ENE	22:02:35	10°	N
Cosmos 1844 Rocket	3.4	21:55:48	10°	NW	22:01:07	46°	WSW	22:04:31	21°	S
CZ-2C R/B	3.4	21:55:48	10°	N	22:00:39	62°	WNW	22:05:43	10°	SSW
CZ-2D R/B	2.6	22:03:09	41°	ESE	22:04:10	48°	ENE	22:08:34	10°	N
CZ-4B R/B	2.3	22:19:41	47°	SW	22:20:26	56°	W	22:24:28	10°	NNW
SPOT 5	3.1	22:27:18	54°	SE	22:28:26	71°	ENE	22:33:49	10°	N
ALOS	2.2	22:28:06	65°	ESE	22:28:40	72°	ENE	22:33:21	10°	N
IGS 1A	3	22:29:24	39°	NE	22:29:24	39°	NE	22:32:07	10°	N
H-2A R/B	3.5	22:33:01	47°	WSW	22:33:25	49°	W	22:37:18	10°	NNW
Envisat	3.2	22:34:09	48°	SSW	22:35:25	66°	WSW	22:40:29	10°	NNW
Cosmos 1933 Rocket	3.5	22:39:00	10°	N	22:43:24	86°	NNE	22:43:24	86°	NNE
Cosmos 1689 Rocket	3.2	22:42:32	55°	NW	22:42:32	55°	NW	22:45:33	10°	NNW
CARTOSAT-1	3.5	22:42:40	83°	NNE	22:42:40	83°	NNE	22:46:53	10°	NNW
Cosmos 2221	2.6	22:45:26	79°	W	22:45:27	79°	W	22:49:57	10°	N
ERS-2	2.8	22:45:27	79°	SE	22:45:43	83°	ENE	22:50:37	10°	NNW
Cosmos 2369 Rocket	2.9	23:00:17	10°	NNW	23:05:41	43°	ENE	23:06:06	43°	ENE
Terra	2.5	23:14:43	46°	W	23:14:43	46°	W	23:19:12	10°	NNW
COSMOS 2406	3.1	23:15:14	80°	ENE	23:15:14	80°	ENE	23:20:44	10°	NNE
H-2A R/B	2.3	23:27:38	65°	NE	23:27:38	65°	NE	23:32:19	10°	N
Cosmos 1943	3.2	23:30:32	70°	NE	23:30:32	70°	NE	23:35:32	10°	NNE
NanoSail-D	3.5	23:34:45	27°	NNE	23:34:45	27°	NNE	23:36:40	10°	NNE

Saturday August 6, 2011Evening Satellite report:

Satellite		Starts			Max. Altitude			Ends		
Name	Mag	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
CZ-4C R/B	2.7	20:16:48	10°	S	20:22:13	41°	ESE	20:27:51	10°	NE
Cosmos 2278 Rocket	2.5	20:20:22	10°	NNW	20:25:54	53°	ENE	20:31:24	10°	SE
SL-16 R/B	2.7	20:22:53	10°	NNE	20:29:04	82°	WNW	20:35:14	10°	SSW
Cosmos 1939 Rocket	2.9	20:55:40	10°	SSE	20:59:34	65°	ENE	21:03:34	10°	N
Cosmos 2333 Rocket	2.6	20:55:47	10°	S	21:01:05	41°	ESE	21:06:23	10°	NE
ADEOS II	2.5	21:01:48	10°	S	21:07:03	63°	W	21:12:16	10°	NNW
COS B Rocket	3.5	21:01:49	21°	ESE	21:02:32	24°	E	21:04:48	10°	NNE
Cosmos 1939	3	21:04:28	14°	SSE	21:07:28	72°	ENE	21:11:02	10°	N
Cosmos 2237 Rocket	2.6	21:07:56	10°	SSW	21:13:35	67°	WNW	21:19:15	10°	NNE
SL-16 R/B	2.1	21:11:36	10°	SSW	21:17:16	76°	ESE	21:22:59	10°	NNE
Cosmos 2219 Rocket	2.2	21:13:16	10°	SSW	21:18:57	87°	NW	21:24:37	10°	NNE
CZ-2C R/B	2.7	21:17:37	10°	S	21:22:37	68°	WSW	21:27:30	10°	NNW
CZ-2C R/B	2.9	21:31:37	10°	NNE	21:36:35	79°	ESE	21:41:46	10°	S
ARGOS	3.3	21:35:56	17°	S	21:40:13	75°	WSW	21:45:41	10°	NNW
Cosmos 1844 Rocket	3.3	21:38:50	10°	NW	21:44:14	51°	WSW	21:48:20	17°	S
Meteor 2-10 Rocket	3.3	21:43:35	10°	N	21:48:37	85°	ENE	21:51:12	30°	SSE
CZ-2D R/B	3.2	21:44:18	27°	E	21:45:30	31°	ENE	21:49:28	10°	N
UARS	1.1	21:55:23	10°	NW	21:57:21	46°	NW	21:57:21	46°	NW
Envisat	3.2	21:57:30	38°	SE	21:59:10	57°	ENE	22:04:10	10°	N
Sich 1	3.3	21:59:50	10°	N	22:04:17	54°	E	22:04:58	48°	ESE
IGS 1B	1.7	22:04:42	57°	SW	22:05:09	64°	W	22:08:30	10°	NNW
CZ-4B R/B	2	22:08:41	55°	S	22:09:41	75°	WNW	22:13:38	10°	NNW
Terra	2.2	22:19:09	47°	E	22:19:40	49°	ENE	22:24:15	10°	N

Cosmos 1689 Rocket	3	22:23:20	56°	NNE	22:23:20	56°	NNE	22:26:26	10°	N
Cosmos 968 Rocket	3.5	22:35:12	42°	SSW	22:36:59	78°	WNW	22:42:08	10°	NNE
Cosmos 2369 Rocket	2.9	22:45:11	10°	N	22:50:33	41°	ENE	22:51:11	40°	ENE
Cosmos 1898 Rocket	3.4	22:57:13	75°	ENE	22:57:13	75°	ENE	23:02:10	10°	NNE
H-2A R/B	2.9	22:57:30	37°	ENE	22:57:30	37°	ENE	23:02:09	10°	N
COSMOS 2406	3	23:03:55	82°	SSE	23:04:01	83°	SE	23:09:47	10°	NNE
RESURS DK-1	3.4	23:06:06	10°	NNW	23:09:09	45°	N	23:09:09	45°	N
ALOS	3.1	23:09:05	44°	W	23:09:07	44°	W	23:13:38	10°	NNW
Cosmos 1943	3.1	23:15:44	74°	ENE	23:15:44	74°	ENE	23:20:55	10°	NNE
NanoSail-D	3.3	23:17:15	28°	NNE	23:17:15	28°	NNE	23:19:14	10°	NNE
Lacrosse 3	3.3	23:50:50	42°	N	23:50:50	42°	N	23:54:34	10°	NE

Whole Sky Star Chart for Wed Aug 3rd at 10pm

The stars and planets change very little from night to night. This should be about the same for the entire cruise.

Sky Chart