

*This year, travel with The Planetary Society and discover
mysteries of Deep Space and Near-Earth Asteroids!*

ARECIBO

& the Lesser Antilles • January 21-29, 2011

On board the 5-masted Yacht, Royal Clipper

Dear Friends:

We invite you to join us on this wonderful adventure to the **Caribbean, January 21, 2011.**

Our adventure combines two tremendous opportunities—a chance to see the **Arecibo Radio Telescope** near San Juan, Puerto Rico, and an opportunity to explore the ring of volcanic islands called the **Lesser Antilles** which circle around the eastern Caribbean. We'll travel on board the 227-foot, 5-masted Royal Clipper—one of the world's largest sailing yachts.

During our visit to Puerto Rico, we will first explore **San Juan**, where an impressive fort and historic Old Town bring back visions of pirate days and the heritage of the Caribbean. We will have a day in the mountains of Puerto Rico where you will meet Arecibo staff and scientists who organize Arecibo's operations and conduct fascinating research.

For all of you interested in learning about deep outer space and SETI (the search for extraterrestrial intelligence), the famous **Arecibo Radio Telescope** is the world's largest and scientists have used it to conduct fascinating deep sky research. Scientists here delve into many aspects of the new deep space astronomies, from quasars and pulsars to the origins of the universe from the moment of the Big Bang.

From Puerto Rico, we will fly to **Barbados**, just southeast of the amazing volcanic island chain of the Lesser Antilles. Originally the Carib Indians lived here, to be followed by European explorers and adventurers. The Spanish, French,



and Dutch all claimed islands for themselves, and brought European culture and way of life to the islands, still seen in some of the historic forts and along narrow streets. Later Africans were brought to work in the sugar plantations. Their music and dancing set the tone for much of Caribbean culture and steelbands today.

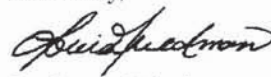
Now, we'll have an opportunity to relive the heritage of the Caribbean as we explore these beautiful islands on board the fabulous—yet affordable—Royal Clipper!

From Barbados, we will sail to **St. Lucia, Dominica, Antigua, St Kitts, Isles les Saintes, and Martinique!** There will be opportunities for snorkeling and beach activities, to go whale watching, to explore historic towns, go hiking in the rainforest, and to discover the night sky along with other Planetary Society members! It will be an amazing experience!

We invite Planetary members with a sense of wonder and adventure to join us and come to the Caribbean this winter and explore the

islands, underwater world, and the night skies of the Lesser Antilles.

Sincerely,



Dr. Louis Friedman
Executive Director



Itinerary

Day 1 Depart Miami for San Juan, Puerto Rico

Depart Miami International Airport on an American Airlines flight to San Juan, Puerto Rico. Transfer to our hotel in the historic district of Old San Juan. This afternoon enjoy a walking tour of Old San Juan. The island was originally discovered by Columbus in 1493. We will visit the promenade of La Princesa, Plaza de Armas, the San Juan Cathedral, and the Forte San Cristobal. Welcome social and dinner. (D)

Day 2 Arecibo Observatory & Barbados

We will depart today for Arecibo Observatory and meet with the staff for an introduction to the research at this world class observatory. We will learn about their fascinating research on many different subjects, including the origin of the universe, the search for extraterrestrial intelligence, star formation, pulsars, quasars, and near-Earth asteroids. We will then fly to Barbados where we board the *Royal Clipper*, our home for the next 8 days. (B,L)



Day 3 Rodney Bay, St. Lucia

After a hardy breakfast we will check out snorkeling equipment and have a safety drill. We will sight St Lucia late morning. It is a lush island of tropical beauty, covered with rain forest, banana plantations, palm lined beaches, mountains, and even has a drive-in volcano! Two of St. Lucia's truly spectacular attractions are the Pitons, two volcanic cones rising up from the sea that have become a symbol of the island itself. Today there are several options for



Looking Deep into Space

Radio telescopes collect faint radio, or electromagnetic, waves produced by distance stars, galaxies, pulsars, quasars, and other space objects. An optical telescope captures electromagnetic waves in the visible light spectrum, the same rainbow spectrum as seen in a droplet of water or through a prism. Radio waves have much longer wave lengths than visible light waves and can detect much fainter energy sources, thus can explore much deeper into space.

To capture these long waves the telescope receiver, or dish, needs to be very large. The Arecibo telescope parabolic reflector dish has a diameter of 1,000 feet or 305 meters. Aluminum panels cover the inside of the dish to reflect the radio waves to an antenna suspended above the center of the dish. The antenna transfers the electromagnetic wave information to the on site receiver and amplifies, or strengthens the signal, and then records the information digitally.

Astronomers using radio telescopes have discovered many deep space objects, including pulsars and quasars, and many rare molecules. These discoveries have been instrumental in understanding the origins of the universe since the Big Bang.

The Arecibo radio telescope is also a critical facility for the study and detection of near-Earth asteroids. Astronomers at Arecibo's radio telescope discovered the first near-Earth triple asteroid system in 2008.



you, including a 4 x 4 adventure in the mountains, a rainforest canopy adventure by zip-lines, and a tour of St. Lucia. After dinner we will look at the dark night skies and explore the heavens with our binoculars. (B,L,D)

Day 4 Dominica—Whales or Champagne Beach

Christopher Columbus discovered this island on a Sunday, so Dominica it became! Dominica is the Caribbean's "nature island" where steep volcanic slopes and rainforests offer great hiking and awesome vistas. Its slopes plunge steeply into the Caribbean. The waters off Dominica are part of the whales winter breeding and calving grounds. Today, we may have a whale-watching adventure to see the wintering humpback or sperm whales. Or we may go snorkel at Champagne Beach which is one of the best snorkeling locations in the Caribbean. Underwater geothermal springs vent gasses which form thousands of bubbles, giving you the feeling of swimming through a giant glass of Champagne! After dinner star and planet watching. (B,L,D)

Day 5 Falmouth Harbour, Antigua

Sighting this island on his second voyage to the New World, Columbus named it after a saint recognized for miracles in the Seville Cathedral, Saint Maria de la Antigua. It was only after the English arrived from St. Kitts in 1632 that anyone other than Carib Indians inhabited the island. In 1674 a new way of life began with sugar cane production, which was the focal point of life on Antigua



for 300 years. It is here that a soon-to-become famous Royal Navy Captain set up his base in 1785. Today Horatio Nelson's Dockyard evokes the presence of the greatest naval commander in history. It is an important offshore banking center and epicenter of the Caribbean yachting world. After our beach barbeque there are several

optional afternoon excursions, from a kayak ecotour to a chance to snorkel and swim with sting rays! The sting rays will glide and dance around us as we squeal with delight! This evening, we will explore the night skies with binoculars. (B,L,D)

Day 6 Basseterre & South Friar's Bay, St. Kitts

St. Kitts is officially named St. Christopher. Its volcanic slopes rise 4,000 feet, providing an ideal climate for one of the Caribbean's largest rainforests. The French and British shared St. Kitts until the Treaty of Versailles. In many ways it is little changed. Sugar is still the main source of income, just as in the 17th century. Here we may explore Basseterre, or join an optional historic tour, including Brimstone Hill Fortress National Park (one of the most important fortresses in the Americas), an ecotour, or a rail tour around the island. For snorkeling enthusiasts we will anchor off Basseterre Beach and have a day to explore the marine life near the sea edge. Look for tropical fish hovering near the coral heads, some darting in for a quick meal and others working the coral sands for their midday meal. This is a habitat of moving predatory fish and prey species always on the alert. Evening focus on today's new planetary discoveries. (B,L,D)

Day 7 Isles les Saintes

Isles les Saintes is a thoroughly entrancing group of islands lying just off Guadeloupe. The independent, self sufficient inhabitants are descended from Breton fishermen. Wealthy French investors have recently built elaborate vacation homes and exclusive resorts here. This morning we will walk the streets of the quaint French-

style village of le Bourg and then of Fort Napoleon overlooking the harbor. In the afternoon, you may enjoy the picture perfect beaches, snorkeling, and other water-sports activities. Evening focus on the visible planets and what they told the ancient astronomers. (B,L,D)

Day 8 Martinique

We will dock at Fort-de-France with its narrow streets, 19th century architecture, and designer shops with European specialties. Martinique is the classic French Caribbean island. Wild and mysterious, yet urbane and sophisticated,

it is France with a tropical twist. Explore the quaint town center on your own or join an excursion to visit St. Louis Cathedral and Fort St Louis (occupied by the French army since the 17th century), and the botanic garden. You may wish to linger in town and taste the well known French delicacies. We will sail to Barbados this afternoon. Farewell dinner and celebration. (B,L,D)

Day 9 Barbados to Miami & Home

Disembark after breakfast and enjoy time to explore Bridgetown and Barbados, the eastern-most island in the Caribbean. Geologists believe the red sandstone deposits of Barbados have blown all the way across the Atlantic from the deserts of the Sahara. The British first landed here in 1625, and many historic landmarks can be seen. Transfer to the airport for our return flight to Miami. (B)



Reservations

#1143

Yes! I/We want to join the **Arecibo & Lesser Antilles Expedition, January 21-29, 2011**, offered by **The Planetary Society & Betchart Expeditions Inc.** Please reserve ____ space(s) on the expedition. As a deposit, I/we have enclosed a check for \$ _____ (\$500 per person), payable to Betchart Expeditions Inc. Trust Account.

Name(s): _____ Age ____ Sex ____

_____ Age ____ Sex ____

Address: _____

City _____ State ____ Zip ____

Phone: Home (____) _____

Work (____) _____

Email: _____

Citizenship: ____ USA ____ Canada Other: _____

Member: ____ Planetary Society ____ AAAS ____ Sigma Xi ____ ACS

Accommodations Preference: ____ Cat 2 ____ Cat 3 ____ Cat 4

____ Twin ____ Single Twin Share ____ with a friend *or*

____ Nonsmoker ____ Smoker ____ assign a roommate

Signature: _____ Date: _____

Signature: _____ Date: _____

Please Mail To:

**Arecibo & Lesser Antilles, Betchart Expeditions Inc.
17050 Montebello Road, Cupertino, CA 95014-5435**

Costs & Conditions

Expedition Fee: Is based on per person twin share (depending on cabin category) + air fare of \$600 + tax from Miami International Airport to San Juan and Barbados, RT.

Category 4: \$3,650 pp + Port Charges \$215

Category 3: \$3,795 pp + Port Charges \$215

Category 2: \$3,995 pp + Port Charges \$215

Single Supplement: Is 150% of the cabin rate in Category 2, 3, or 4. We encourage all singles to bring a roommate.

Triples: A limited number of cabins are available for triple occupancy in each category for 1/2 price the per person rate.

Expedition Fee Includes: Group transfers in San Juan and Barbados; 1 night hotel accommodations twin share with bath; walking tour in Old San Juan; special excursion to Arecibo including lunch; transportation by yacht for 8 days/7 nights as described in the itinerary; two half-day excursions as indicated; accommodations based on twin share in comfortable yacht-sized cabin with private bath; meals and activities on board ship; tour leadership and special lectures by an excellent naturalist; administration.

Expedition Fee Does Not Include: International air fare (quoted separately); independent transfers; optional shore excursions; tips on board ship; baggage handling; alcoholic beverages, snacks, sodas, bottled water, laundry, internet use, phone, fax, passport, travel insurance, or other personal expenses; foreign airport departure taxes.

What to Expect: This expedition is for the travel enthusiast who would like to explore historic San Juan, Puerto Rico, and to learn about the radio telescope which explores the outer edges of the universe and the search for extraterrestrial intelligence at Arecibo Observatory. Also enjoy the history, marine world, and heritage of Barbados and the Lesser Antilles while traveling on board a 5-masted, 227-passenger sailing yacht. Discover beaches, marine life, and the cultural heritage from Barbados to St. Lucia, Dominica, Antigua, St. Kitts, Ile les Saintes, and Martinique with evening astronomy activities. There are frequent opportunities for snorkeling, swimming, kayaking, windsurfing, or other water sports. Scuba diving is available at additional cost. Typically it will be in the 70's to 80's, with the balmy weather for which the Caribbean is famous in January to March.

M/Y Royal Clipper: Our journey will be on board a 227-passenger clipper ship, *Royal Clipper*, which, at 439 feet long, is one of the largest full-rigged sailing yachts in the world. The Clipper yachts are the dream of a Swedish gentleman, who started building his first



yacht in 1991. *Royal Clipper* accommodates passengers in 114 cabins, with double or twin lower beds, all with private bath (some cabins have triples available). All cabins have portholes and are air conditioned. The dining room serves all passengers at once. There are indoor and outdoor bars, a library, and three mini pools. Included are complimentary snorkeling gear, hobie cats, wind surfers, and kayaks for everyone's enjoyment.

Air Fare & Airline Ticketing: Group air flights from Miami are on American Airlines to San Juan, Puerto Rico and Barbados, RT. Please contact Marisa for flight information. AIR FARES ARE SUBJECT TO CHANGE.

Reservations, Deposits & Payments: To reserve a space, please contact **Marisa Eide, Betchart Expeditions Inc.**

Phone (800) 252-4910 or (408) 252-4910

Fax (408) 252-1444

Email: Marisa@betchartexpeditions.com

Final payment is due 90 days before departure (October 21, 2010).

Cancellations & Refunds: The initial deposit is refundable up to 120 days before departure, less a handling fee of \$250 per person. From 119 to 75 days before departure, the cancellation penalty is \$500 per person. There is no refund for any cancellation within 75 days of departure. Trip cancellation insurance will be offered. No refunds are made for unused services.



Responsibility: Betchart Expeditions Inc., and The Planetary Society act only as agents for the passenger with respect to transportation and hotels, and exercise every care possible. However, we can assume no liability for injury, damage, delay, loss, accident or irregularity in connection with the services of any airplane, ship, motorcoach, or other conveyance used in carrying out the arrangements of the tour. Operation of the yacht is solely the responsibility of Star Clippers. We cannot accept any responsibility for losses or additional expenses due to delay or changes in air or other services, weather, sickness, strike, war, quarantine, terrorism, acts of God, or other causes beyond our control. All such losses or expenses will have to be borne by the passenger as tour rates provide for arrangements only for the time stated. We reserve the right to substitute another leader of similar expertise or to reserve the right to cancel any tour prior to departure, in which case the entire payment will be refunded with no further obligation on our part. The right is also reserved to decline to accept or retain any person as a member of the tour. No refund will be made for the unused portion of any tour unless arrangements are made in sufficient time to avoid penalties. The price of the program is based on current tariffs and rates, and is subject to change. Any tariff, exchange rate, or fuel increases will be passed on to participants. Baggage is carried at the owner's risk entirely. It is understood that the air ticket when issued shall constitute the sole contract between the passenger and the airline concerned. The airlines concerned are not to be held responsible for any act, omission, or event during the time passengers are not on board their plane or conveyance.

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Map & illustration by April Milne.

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