APPLICATION FOR CONSENT TO CONDUCT MARINE SCIENTIFIC RESEARCH

1. General Information

| 1.1 Cruise name and/or number: | C251 OE - F2013-090 | | |
|--|--|------------------|---|
| | | | |
| 1.2 Sponsoring institution(s): | | | |
| Name | Address | Name of Director | |
| Sea Education Association | PO Box 6 Woods Hole, MA 02543 | Peg Brandon | |
| | | | |
| 1.3 Scientist in charge of the project: | | | |
| Name: | Charles Lea | | |
| Country: | US | US | |
| Affiliation: | Sea Education Association | | , |
| Address: | P.O. Box 6 Woods Hole, Massac | husetts 02543 US | |
| Telephone: | 508-444-1928 | 508-444-1928 | |
| Email: | clea@sea.edu | clea@sea.edu | |
| | | | |
| 1.4 Entity(ies) /Participant(s) from coastal S | tate involved in the planning of the project | : | |
| Name: | | | |
| Country: | | | |
| Affiliation: | | | |
| Address: | See Section 6.2. | | |
| Telephone: | See Section 6.2. | | |
| Fax: | | | |
| Email: | | | |
| Website (for CV and photo): | | | |

2. Description of Project

2.1 Nature and objectives of the project:

The primary purpose of our scientific research is to teach oceanography and oceanographic sampling techniques to college undergraduate students. Each student must design a research project ashore and carry out that research project during the cruise. In addition, some data is collected for long-term research projects carried out by staff scientists at the Sea Education Association. These projects include studies of the abundance and distribution of plankton, floating tar and plastic, the biology of thermal fronts, the geology of carbonate banks and islands, and the comparative ecology of shallow productive banks.

2.2 Relevant previous or future research projects:

SEA has been training young oceanographers and working with Coastal States for almost 30 years in the Atlantic Ocean. Our vessels have routinely sailed through the waters claimed by nearly every coastal state in the Caribbean and Bahamian region, and we always secure permission to conduct oceanographic research from each of these countries before the cruises begin.

2.3 Previous publications relating to the project:

The fact that we sail areas of the ocean not frequently covered by other research vessels has allowed us to contribute to the research of a number of outside investigators as vessels of opportunity, resulting in the publication of at least 40 articles on topics in physics, chemistry, geology, biology, meteorology, and pollution. In addition, SEA oceanographers occasionally publish results of data collected with student help. Four representative articles (including those by SEA oceanographers) are cited below. Joyce, P. 1998. Floating tar in the western North Atlantic and Caribbean Sea, 1982-1996. Baseline 36:167-171. Bower, A., E. Zettler, and G. Gawarkiewicz. 2004. Science under sail. Oceanography 17:42-51. Moret-Ferguson, S., K. L. Law, G. Proskurowski, E. K. Murphy, E. Peacock, C. M. Reddy. 2010. The size, mass, and composition of plastic debris in the western North Atlantic Ocean. Mar.Poll.Bull. doi:10.1016/j.marpolbul.2010.07.020. Law, K. L., S. Moret-Ferguson, N. A. Maximenko, G. Proskurowski, E. E. Peacock, J. Hafner, C. M. Reddy. 2010. Plastic accumulation in the North Atlantic subtropical gyre. Science 329: 1185-1188.

3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude, including coordinates of cruise track/ way points):

The cruise will sail north from San Juan, Puerto Rico before turning southeast. From there we will begin a long southbound transect along the Antilles before turning northwest along the leeward side of the islands. We plan stops in Antigua, Saint Vincent and the Grenadines, and Montserrat before ending the voyage in St Croix. Due to our educational mission, we seldom have exact locations where we need to sample. Generally samples are taken daily along the cruise track however, here are some tentatively proposed sampling locations: 1) 23Ű00' N x 66Ű00' W Atlantic Ocean 2) 21Ű00' N x 61Ű35' W British Virgin Islands 3) 19Ű00' N x 63Ű00' W Anguilla 4) 18Ű30'N x 61Ű50' W Antigua and Barbuda 5) 16Ű30' N x 60Ű50'Ű W Guadeloupe (France) 6) 15Ű30' N x 60Ű30' W Dominica 7) 14Ű45'N x 60Ű25'W Martinique (France) 8) 14Ű00'N x 60Ű03'W Saint Lucia 9) 12Ű50' N x 59Ű40'W Barbados 10) 12Ű15' N x 61Ű10'W Grenada 11) 12Ű33' N x 61Ű08'W Saint Vincent & the Grenadines 12) 16Ű35' N x 62Ű10'W Montserrat

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical areas of the intended work and, as far as practicable, the location and depth of sampling stations, the tracks of survey lines, and the locations of installations and equipment. Chart provided - see Section 10.1.

4. Methods and Means to be Used

| 4.1 D .: 1 C . 1 | |
|---|--|
| 4.1 Particulars of vessel: | |
| Name: | CORWITH CRAMER |
| Type/Class: | Ship |
| Nationality (Flag state): | United States |
| Identification Number (IMO/Lloyds No.): | |
| Owner: | Sea Education Association |
| Operator: | Sea Education Association |
| Overall length (meters): | 41.00 |
| Maximum draught (meters): | 4.00 |
| Displacement/Gross tonnage: | 280.00 |
| Propulsion: | Sail; auxiliary 500 horsepower (370 kW) Cummins diesel |
| Cruising: | |
| Maximum speed: | |
| Call sign: | WTF 3319 |
| INMARSAT number and method and capability | VHF 16 |
| of communication (including emergency | |
| frequencies): | |
| Name of master: | Thomas Sullivan |
| Number of crew: | 6 |
| Number of scientists on board: | 4 |

| 4.2 Other craft in the project, including its use: |
|--|
| One 15 foot (5 m) hard bottom inflatable boat with 25 HP outboard engine |

| 4.3 Particulars of methods and scientific instruments: | | | |
|--|---|--|--|
| Types of samples and measurements | Methods to be used | Instruments to be used | |
| 1: Temperature, salinity, nutrients 2: | 1: Chemical analyses 2: Net tows and | 1: CTD, spectrophotometer, fluorometer, | |
| Plankton 3: Benthic organisms 4: | microscope counts 3: Diversity and | titration 2: Plankton nets 3: Small research | |
| Sediments | abundance counts 4: Sieving, microscope | otter trawl (5m opening) 4: Sediment | |
| | observation | grab, gravity corer, rock dredge | |

| 4.4 Indicate nature and quantity of substances to be released into the marine environment: |
|--|
| No |

| 4.5 Indicate whether drilling will be carried out. If yes, please specify: |
|--|
| No |

4.6 Indicate whether explosives will be used. If yes, please specify type and trade name, chemical content, depth of trade class and stowage, size, depth of detonation, frequency of detonation, and position in latitude and longitude:

No

| 4.7 Indicate whether protected species be studied. If yes, please specify: |
|--|
| 4.7 indicate whether protected species be studied. If yes, please specify. |
| N- |
| No |

5. Installations and Equipment

Details of installations and equipment (including dates of laying, servicing, method and anticipated timeframe for recovery, locations and depth, and measurements):

No

6. Dates

| 6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms: |
|--|
| Project Start Date: Feb 14, 2014 |
| Project End Date: Mar 24, 2014 |

| 6.2 Coastal State-specific details: | | |
|-------------------------------------|----------------------|--------------------------|
| Coastal Area | Estimated Entry Date | Estimated Departure Date |
| Anguilla | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

Research will be performed: within 12 nm

Extent to which Anguilla will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Anguilla:

| Coastal Area | Estimated Entry Date | Estimated Departure Date |
|----------------------------------|----------------------|--------------------------|
| Virgin Islands, British | Feb 14, 2014 | Mar 24, 2014 |
| Explanation of multiple entries: | | |

Research will be performed: within 12 nm

Extent to which Virgin Islands, British will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Virgin Islands, British:

| Coastal Area | Estimated Entry Date | Estimated Departure Date |
|--------------|----------------------|--------------------------|
| Saba | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

N/A

Research will be performed: within 12 nm

Extent to which Saba will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Saba:

| Tume, armation and contact mornation for an participants from constant state Subtr | | | |
|--|----------------------|--------------------------|--|
| Coastal Area | Estimated Entry Date | Estimated Departure Date | |
| Saint Kitts and Nevis | Feb 14, 2014 | Mar 24, 2014 | |

Explanation of multiple entries:

N/Ā

Research will be performed: within 12 nm

Extent to which Saint Kitts and Nevis will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

| Name, affiliation and contact information for all participants from coastal | state Saint Kitts and Nevis: |
|---|------------------------------|

| Name, arrination and contact information for all participants from coastal state Saint Kitts and Nevis: | | |
|---|----------------------|--------------------------|
| Coastal Area | Estimated Entry Date | Estimated Departure Date |
| Antigua and Barbuda | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

The first half of the cruise track sails south on the eastern side of the Antilles. For the second half of the cruise, the ship sails north on the western side of the Antilles leading to multiple entries in the EEZ.

Research will be performed: within 12 nm

Extent to which Antigua and Barbuda will be enabled to participate or to be represented in the research project:

***Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is

weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states.*** SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Antigua and Barbuda:

| , | | | |
|---|--------------|----------------------|--------------------------|
| | Coastal Area | Estimated Entry Date | Estimated Departure Date |
| | Barbados | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

 $NI/\tilde{\Delta}$

Research will be performed: within 12 nm

Extent to which Barbados will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Barbados:

| Coastal Area | Estimated Entry Date | Estimated Departure Date |
|--------------|----------------------|--------------------------|
| Dominica | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

The first half of the cruise track sails south on the eastern side of the Antilles. For the second half of the cruise, the ship sails north on the western side of the Antilles leading to multiple entries in the EEZ.

Research will be performed: within 12 nm

Extent to which Dominica will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Dominica:

| Coastal Area | Estimated Entry Date | Estimated Departure Date |
|--------------|----------------------|--------------------------|
| Guadeloupe | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

The first half of the cruise track sails south on the eastern side of the Antilles. For the second half of the cruise, the ship sails north on the western side of the Antilles leading to multiple entries in the EEZ.

Research will be performed: within 12 nm

Extent to which Guadeloupe will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Guadeloupe:

| Coastal Area | Estimated Entry Date | Estimated Departure Date |
|--------------|----------------------|--------------------------|
| Martinique | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

The first half of the cruise track sails south on the eastern side of the Antilles. For the second half of the cruise, the ship sails north on the western side of the Antilles leading to multiple entries in the EEZ.

Research will be performed: within 12 nm

Extent to which Martinique will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the

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Name, affiliation and contact information for all participants from coastal state Martinique:

| Tume, armation and contact information for an participants from coastar state martinique. | | |
|---|----------------------|--------------------------|
| Coastal Area | Estimated Entry Date | Estimated Departure Date |
| Montserrat | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

 $NI/\bar{\Delta}$

Research will be performed: within 12 nm

Extent to which Montserrat will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Montserrat:

| _ : | | |
|----------------|----------------------|--------------------------|
| Coastal Area | Estimated Entry Date | Estimated Departure Date |
| Sint Eustatius | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

N/A

Research will be performed: within 12 nm

Extent to which Sint Eustatius will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Sint Eustatius:

| Ī | Coastal Area | Estimated Entry Date | Estimated Departure Date |
|---|--------------------|----------------------|--------------------------|
| Ī | French West Indies | Feb 14, 2014 | Mar 24, 2014 |
| | | | |

Explanation of multiple entries:

N/A

Research will be performed: within 12 nm

Extent to which French West Indies will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state French West Indies:

| Coastal Area | Estimated Entry Date | Estimated Departure Date |
|--------------|----------------------|--------------------------|
| Sint Maarten | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

N/Ā

Research will be performed: within 12 nm

Extent to which Sint Maarten will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

| Name, affiliation and contact information for all participants from coastal state Sint Maarten: | | |
|---|----------------------|--------------------------|
| Coastal Area | Estimated Entry Date | Estimated Departure Date |
| Saint Lucia | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

The first half of the cruise track sails south on the eastern side of the Antilles. For the second half of the cruise, the ship sails north on the western side of the Antilles leading to multiple entries in the EEZ.

Research will be performed: within 12 nm

Extent to which Saint Lucia will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements

| Name, affiliation and contact information for all participants from coastal state Saint Lucia: | | |
|--|----------------------|--------------------------|
| Coastal Area | Estimated Entry Date | Estimated Departure Date |
| Saint Vincent and the Grenadines | Feb 14, 2014 | Mar 24, 2014 |

Explanation of multiple entries:

The first half of the cruise track sails south on the eastern side of the Antilles. For the second half of the cruise, the ship sails north on the western side of the Antilles leading to multiple entries in the EEZ.

Research will be performed: within 12 nm

Extent to which Saint Vincent and the Grenadines will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the

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Name, affiliation and contact information for all participants from coastal state Saint Vincent and the Grenadines:

| Name, armation and contact information for an participants from coastar state same vincent and the orenaumes. | | | | | |
|---|----------------------|--------------------------|--|--|--|
| Coastal Area | Estimated Entry Date | Estimated Departure Date | | | |
| Grenada | Feb 14, 2014 | Mar 24, 2014 | | | |

Explanation of multiple entries:

N/A

Research will be performed: within 12 nm

Extent to which Grenada will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Grenada:Coastal AreaEstimated Entry DateEstimated Departure DateTrinidad and TobagoFeb 14, 2014Mar 24, 2014

Explanation of multiple entries:

N/Ā

Research will be performed: within 12 nm

Extent to which Trinidad and Tobago will be enabled to participate or to be represented in the research project:

Please Note: Entry and exit dates from research areas can vary since we are a sailing research vessel and thus our schedule is weather dependent. If requested, we can provide a progress report and a more detailed schedule for the vessel as the cruise progresses through the waters of individual coastal states. SEA routinely cooperates with coastal states by offering one berth to a visiting scientist. Because of our educational mission, we prefer that the participant be a researcher or educator who can benefit from the experience and contribute their expertise to the students. SEA will pay all reasonable round-trip airfare expenses to the point of departure, with a return to home. SEA will also provide room and board to the participant during his/her time aboard, however we cannot provide a per diem or any other remuneration to the individual. Our schedules and cruise tracks are not flexible enough to allow for the vessel to make special port calls in order to pick up or drop off the observer. Please note that because our ships are generally full we request that the participant be identified at least one month before the trip commences (by 14 Jan 2014), so that we can make travel and onboard arrangements.

Name, affiliation and contact information for all participants from coastal state Trinidad and Tobago:

7. Port Calls

| Port | Arrival Date | End Date | Special Logistical Requirements | Shipping Agent |
|----------------|--------------|-----------|--|---|
| Bequia | 3/10/2014 | 3/12/2014 | none; SEA vessels are self sufficient | none; SEA vessels generally do not use an agent |
| English Harbor | 2/25/2014 | 2/27/2014 | none; SEA vessels are self sufficient | none; SEA vessels generally do not use an agent |
| Union Island | 3/7/2014 | 3/7/2014 | none; SEA vessels are self sufficient | none; SEA vessels generally do not use an agent |

8. Participation of the representative of the coastal State

| 8.1 Modalities of the participation of the representative of the coastal State in the research project: | | |
|---|--|--|
| See Section 6.2. | | |

| 8.2 Proposed dates and ports for embarkation/disembarkation: | |
|--|--|
| See Section 6.2. | |

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include the expected dates of submission of the data and research results:

No more than 60 days from the end date of the research as provided in Section 6.1.

9.2 Anticipated dates of submission to the coastal State of the final report:

No more than 2 years from the end date of the research as provided in Section 6.1.

9.3 Proposed means for access by coastal State to data (including format) and samples:

Data will be provided through official channels at no cost to the coastal State(s). Samples will be provided upon request.

9.4 Proposed means to provide coastal State with assessment of data, samples and research results:

Assessment of data, samples and research results will be provided at no cost to the coastal State(s).

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples and research results:

Assistance in further assessment or interpretation will be provided upon request.

9.6 Proposed means of making results internationally available:

Some results are published in international scientific journals. Unpublished data can be made available by arrangement with the SEA archivist by contacting: SEA Data Archivist, Sea Education Association, P.O. Box 6, Woods Hole, MA 02543, U.S.A. 508-540-3954 x529, fax 508-457-4673, email: dataarchivist@sea.edu, website: www.sea.edu

10. List of Supporting Documentation

| 10.1 List of attachments, such as additional forms required by the coastal State, etc.: | | | | | |
|---|----------------------------|---------------------------|-----------------|--|--|
| Attachment Type | Description | Attachment | Submission Date | | |
| Supplemental Material | Chief Scientist's CV | 9472343750_Charles Lea CV | Sep 12, 2013 | | |
| | | 2009.pdf | | | |
| Proposed Cruise Track | Cruise Prospectus for C251 | 1025781250_C251 Cruise | Sep 12, 2013 | | |
| | _ | Prospectus.pdf | _ | | |