



SEA Expedition

Sea Education Association | SEA Semester • P.O. Box 6 • Woods Hole, MA 02543 • 800.552.3633 • www.sea.edu

PLEASE PRINT THIS DOCUMENT AND CARRY IT WITH YOU

TO: **SEA Expedition** Students
Session II July 29 – August 10, 2019 Boston to Portland, Maine

FROM: Virginia Land McGuire
Associate Dean of Student Services

RE: Program Materials for **SEA Expedition 2019**

*****WELCOME*****

The faculty and staff at the Sea Education Association (SEA) look forward to your participation in our [SEA Expedition](#) program this summer. Please read all of the enclosed important information.

Arrival-Orientation

Plan to arrive in **Boston on July 29th** in time to board the ship, *SSV Corwith Cramer*, at **2:00 PM**. The ship will be docked at the harbor dock at the John Joseph Moakley United States Courthouse, located at One Courthouse Way, Boston, MA. See enclosed **Travel Information** for directions. When you arrive at the ship, you will be given your bunk assignment and can unpack your belongings. The ship will leave the dock between 3:00 and 4:00 PM.

Parents

Parents are welcome to board the ship when their students arrive and get a tour and meet the Faculty & Crew. If your parents are bringing you to the ship in Boston, we hope they will be able to do this.

Academic Program at Sea

The attached "Voyage Prospectus and Research Plan" will provide you with information about the academic program you will undertake at sea. It gives a general idea of the area in which you will be sailing, the science that will be conducted the watch schedule and the group presentations. **Bring school supplies** such as a calculator, notebooks, pens, pencils, etc. It is not necessary to bring your own laptop computer, though you are welcome to bring one if you like.

Going to Sea

To download the "**Organization and Operations Manual for SEA Seminars**" for your SEA Expedition program from the SEA website, go to <http://www.sea.edu/documents/HSEOperationsmanual.pdf>. Read it carefully for useful information about life at sea. The last three pages of that manual include information about what to pack for going to sea on the range of seminar programs SEA offers; **a packing list specific to your SEA Expedition program is attached here**, so that you can start thinking about what you will need to bring.

Communication at Sea

SEA is in radio or satellite contact with our ships daily. If necessary, an emergency message can be passed to you through the office of Student Services. Your parents and friends will be able to check on the ship's location and follow our voyage blog by looking at our web site: www.sea.edu.

Room and Board

Accommodations aboard the *Cramer* are comfortable, but cozy. You and all your belongings (except your foul weather gear) will live in your assigned berth aboard ship. Each berth has a mattress, pillow, and privacy curtain. As noted in the attached packing list, *you must bring your own towels, standard size twin sheets, pillowcase and warm blanket/sleeping bag.* SEA will provide three meals each day with snacks in between. Your payment to SEA has already included money for food while you are aboard ship.

Medical Record

Be sure that you have completed the **SEA Medical Form** (sent in your acceptance package) thoroughly and accurately, have it signed by your physician, and return it to SEA. The staff must be aware of all prescription drugs and any medical concerns or conditions in advance.

PLEASE NOTE: If any changes occur in your health and medical fitness between the time you submit the form and when you arrive in Woods Hole, you are required to inform us of them.

Program Close

The *Corwith Cramer* will arrive at the Portland Shipyard, Portland, Maine by **9:00 AM on August 10th**. The program is over at this time, and **you must make arrangements in advance for going home and tell us of your anticipated travel plans.** See enclosed **Travel Information**. If parents are picking you up at the ship at the Portland Shipyard, there will be an opportunity for them to come aboard briefly and tour the ship.

Tuition, Contract, Refund Policy

A \$300 Deposit is due at the time your acceptance. You will be billed for the remainder of the \$5,200 tuition later. All payments are non-refundable unless your space is filled. Tara Grieb (ext. 542) or treid@sea.edu at SEA can assist you with billing concerns. SEA Financial Aid will appear on your invoice. Direct questions regarding Financial Aid to Virginia Land McGuire, Associate Dean of Student Services and Financial Aid (ext. 557) or vland@sea.edu. Please be sure your contract has been sent to our office.

Questions?

If you have any questions or concerns about *SEA Expedition*, please feel free to call SEA's Office of Student Services at 800-552-3633 (Dale Dean at ext. 535 or Virginia Land McGuire at ext. 557). You may email us at ddean@sea.edu.

A class list will be sent later. Everyone at SEA is looking forward to your participation in this program!

WELCOME...SEE YOU July 29th!



Voyage Prospectus and Research Plan

SEA Expedition, Session II

SEA Expedition is a 13-day offshore summer program. It is a multidisciplinary course that involves students in every aspect of a challenging offshore sailing and oceanographic expedition. **SEA Expedition** occurs entirely aboard the Sailing School Vessel (SSV) *Corwith Cramer*, one of two sailing research vessels operated by Sea Education Association (SEA). The *Cramer* is a 134' steel-hulled brigantine built specifically for SEA to meet our programming needs.

Under the tutorage of professional scientists and crew, **SEA Expedition** students gain hands-on experience conducting oceanographic research, sailing a tall ship, understanding of the complexities of creating and managing marine sanctuaries, and developing crucial leadership and teamwork skills. Activities continue on a 24-hour basis throughout the program, and each student is assigned to a watch team of eight people with whom they rotate throughout a day-and-night schedule throughout the voyage.

SEA Expedition provides students with a unique opportunity to conduct marine research at sea. Our scientific voyage will focus on one or both of two protected offshore marine environments near Cape Cod, MA – Stellwagen Bank National Marine Sanctuary and the Northeast Canyons & Seamounts Marine National Monument. Both are important habitats for rare and endangered species – whales, turtles, seabirds – along with countless other marine organisms. Data collected by **SEA Expedition** students contribute to a cumulative data set that provides critical annual monitoring of these marine protected areas for key stakeholders. Scientific studies are given human background context with discussions of the history and policies behind the marine protected areas we visit. Students return home with a broader sense of the ocean's importance to our planet and the need to preserve this precious resource for future generations.

Central to the SEA experience is the challenge of forming a team to operate a sailing ship at sea. This is accomplished through the sail training and seamanship components of **SEA Expedition**. Teamwork, leadership, community, and a sense of shared mission are core values of all SEA programs, and having students take responsibility for and participate in all operations of a modern sailing research vessel cultivate these life skills. The captain and USCG licensed mates use instruction in navigation, sail handling and watch leadership to explore communication, thoughtful participation, and a planned approach to tasks – all essential in school, the workplace, and in learning to deal successfully with dynamics or unplanned events. **SEA Expedition** participants grow not only as students, but as individuals and contributing members of a ship's company.

This is an academically rigorous program. In addition to routine watch standing duties that are a part of each student's experience at sea, lectures and discussion sections are also an integral part of the learning process. Assignments are given, including individual assignments as well as preparing and presenting a group research project. There is always something new to see, learn, or do! Upon successful completion of **SEA Expedition**, students receive a Certificate of Completion with a ranking as high honors, honors, or pass based on their achievement and effort throughout the program.

General Voyage Plan

SEA Expedition Session II will start in Boston and end in Portland, Maine, but the actual voyage track will be shaped by weather conditions in real time. We expect to sail and collect scientific data in either the Stellwagen Bank National Marine Sanctuary and/or the newly established Northeast Canyons & Seamounts Marine National Monument. Stellwagen Bank is a federally protected marine sanctuary located at the mouth of Massachusetts Bay, north of Cape Cod (see left-hand Figure 1, below). It is a shallow steep-sided underwater plateau surrounded by deeper waters, where upwelling brings nutrients to the surface waters to support a robust and diverse local ecosystem. The Northeast Canyons & Seamounts Marine National Monument is located southeast of Cape Cod at the edge of Georges Bank, designated to protect the ecosystems of four underwater seamounts and three submarine canyons (see right-hand Figure 1, below). One possible voyage track is shown in Figure 2 (next page), in which we would sail through and sample both protected marine regions. Regardless of the voyage track **SEA Expedition** ultimately travels, students will have opportunities to experience and explore a good blend of coastal and offshore conditions.

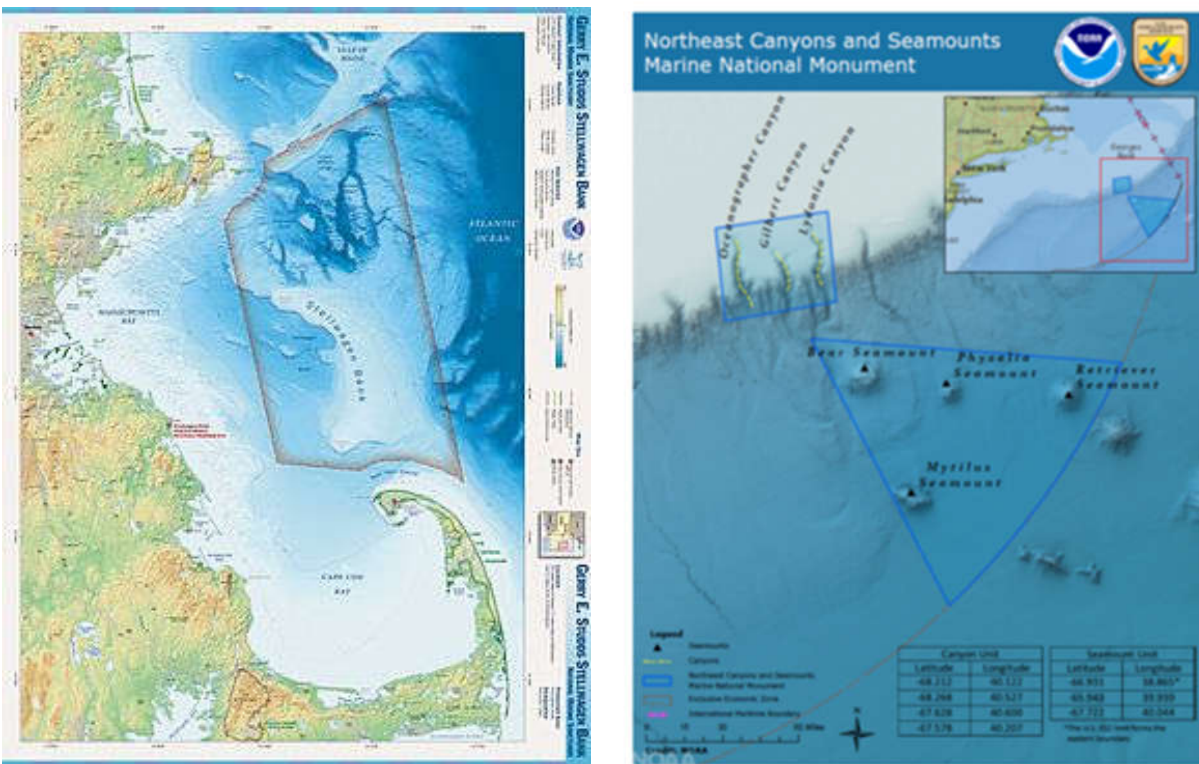


Figure 1. Left figure: Chart of Stellwagen Marine Sanctuary (Source: stellwagon.noaa.gov); Right figure: Chart of Northeast Canyons and Seamounts Marine National Monument (Source: noaa.gov).



Figure 2. Possible SEA Expedition offshore voyage track that travels to both the Northeast Canyons and Seamounts Marine National Monument and Stellwagen Bank National Marine Sanctuary. For scale, the seamount region shown in the lower right corner of this chart (the furthest offshore portion of the illustrated voyage track) is approximately 225nm from Woods Hole.

Shipboard Life

Daily activities aboard the vessel are designed to immerse students in all operations of a modern sailing research vessel - collecting, processing, and analyzing scientific data, operating the vessel's diesel engine, setting and striking sails, helping in the ship's galley, and more. While a watch group is on duty, those students and staff take responsibility for running the lab, the deck, and the galley for the duration of that watch period.

During lab watch, students participate in oceanographic activities led by the professional scientist on duty. Each day they deploy oceanographic instruments at scientific stations to determine characteristics of the water column, the sea floor and the biological organisms of the region. Students also assist in analyzing all data collected during the cruise. These data may include sea temperature, salinity, chemical nutrients, water depth, plankton samples, sediment samples, weather observations, visual and acoustic recording of whales, and more.

During deck watch, students participate in navigational exercises led by the mate on duty. These exercises include opportunities to maneuver the vessel under sail and power, plot courses, and learn about celestial navigation and near-shore piloting with charts, compass, and radar.

Students' work in the galley includes assisting with menu planning, helping the steward prepare snacks or meals, and keeping the galley clean and sanitized. The food is excellent and plentiful – three meals plus three snacks each day. At least once during the voyage students join in a general cleaning of the ship.

Busy as things are, there is still enough free time to make friends, keep a journal, climb aloft to enjoy sunrises, sunsets, and the night sky, and appreciate the awe inspired by the nature and beauty of the offshore setting.

Travel Information
SEA Expedition Session II
(July 29 – August 10, 2019)

TO Corwith Cramer (July 29th), boarding time in Boston at 2:00 PM

The SSV *Corwith Cramer* will be docked at the harbor dock at the John Joseph Moakley United States Courthouse, located at One Courthouse Way in Boston, MA, and that is where you should plan to meet the ship on July 29th. If you are arriving by car, information about harbor dock location, public transportation, and parking information are available at: www.moakleycourthouse.com.

Airline and Bus Arrangements: Please fly into Logan Airport in Boston, MA or travel by bus to Boston's South Station Bus Terminal. As need be, we can meet students arriving by bus or airplane at 1:00 PM at pre-arranged locations at South Station Bus Terminal or Logan Airport, to accompany them to the ship.

Program End Date is August 10, 2019

The *Corwith Cramer* will arrive at Portland Shipyard in Portland, Maine **by 9:00 am on August 10th**. You must make travel arrangements in advance to go home.

Departing by Bus or Airline: Concord Coach Lines (800-639-3317) and Greyhound Bus Lines (207-772-6588) operate buses from Portland to many New England and other destinations. Several airlines provide service from Portland International Jetport (PWM). Both bus stations and the airport are a short distance from Portland Shipyard. As need be, we can accompany students departing by bus or by airplane to either bus station or the Portland airport. If you are departing by airplane, please do not book a flight that departs Portland International Jetport before 1:00 PM.

Departing by Car: If you are being picked up by car, the Portland Shipyard is located on 100 West Commercial Street in Portland, Maine.

It is highly unlikely that there will be any changes in this schedule. However, if weather prevents the ship from arriving at the scheduled time, parents will be notified.

TRAVEL PLANS

To facilitate your arrival at the ship in Boston on July 29th and your departure from the ship in Portland ME on August 10th, please fill out the enclosed **Travel Plan** form and return it to SEA.

Packing List for SEA Expedition High School Programs

- ◆ Space aboard is limited. EVERYTHING you bring, except for foul weather gear, will live with you in your bunk in small shelves or cubbies. Think hard about what you really need.
- ◆ Pack in soft-sided crushable luggage such as a duffel bag or backpack. Do not bring roll-aboard or hard suitcases, as they will be living with you in your bunk as well.
- ◆ Everything you bring to sea will be put to hard use. Clothes will get torn, stained, covered in zooplankton guts & so forth. Think of this as an opportunity to take some of your oldest T-shirts out for one last fling (& maybe not bring them back).
- ◆ Everything you bring should be comfortable & easy to move in. You will change your clothes much less frequently than you do on land. Plan to wear things for multiple days.
- ◆ Layering is key – clothes that fit over/under other layers are best. For both base & outer layers, fibers that dry quickly (such as nylon, capilene, polypropylene, fleece & wool) are better than heavy cotton. Avoid heavy cotton items, denim & thick towels; once wet, they will never dry.
- ◆ Protection from the elements is crucial. Make sure to have a broad-brimmed hat, polarized sunglasses & light-weight long sleeves for sunny conditions as well as sufficient warm layers & a hat for the cold.
- ◆ If you wear prescription glasses, bring a second pair. If you wear contact lenses, you must bring your glasses as well.
- ◆ The ship has a few desktop computers for your use; however, if you think that you'll need a laptop for project work, you are welcome to bring it. Laptops will be used exclusively for academic work (there is no internet access onboard the ship). You will keep your computer below decks where standard care will keep it safe at sea.
- ◆ DO NOT BRING: SCUBA gear, hair dryers or irons, food, candy or liquor.

Items You Must Bring:

Waterproof foul weather gear, jacket & pants	1 set – robust gear recommended (hiking-type “breathable” gear won’t cut it if you’re on watch in the rain for 6 hours). <i>Please contact SEA if you have questions about what you should be looking for.</i>
Rain boots	Required – inexpensive ones are fine; should fit with 2 pairs of warm socks.
Shoes, non-skid/rubber-soled	2-3 pairs – 1 Teva/Chaco/Keen or similar with heel strap & 1 pair closed-toe, captured-heel sneakers. <i>Flip-flops & Crocs are not allowed to be worn on watch.</i>
Light jacket	1, optional – windbreaker or shell, for an outer layer when it’s not raining.
Sweaters or Fleece	1-2 – wool or synthetic only. Layers of different weights are ideal, so you can combine them in a variety of ways; <u>must</u> fit under raincoat.
Additional warm layer	1 – vest or midweight synthetic top.

Long underwear	1 pair, both tops & bottoms – synthetic only, different weights ideal.
Pants	2 pairs – at least 1 pair lightweight canvas or synthetic recommended.
Shorts	1-2 pairs – quick-dry or cotton is fine.
Long-sleeved shirts	1-2 – quick-dry or cotton is fine, for a mix of sun protection & layering.
T-shirts & tanks	3-4 – quick-dry or cotton is fine.
Underwear	Enough for the entire cruise.
Socks	2-4 pairs, wool or synthetic only – wet cotton will freeze your feet.
Swimsuits	1
Hat, broad-brimmed	1 – for sun protection.
Hat, warm	1 – wool or synthetic only.
Gloves, warm	1 pair – wool or synthetic only.
Clean “travel” clothes	1 set – keep in a Ziploc bag during trip.
Towel	1 – light & quick-drying only.
Twin sheets & pillowcase	1 set, top & bottom; plus an extra set if room; pillowcase.
Sleeping bag or Blanket	1 – three-season weight recommended.
Sunblock & Lip Balm	SPF 30 or greater for both.
Sunglasses	1-2 pairs, with UV protection & strap; polarized is a good idea.
Toilet Kit	Toothpaste, toothbrush, shampoo, body wash, an appropriate supply of feminine hygiene products, etc. <i>Please remove excess plastic packaging before joining the ship & avoid plastic beads in products.</i>
Prescription medications	You <u>must</u> bring a 150% supply of any medications you will need at sea. <i>Redundancy is critical in case of loss or seasickness.</i>
Insect Repellent	1 – DEET or equivalent; plus anti-itch cream if you anticipate wanting it.
Flashlight or headlamp	1 small, with extra set of batteries.
Wristwatch	1 – water-resistant & digital.
Water bottle	1 – durable, 1 Liter volume recommended.
Notebook/pens/pencils	Whatever you need for academic work.
Cash & Credit/ATM Cards	<i>Enough for your pre and post cruise travel needs</i>

Optional Items to Bring: Small folding knife (if you bring a knife, please make certain that the tip is blunt, that the folding blade locks in place when open, and that the blade is no longer than 3-4”), writing material, reading material, camera, chargers, musical instrument, Ziploc/waterproof bags, USB or external hard drive to transfer pictures/personal files.

SEA Expedition Session II Student Travel Plan
July 29, 2019- August 10, 2019

Please arrive in Boston on July 29, 2019 in time to board the ship at 2pm
The Corwith Cramer will be at the harbor dock at the John Joseph Moakley United States Courthouse in Boston.

Name: _____

Time of arrival _____ **by Car** **by Bus** **by Plane**

If arriving by BUS please provide arrival time at South Station, Boston or by PLANE please provide arrival time at

Logan Airport and airline

The SEA Expedition Session II program will arrive in Portland ME by 9 am on August 10th.

I will be picked up at the dock

Please provide the name of the person who will be picking you up

I will need transportation to the Bus Station or Airport

(If you are going to Portland International Jetport, do not book a flight out of Portland before 1:00 pm)

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Please contact SEA if there are any questions. Contact Dale Dean at ddean@sea.edu or 508-444-1923 or Virginia Land McGuire at vland@sea.edu or 508-444-1937.