DRAFT Prospectus for RV Falkor (too) expedition Fkt231202 Dec 2023

Octopus Odyssey (too)

Cruise ID: Fkt231201
Vessel: RV Falkor (too)
Ports: Mobilization - Balboa, Panama; Demobilization - Golfito, Costa Rica

Dates:
Mobilization starts: 30 November 2023
Departure: 2 December 2023
Return: 15 December 2023
Demobilization: 16 December 2023

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Cruise Overview

The OctoOdysseyToo Fkt231202 expedition will be very similar in operations to those on OctoOdyssey Fkt230602, focusing on a region of seamounts and outcrops offshore Guanacaste, Costa Rica, where abyssal hydrothermal springs and octopus nurseries have previously been identified (Figure 1). The abyssal plain in this region is roughly 3000-3200 m water depth, and the outcrop features rise in height from 150-900 m.

Permission to conduct international Marine Scientific Research in Costa Rica’s waters was given diplomatic consent by the Costa Rican Ministry of Foreign Affairs to the US Embassy (DNS-2023-0126). This basic research was conducted with the permission to access genetic and biochemical elements and resources of biodiversity or associated traditional knowledge given by the National Commission for the Management of Biodiversity (Comisión Nacional para la Gestión de la Biodiversidad, CONAGEBIO) of the Ministry of Environment and Energy (Ministerio de Ambiente y Energía, MINAE) of Costa Rica (Permit R-026-2023-OT-CONAGEBIO to Dr. Jorge Cortés-Núñez). We also acknowledge the prior informed consent of the Minister of Fisheries and Aquaculture, Mr. Heiner Méndez Barrientos of the Costa Rican Institute of Fisheries and Aquaculture (INCOPECSA). All publications and presentations should reference this permit information. All specimens are archived at the Museum of Zoology at the University of Costa Rica.

Figure 1. Overview map of Fkt231202

Planned cruise track to and from the primary working region (see Figure 2), made using Marine Facilities Planning portal. Transit from the mobilization port of Balboa will be significantly longer than during Fkt230602, estimated to take 70.5 hours (~560 miles @ 8 knots). Transit to the demobilization port at Golfito is estimated to take 35 hours. See Table 1 for Operations sequence and Table 2 for coordinate information.
Operations Overview

The science party will begin mobilization of the vessel on 30 November, with a departure expected on 2 December. Please note that departure may occur earlier at the captain's discretion. See Mobilization section for more details about what to expect.

We are expecting a 70+ hour transit. During this time, the science party should be prepared to give short (~10-15 minute) presentations about their work for the crew, to help them to understand the mission of the expedition and share our science with them.

Once on site, operations will consist primarily of alternating 16-hour ROV dives with CTD casts or multibeam operations during 8-hour ROV turnaround periods (Table 1). The ROV dives will focus on revisiting outcrop features that were explored on Fkt230602, to expand sampling and collect time series information. Our primary targets will be Tengosed seamount, Dorado Outcrop, Caballito outcrop, an unnamed outcrop E of Caballito, and Fuente Seamount (Figure 2, Table 2). If time allows, we may revisit an unnamed outcrop SW of Fuente Seamount and/or explore other outcrop and seamount features in the working area. CTD work will reoccupy sites in the center of the region that were sampled on Fkt230602, for seasonal comparison. Limited multibeam mapping may be conducted around the unnamed outcrop E of Caballito to improve resolution in this area. No elevator operations are planned.

Table 1. Overview of cruise plan by day - NOT UPDATED YET

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Figure 2. Zoomed in map of working area with site names.
Numbers indicate sequence of operations. Purple markers indicate ROV Dive targets; blue markers indicate CTD stations.
Table 2. Site locations

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The ROV will be configured in a similar way as on Fkt230602 with two new third-party equipment additions (Figure 3). In brief, the starboard rail will be replaced by the third-party heat flow probe provided by UCSC; the port rail will have push cores mounted; and the basket will contain one small and one large biobox, coral quivers, divided and undivided milk crates or holsters for milk crates (some containing nets and scoops), the temperature probe, Excaliber, and the suction sampler nozzle. The ROV will also have Niskin bottles for water sampling, the CTD sensor suite for water property measurement, and the 8-chamber suction sampler. The two new third-party components will include a custom fluid sampling system provided by co-I Huber and a dissolved oxygen Aanderaa optode sensor provided by co-I Wheat. Both of these pieces of equipment will require power and data connections. We propose to mount the fluid sampling system sled and electronics on the aft port side of the ROV, with the sampling intake tubing plumbed to a holster on the basket. The dissolved oxygen system electronics can be mounted on the starboard aft side of the ROV, with the sensor wand mounted in a holster on the basket.
Figure 3. Example ROV Basket configuration.

Front to back, left to right: Divided milkcrate with squeezer samplers, divided milk crate for rock samples (can be replaced for deploying or recovering OsmoSampler milk crates), coral quivers (some can be replaced for holsters for oxygen probe and/or fluid sampling wand), small biobox with divider, large biobox with two dividers, undivided milk crate for nets and scoops. Not shown in front of basket: Excalibur, suction sampler hose. To the right of the basket is the port side rail with push cores. Above the basket are the 8-chamber suction sampler and triggers for Niskin bottles (not shown). Not shown on the starboard side is the UCSC heat flow probe.

General ROV operations will include temperature and dissolved oxygen measurement of fluids venting from diffuse hydrothermal springs (expected max temperatures of ~12°C), sampling of venting fluids with two types of third party instruments (i.e. squeezers and the new fluid sampling system), video observation of animals, collection of different types of experiments placed on the seafloor during Fkt230602, collection of animal specimens including octopus, collection of sediment push cores, collection of bottom water with Niskin bottles, collection of rock samples, conducting forward-looking camera photographic transects under standard conditions, and collection of heat flow data in sedimented areas. Dive operations will be logged in SeaLog, with video annotation supported by Tator.
In the shipboard laboratories, animal specimens will be photographed and then dissected on the benchtop and preserved in alcohol, formaldehyde or frozen. It is essential to have shipboard seawater available, preferably chilled, for transferring animal specimens from the ROV. Water samples will be subdivided and preserved for various shore-based chemical and molecular analyses, with the remainder filtered for shore-based taxonomic research. Rock and sediment samples will be similarly distributed and preserved for shore-based analysis. Heat flow, bathymetric, CTD and ADCP data will be processed shipboard in the dry lab. At the end of the cruise, samples will be arranged for temperature-sensitive shipment.

**Dive Priorities - NOT REVISED YET**

1. **Dive #1 - S0619 - START AT DORADO - TENTATIVE**
   a. **Marker KRW**
      i. Recover 2x T loggers
      ii. Recover OsmoSampler
      iii. Recover 2x microbe trap experiments + one small rock
      iv. Recover 2-4x animal shelters
      v. Recover 1x wood fall bag
      vi. Measure and sample venting fluids
      vii. Observe octopus specimens (only collect eggs on this dive due to space)
      viii. Conduct standard transects
      ix. Collect other high-target specimens (coral quivers & suction sampler only)
      x. If possible collect push cores

2. **Tengosed Seamount**
   a. **Marker X**
      i. Recover T logger
      ii. Deploy fast flow OsmoSampler
      iii. Measure and sample venting fluids
      iv. Collect rock samples
   b. **Skate Park**
      i. Explore for venting
      ii. Collect rock samples
      iii. Collect specimen samples
      iv. Video transects
   c. **General**
      i. If observed, collect 1-2 octopus specimens
      ii. Conduct standard transects
      iii. Collect coral specimens for Rotjan challenge experiment
      iv. Collect other high-target specimens
      v. Collect Niskin samples of bottom water
      vi. Collect push cores
      vii. Adding for María - sampling escapment
4. Dive #3 Unnamed outcrop E of Caballito
   a. Marker Q
      i. Deploy fast flow OsmoSampler
      ii. Recover T logger
      iii. Recover OsmoSampler
      iv. Recover microbe trap
      v. Recover wood fall bag
      vi. Measure and sample venting fluids
      vii. Collect rock samples
      viii. Observe and collect octopus specimens
     ix. Conduct standard transects
     x. Collect other high-target specimens
   b. General, if time allows
      i. Explore other areas for venting
      ii. Collect additional heat flow measurements
      iii. Collect Niskin samples of bottom water
      iv. Collect push cores

5. Dive #4 Caballito
   a. Collect heat flow measurements in transects towards outcrop
   b. On rocky areas,
      i. Observe and collect octopus specimens (Graneledone target)
      ii. Collect rock samples

6. Dive #5 Dorado Outcrop
   a. Marker KRW
      i. Recover 2x T loggers
      ii. Recover OsmoSampler
      iii. Recover 2x microbe trap experiments + one small rock
      iv. Recover 2-4x animal shelters
      v. Recover 1x wood fall bag
      vi. Measure and sample venting fluids
      vii. Observe octopus specimens (only collect eggs on this dive due to space)
     viii. Conduct standard transects
      ix. Collect other high-target specimens (coral quivers & suction sampler only)
     x. If possible collect push cores

7. Dive #6 Fuente
   a. Collect transect of sediment sampling along exposed cliff
   b. Conduct standard photo transects
   c. General, if time allows
      i. If observed, collect 1-2 octopus specimens
      ii. Collect other high-target specimens
      iii. Collect heat flow measurements
      iv. Collect push cores

8. Dive #7 Dorado Outcrop
   a. Marker RKW
i. Finish up any recoveries not yet completed
ii. Measure and sample fluids
iii. Collect additional rock samples as needed

b. Marker D
   i. Collect animal shelters
   ii. Measure and sample fluids
   iii. Collect additional rock samples as needed

c. Marker A
   i. Recover T logger
   ii. Recover microbe trap experiment + one rock
   iii. Measure and sample fluids

d. Nodule area
   i. Recover microbe trap experiment

e. General
   i. Collect other high-target specimens
   ii. If time allows, conduct additional photo transects
   iii. Collect push cores

9. Dive #8 Tengosed Seamount
   a. Marker X
      i. Recover fast flow OsmoSampler
      ii. Measure and sample fluids
      iii. Collect rock samples
   b. General as time allows
      i. Collect other high-target specimens + coral samples for challenge experiments
      ii. Conduct additional photo transects
      iii. Explore for other vent sites or places we have not yet gone to
      iv. Collect push cores

10. Dive #9 Unnamed outcrop E of Caballito
    a. Marker Q:
       i. Recover fast flow OsmoSampler
       ii. Measure and sample fluids
       iii. Collect rock samples
    b. General as time allows
       i. Collect other high-target specimens
       ii. Conduct additional photo transects
       iii. Explore for other vent sites or places we have not yet gone to
       iv. Collect push cores

11. Dive #10 Caballito
    a. Conduct heat flow surveys
    b. General as time allows
       i. Collect other high-target specimens
       ii. Conduct additional photo transects
       iii. Collect push cores
12. Filming priorities:
   a. Octopus 😃
   b. Venus vase sponges with shrimp:
      i. Candidate site #1 - Dorado Outcrop: 9.087703 / -87.100323, 3035m (Dive 542, 2023-06-19 21:40)
      ii. Candidate site #2 - Tengosed: 9.120591 / -86.943630, 2017m (Dive 541, 2023-06-18 17:30)
   c. Tripod fish:
      i. Candidate site #1 - Fuente: 8.74421 / -87.206703, 3076m (Dive 531, 2023-06-05 23:28)

13. Transect Priorities:
   a. Priorities: Briefly, 4x random orientation 100-m transects per habitat type
      i. Tengosed - skate nursery/outcrop, abyssal plain, other sites
      ii. Unnamed outcrop E Caballito - ridge edge on non-venting side, abyssal plane
      iii. Caballito - outcrop
      iv. Any new sites - at each habitat
      v. Dorado - outcrop
      vi. Unnamed outcrop SW Fuente - outcrop
      vii. Additional transects where previously done to assess seasonal variation
   b. Settings:
      i. 0.1 m/sec
      ii. 1 m above bottom
      iii. 100 m length
      iv. Lasers on
      v. SCI camera with no zoon tilted to just above basket edge
      vi. Random heading if possible
      vii. REMEMBER TO LOG START/STOP IN SEALOG!
## Science Party
### Shipboard

<table>
<thead>
<tr>
<th>Person</th>
<th>^</th>
<th>Role</th>
<th>Country - Institution</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHIPBOARD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beth Orcutt</td>
<td>S</td>
<td>Co-Chief Sci; MBIO</td>
<td>USA - Bigelow</td>
<td>b <a href="mailto:orcutt@bigelow.org">orcutt@bigelow.org</a></td>
</tr>
<tr>
<td>Jorge Cortés</td>
<td>S</td>
<td>Co-Chief Sci; Coral</td>
<td>CRI - UCR</td>
<td><a href="mailto:jorge.cortes@ucr.ac.cr">jorge.cortes@ucr.ac.cr</a></td>
</tr>
<tr>
<td>Ryu Akiba</td>
<td>G</td>
<td>Heat flow</td>
<td>USA - UCSC</td>
<td><a href="mailto:rakiba@ucsc.edu">rakiba@ucsc.edu</a></td>
</tr>
<tr>
<td>Oscar Almacen</td>
<td>G</td>
<td>microbes</td>
<td>USA - CalState LA</td>
<td><a href="mailto:malmace@calstatela.edu">malmace@calstatela.edu</a></td>
</tr>
<tr>
<td>Diva Amon</td>
<td>E</td>
<td>Benthic Megafauna</td>
<td>TTO - SpeSeas</td>
<td><a href="mailto:divaamon@gmail.com">divaamon@gmail.com</a></td>
</tr>
<tr>
<td>Odalisca Breedy</td>
<td>S</td>
<td>Octocorals</td>
<td>CRI - UCR</td>
<td><a href="mailto:odalisca.breedy@ucr.ac.cr">odalisca.breedy@ucr.ac.cr</a></td>
</tr>
<tr>
<td>Sergio Cambronero</td>
<td>E</td>
<td>Hydrography</td>
<td>CRI - UNA</td>
<td><a href="mailto:sergiocambrosces@gmail.com">sergiocambrosces@gmail.com</a></td>
</tr>
<tr>
<td>José Leonardo Chacón-Monge</td>
<td>G</td>
<td>Echinoderms</td>
<td>CRI-UCR</td>
<td><a href="mailto:jose.chaconmonge@ucr.ac.cr">jose.chaconmonge@ucr.ac.cr</a></td>
</tr>
<tr>
<td>Andrew Fisher</td>
<td>S</td>
<td>Hydrogeology</td>
<td>USA - UCSC</td>
<td><a href="mailto:afisher@ucsc.edu">afisher@ucsc.edu</a></td>
</tr>
<tr>
<td>Julie Huber</td>
<td>S</td>
<td>MBIO</td>
<td>USA - WHOI</td>
<td><a href="mailto:jhuber@whoi.edu">jhuber@whoi.edu</a></td>
</tr>
<tr>
<td>Beatriz Naranjo</td>
<td>G</td>
<td>Web tools</td>
<td>CRI - UCR</td>
<td><a href="mailto:beanaranjo@gmail.com">beanaranjo@gmail.com</a></td>
</tr>
<tr>
<td>Marino Protti</td>
<td>S</td>
<td>Geology</td>
<td>CRI - UNA</td>
<td><a href="mailto:maino.protti.quesada@una.cr">maino.protti.quesada@una.cr</a></td>
</tr>
<tr>
<td>Gustavo Ramírez</td>
<td>E</td>
<td>MBIO</td>
<td>USA - CalStateLA</td>
<td><a href="mailto:gramir157@calstatela.edu">gramir157@calstatela.edu</a></td>
</tr>
<tr>
<td>Randi Rotjan</td>
<td>S</td>
<td>Corals</td>
<td>USA - Boston U</td>
<td><a href="mailto:rrotjan@bu.edu">rrotjan@bu.edu</a></td>
</tr>
<tr>
<td>Celeste Sánchez-Noguera</td>
<td>E</td>
<td>Ocean acidification</td>
<td>CRI - UCR</td>
<td><a href="mailto:CELESTE.SANCHEZNOGUERA@UCR.AC.CR">CELESTE.SANCHEZNOGUERA@UCR.AC.CR</a></td>
</tr>
<tr>
<td>María Isabel Sandoval</td>
<td>S</td>
<td>Paleoceanography</td>
<td>CRI - UCR</td>
<td><a href="mailto:mariaisabel.sandoval@ucr.ac.cr">mariaisabel.sandoval@ucr.ac.cr</a></td>
</tr>
<tr>
<td>Amanda Sutherland</td>
<td>E</td>
<td>Engineer</td>
<td>USA - WHOI</td>
<td><a href="mailto:asutherland@whoi.edu">asutherland@whoi.edu</a></td>
</tr>
<tr>
<td>Fiorella Vásquez Fallas</td>
<td>G</td>
<td>Octopus</td>
<td>CRI - UCR</td>
<td><a href="mailto:f.vasquezfallas@gmail.com">f.vasquezfallas@gmail.com</a></td>
</tr>
<tr>
<td>Janet Voight</td>
<td>S</td>
<td>Octopus taxonomy</td>
<td>USA - Field Museum</td>
<td><a href="mailto:jvoight@fieldmuseum.org">jvoight@fieldmuseum.org</a></td>
</tr>
<tr>
<td>Geoff Wheat</td>
<td>S</td>
<td>Geochemistry</td>
<td>USA - UAF</td>
<td><a href="mailto:cgwheat@alaska.edu">cgwheat@alaska.edu</a></td>
</tr>
</tbody>
</table>

^ = Career Stage: E, early career professional; G, graduate student; P, Postdoc; S, senior scientist
Shorebased collaborators with Tator access

- Reminder of Tator tutorial: [Tator-useful-links.docx](#)

<table>
<thead>
<tr>
<th>Shorebased</th>
<th>Role</th>
<th>Country - Institution</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Auscavitch</td>
<td>Fauna</td>
<td>US - Boston U</td>
<td><a href="mailto:steven.auscavitch@temple.edu">steven.auscavitch@temple.edu</a></td>
</tr>
<tr>
<td>Erik Cordes</td>
<td>Corals</td>
<td>US - Temple</td>
<td><a href="mailto:erik.cordes@temple.edu">erik.cordes@temple.edu</a></td>
</tr>
<tr>
<td>Emily Cowell</td>
<td>Cold seep ecology</td>
<td>USA - Temple</td>
<td><a href="mailto:emily.cowell@temple.edu">emily.cowell@temple.edu</a></td>
</tr>
<tr>
<td>Maila Guilhon</td>
<td>Capacity building</td>
<td>GER - IASS</td>
<td><a href="mailto:maila.guilhon@iass-potsdam.de">maila.guilhon@iass-potsdam.de</a></td>
</tr>
<tr>
<td>Anne Hartwell</td>
<td>Benthic ecology</td>
<td>USA - UNH</td>
<td><a href="mailto:annemariehartwell@gmail.com">annemariehartwell@gmail.com</a></td>
</tr>
<tr>
<td>Rachel Lauer</td>
<td>Hydrogeology</td>
<td>CAN - UCalgary</td>
<td><a href="mailto:rachel.lauer@ucalgary.ca">rachel.lauer@ucalgary.ca</a></td>
</tr>
<tr>
<td>Holly Lutz</td>
<td>Animal MBIO</td>
<td>USA - UCSD</td>
<td><a href="mailto:hlutz@ucsd.edu">hlutz@ucsd.edu</a></td>
</tr>
<tr>
<td>Wendolyn Matamoros</td>
<td>Black corals</td>
<td>CRI - UCR</td>
<td><a href="mailto:wendolyn.matamoros@ucr.ac.cr">wendolyn.matamoros@ucr.ac.cr</a></td>
</tr>
<tr>
<td>Rob Perrin</td>
<td>Geophysics</td>
<td>CAN - UCalgary</td>
<td><a href="mailto:robert.perrin@ucalgary.ca">robert.perrin@ucalgary.ca</a></td>
</tr>
<tr>
<td>Miguel Semedo</td>
<td>MBIO</td>
<td>PRT - CIMAR</td>
<td><a href="mailto:msemedo@ciimar.up.pt">msemedo@ciimar.up.pt</a></td>
</tr>
</tbody>
</table>

^ = Career Stage: E, early career professional; G, graduate student; P, Postdoc; S, senior scientist

SOI staffing

Department Heads:
- Allan (Al) Doyle
- Lead Technician: John Fulmer
- Chief Officer: Anthony McCann
- Chief Engineer: Dan Buehler
- Purser: Jessica Van Jaarsveldt
- AV/IT: Todor Gerasimov
- ROV Lead: Jason Rodriguez

Multimedia Correspondent:
- [Conor Ashleigh](#)

Multimedia Technician:
- [Sofya Pesternikova](#)

Berths of Opportunity:
- [Valeria Naranjo-Aguilar](#) (UCR student)
- [Nixon Lara-Quesada](#) (INCOPEsca)

Artist at Sea:
- [Diego Gamero](#)
Proposed ROV Shifts & Activity Leads

- Reminder of Octopus Odyssey Talking Points English

<table>
<thead>
<tr>
<th>Shift</th>
<th>Dive lead</th>
<th>SeaLog</th>
<th>Dive lead Alternate</th>
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<tr>
<td>Descent</td>
<td>Orcutt/Huber</td>
<td>Orcutt/Huber</td>
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<tr>
<td>7:15-8</td>
<td>Voight</td>
<td>Akiba</td>
<td>Wheat</td>
</tr>
<tr>
<td>8-9</td>
<td>Sandoval^</td>
<td>&quot;</td>
<td>Wheat</td>
</tr>
<tr>
<td>9-10</td>
<td>Amon</td>
<td>Chacón</td>
<td>Wheat</td>
</tr>
<tr>
<td>10-11</td>
<td>Naranjo^</td>
<td>&quot;</td>
<td>Wheat</td>
</tr>
<tr>
<td>11-12</td>
<td>Protti^</td>
<td>&quot;</td>
<td>Orcutt</td>
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<tr>
<td>12-13</td>
<td>Sánchez^</td>
<td>Almacen</td>
<td>Rotjan</td>
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<tr>
<td>13-14</td>
<td>Ramírez</td>
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<td>Rotjan</td>
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<tr>
<td>14-15</td>
<td>Cambronero^</td>
<td>Naranjo</td>
<td>Rotjan</td>
</tr>
<tr>
<td>15-16</td>
<td>Breedy^</td>
<td>&quot;</td>
<td>Rotjan</td>
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<tr>
<td>16-17</td>
<td>Rotjan</td>
<td>Vásquez</td>
<td>Orcutt</td>
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<tr>
<td>17-18</td>
<td>Fisher</td>
<td>&quot;</td>
<td>Orcutt</td>
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<tr>
<td>18-19</td>
<td>Cortés^</td>
<td>Akiba</td>
<td>Orcutt</td>
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<tr>
<td>ascent</td>
<td>n.a.</td>
<td>Cambronero</td>
<td>n.a.</td>
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</tbody>
</table>

^ primarily narrating in Spanish

<table>
<thead>
<tr>
<th>Activity</th>
<th>Decision Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPR sampler</td>
<td>Huber or Sutherland</td>
</tr>
<tr>
<td>Heat flow measurements</td>
<td>Fisher or Akiba</td>
</tr>
<tr>
<td>Specimen collection</td>
<td>Breedy</td>
</tr>
</tbody>
</table>

Logistics
Working areas

Lab layout plan for expedition: Fkt231202 Lab layout plan

What to expect about life on the Falkor (too)

- Watch this recording from April 2023 where “what to expect” was discussed
- Code of Conduct - Bottom line: Harassment and bullying will not be tolerated.
  - SOI’s Harassment and Bullying guidelines and Say No to Harassment video
  - COBRA’s Code of Ethics and Professional Conduct
  - If you ever have an issue that you would like to report, there are multiple people who will listen and help address it:
    - Co-leads: Jorge (WhatsApp +506 8994-6220; jorge.cortes@ucr.ac.cr) and Beth (WhatsApp +1 682-970-0499; borcult@bigelow.org)
    - If you are nervous about reporting to a co-lead, Diva Amon has agreed to be another science party advocate (WhatsApp +1 868-790-3207; divaamon@gmail.com)
    - You can also report an issue directly to the Director of Human Resources at Bigelow Laboratory for Ocean Sciences. Margaret McDiarmid, mmcdiarmid@bigelow.org, phone +1 207-315-2567 ext 119)
    - Schmidt Ocean Institute
      - Captain/Master - captain@falkortoo.org
      - Lead Marine Technician - leadtech@falkortoo.org
- Review of “what to bring” and “what to expect”, shared berthing and bathrooms
  - What to expect about living on Falkor (too) - info on meals, trash, power, internet, laundry, recreation
  - TAKE NOTE ABOUT POWER OUTLETS IN BERTHING!!!
  - Same-gender shared berthing policy, and shared bathrooms: “Mixed Gender Cabin Berthing Policy” - Schmidt Ocean Institute believes in creating a respectful environment that supports our crew, scientists and other personnel to do their best work while aboard Falkor. As part of this effort, SOI strives to provide berthing accommodations aboard Falkor that are safe, equitable, inclusive and respectful of personal privacy. All individuals will be assigned a berth in a shared same-gender cabin based on their stated gender. Single berth cabins are reserved for Falkor’s senior officers and chief scientist. Mixed gender cabin sharing is not allowed unless there is a specific request to be considered in advance and approved by the Director of Operations.”
  - Berths are small - try to pack light, use a duffel bag suitcase if possible
  - Berths are not soundproof - bring earplugs
  - Shower in bathrooms don’t have a lip to prevent water from getting everywhere, so bring shower shoes
  - What to expect about office support - info on computers, printing, office supplies, etc.
What to expect about medical care - reminders about emergency medical care, medications, etc.

Recommended packing list
- Bring at least two pairs of closed-toe shoes!

Arrival and departure from the ship
- Cheat sheet with common nautical terms, to help you understand directions on a ship
- Info about alarms and safety drills on the vessel

Copying data/video at end of cruise:
- If you want copies of data and/or photos/videos, you need to bring your own hard drives for copying this information. For reference, on the June expedition, we had ~1TB of data, 1TB of photo and highlight clips, and 30+ TB of video data. Here is an option:

Mobilization

Important reminders:
- Don't forget your passport!
- COVID testing required 48 hours prior to travel to Balboa!
  - Please use this form 'Negative COVID Test Results' to upload your negative results.

Locations:
- We will be boarding the vessel via water taxi from the Flamenco Marina

Timeline:
- 29 November
  - All science party should be in Balboa, Panama
  - Group dinner: 6:00PM at La Compañia Hotel
  - Recommended hotel: see travel plan
- 30 November:
  - 06:15 pickup at Tantalo & 06:30 Cascades AirBnB to bring to Flamenco marina for 07:30 water taxi transit to the vessel, including time for immigration paperwork.
  - Mobilization activities: Safety briefings, lab set up, etc.
  - Lunch and dinner on board
  - Science party must be on board until 17:00
  - All science party stays on board overnight
- 1 December:
  - Mobilization continues - science party needs to be on board from 09:00-17:00
  - Lunch and dinner on board
  - All science party stays on board overnight
2 December:
- Vessel departs Balboa, Panama. Expect ~71 hour transit.

Port agent - **Balboa, Panama**

<table>
<thead>
<tr>
<th>Prime Agency Name:</th>
<th>Gateway Transit Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Agency Name:</td>
<td>Gateway Transit Ltd. Marr Center (Former Bldg #798) Williamson Place La Boca Road Balboa Ancon / Panama City Rep of Panama</td>
</tr>
<tr>
<td><strong>Agency Full Style Address:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Agency Point-of-Contact 1</strong></td>
<td>John Bamber</td>
</tr>
<tr>
<td><strong>Agency Point-of-Contact 2</strong></td>
<td>James Bamber</td>
</tr>
<tr>
<td><strong>Office Phone 1</strong></td>
<td>Tel: +507-211-9449</td>
</tr>
<tr>
<td><strong>Office Phone 2</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Facsimile</strong></td>
<td>Fax: +507-211-9450</td>
</tr>
<tr>
<td><strong>Mobile Phone 1</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Mobile Phone 2</strong></td>
<td></td>
</tr>
<tr>
<td><strong>E-mail 1</strong></td>
<td><a href="mailto:jbamber@wilgat.com">jbamber@wilgat.com</a>, <a href="mailto:jbbamber@yahoo.com">jbbamber@yahoo.com</a></td>
</tr>
<tr>
<td><strong>E-mail 2</strong></td>
<td><a href="mailto:james@shipsagent.com">james@shipsagent.com</a>, <a href="mailto:gateway@shipsagent.com">gateway@shipsagent.com</a></td>
</tr>
<tr>
<td><strong>website</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Shipping Address (mail and small hand carried packages under 30kg)</strong></td>
<td>Please use this <strong>exact address</strong> Master R/V FALKOR (too) <strong>Attn:</strong> c/o Gateway Transit Ltd. International Business Park Building 3185, Office 305 Boulevard Panama Pacifico Panama Pacifico - Howard Panama, Republic of Panama Tel: +507-282-0850</td>
</tr>
</tbody>
</table>
Shipping Address (packages over 30kg and air freight)

Please use this **exact address**

Master R/V FALKOR (too) **Attn:**
c/o Gateway Transit Ltd.
International Business Park
Building 3185, Office 305
Boulevard Panama Pacifico
Panama Pacifico - Howard
Panama, Republic of Panama

Tel: +507-282-0850

Falkor's Physical Location

Note 0: DHL is preferred international carrier.

Note 1: Include our prime agent’s email addresses in all email correspondence.

Note 2: All spares should be sent freight fully prepaid and consigned to the Master c/o GATEWAY TRANSIT LTD and clearly marked: **SHIP’S STORES IN TRANSIT.**

Special Instructions

Note 3: Agent will require a copy of the AWB & flight details in order to arrange necessary customs clearance and delivery.

Note 4: Agent will require consignment to arrive Panama at least 72 hrs prior vessel arrives and within working weekdays (Monday-Friday), otherwise can not grant timely clearance nor delivery on board upon arrival as clearance can not be effected on weekends.

Note 5: Spares should be dispatched to Tocumen International Airport (PTY)

Demobilization

We will arrive in Golfito at TBD time on Friday 15 December. Primary tasks for this day will include offloading all gear, arranging for gear shipments, and arranging for sample shipments. Colleagues from UCR will meet us in port with dry ice.

We will provide a ship’s tour for a VIP tour group being organized by Jorge. All visitors must complete SOI’s [Visitor Form](#) and the [COVID-19 Test Results](#) form online.

Expect that there will be a group dinner somewhere on 15 December. We will stay on board the ship on the evening of 15 December, then depart in the morning on 16 December. There will be
a UCR shuttle bus to drive us back to San José. If you will be flying out, please do not plan to depart any earlier than late evening 16 December.

Port agent *Golfito, Costa Rica*

<table>
<thead>
<tr>
<th>Agency Name:</th>
<th>SERMAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agency Point-of-Contact 1</strong></td>
<td>Manuel Fernandez Conroy - local agent</td>
</tr>
<tr>
<td><strong>Office Phone 1</strong></td>
<td>(506) 6043-2909</td>
</tr>
<tr>
<td><strong>E-mail 1</strong></td>
<td><a href="mailto:manuel.fernandez@sermarcr.com">manuel.fernandez@sermarcr.com</a></td>
</tr>
</tbody>
</table>

**Shipping Address** *(mail and small hand carried packages under 30kg)*

*(use FEDEX if possible)*

Master R/V FALKOR (too) in transit to Golfito, Costa Rica
Attn: [name of HOD]
c/o Manuel Fernandez Conroy / Servicios Maritimos del Pacifico.
Condominio Hacienda Los Maderos, casa #39
(400 mts oeste de la Escuelita de Brasil de Mora)
Ciudad Colon, San Jose, Costa Rica

506 8862 6787 Manuel Fernandez

**Shipping Address** *(packages over 30kg and freight)*

*(use FEDEX if possible)*

*(air shipments in transit, pallets, 20-foot and 40-foot ISO shipping containers)*

Master R/V FALKOR (too) in transit to Golfito, Costa Rica
Attn: [name of HOD]
c/o Manuel Fernandez Conroy / Servicios Maritimos del Pacifico.

manuel.fernandez@sermarcr.com
506 8862 6787 Manuel Fernandez

According to the agent, *"No need for an address because they will call me to coordinate delivery. I will be contacted by Customs and I will arrange delivery to Golfito"*
<table>
<thead>
<tr>
<th>Special Instructions and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note 0: Anything shipped to/from R/V FALKOR (too) that is considered &quot;in transit&quot; (e.g. ship's spares). The agent MUST be informed well in advance to ensure delivery to the Golfito dock for loading.</td>
</tr>
<tr>
<td>Note 1: Inform all vendors to clearly mark the outside of all packages, crates, boxes, totes, and cases: &quot;Ship's spares in transit&quot;.</td>
</tr>
<tr>
<td>Note 2: Inform the local agent in advance of any shipments arriving from outside of the country to ensure proper customs clearance.</td>
</tr>
<tr>
<td>Note 3: Direct the airbill, bill of lading, packing lists, and commercial invoice to the sub-agent in advance of the freight arrival, and they will take care of the inbound clearance.</td>
</tr>
<tr>
<td>Note 4: If shipping 20-foot ISO or 40-foot ISO containers you must inform the agent of the weights.</td>
</tr>
<tr>
<td>Note 5: Passenger air service flights between San Jose, Costa Rica and Golfito, Costa Rica is with the airline SANSA (<a href="https://flysansa.com">https://flysansa.com</a>) 45 minute flight.</td>
</tr>
<tr>
<td>Note 6: Driving between San Jose, Costa Rica and Golfito, Costa Rica is 5 hours.</td>
</tr>
</tbody>
</table>

### Outreach Plan

**Cruise webpage:** [https://schmidtocean.org/cruise/octopus-odyssey-too/](https://schmidtocean.org/cruise/octopus-odyssey-too/)

**Social media hashtag:** #OctoOdyssey

**SOI outreach personnel**
- *Overall coordinator (shorebased): Hannah Nolan*
- MMC: Connor Ashleigh
- MMT: Sofya Pesternikova
- Artist-at-Sea: **Diego Gamero**
- Berths-of-opportunity: Valeria Naranjo (UCR), Nixon Quesada (INCOPECA)
- **Documentary film crew** - TREAT IN CONFIDENCE and DO NOT SHARE
  - Orla Doherty - Executive Producer, BBC Studios Natural History Unit
  - Gavin Thurston - Director of Photography (BBC Blue Planet II)
  - Paul Silcox - Director, Lux Aeterna visual effects company

**Ship-to-Shore events: schedule TBD**
- Priority list given to SOI: [Fkt231202 Ship-to-Shore Scheduling Priorities](#)
<table>
<thead>
<tr>
<th>Date (ship time)</th>
<th>Audience (Language)</th>
<th>Science party lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 4 16:00</td>
<td>UCR Reef Fishes class</td>
<td>Valeria Naranjo</td>
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<tr>
<td>Dec 5, 10:30</td>
<td>Boston 6th grade class of Rotjan kid (middle school) - English</td>
<td>Rotjan</td>
</tr>
<tr>
<td>Dec 7, 10:00</td>
<td>UNED remote high schools (Spanish)</td>
<td>Cambronero &amp; Naranjo</td>
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<tr>
<td>Dec 8, 16:00</td>
<td>UCR CIMAR</td>
<td>Valeria Naranjo, Sanchez, Sandoval</td>
</tr>
<tr>
<td>Dec 9, 15:00</td>
<td>Sustainable Ocean Alliance CR &amp; Pelagos - all ages (Spanish)</td>
<td>Cambronero &amp; Naranjo</td>
</tr>
<tr>
<td>Dec 9, 17:00</td>
<td>Art Basel show in Miami – adult art enthusiasts (English)</td>
<td>Diego Bermee &amp; TBD</td>
</tr>
<tr>
<td>Dec 12, 14:00</td>
<td>Bates College students in Michel Droge’s class</td>
<td>Orcutt</td>
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<tr>
<td>Dec 13, 10:00</td>
<td>Costa Rica National Academy</td>
<td>Cortés, Breedy, Protti</td>
</tr>
</tbody>
</table>

**Blogs:**

Drafts should go [in this folder](#), along with copies of the photos/figures you want to use.

<table>
<thead>
<tr>
<th>Due date^</th>
<th>Topic</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 28</td>
<td>Octopus Odyssey continues</td>
<td>Beth Orcutt, Jorge Cortes</td>
</tr>
<tr>
<td>Dec 2</td>
<td>Microbes</td>
<td>Julie Huber, Gus Ramirez</td>
</tr>
<tr>
<td>Dec 6</td>
<td>Fluid flow + tectonics + life</td>
<td>Marino Protti, Rachel Lauer</td>
</tr>
<tr>
<td>Dec 10</td>
<td>forefront of technology in deep-sea research and conservation, emphasizing how web tools streamline the collection, analysis, and dissemination of crucial data. It would also underscore the importance of multilingual access to information and the creation of online resources to educate and train the next generation of marine science experts, recognizing that this is a pivotal aspect of</td>
<td>Beatriz, Randi, Sergio, Diva</td>
</tr>
<tr>
<td>decision-making processes</td>
<td></td>
<td></td>
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</tbody>
</table>
|---------------------------|--
| ?                         | Valeria Naranjo |

^ Date that text and photos are due to Beth for translation to begin.

Video products being made by SOI’s MMC:
- two weekly videos (one highlighting microbes),
  - Why are we coming back? Will there be octopus babies? Are there unique microbes in the fluids or rocks that influence octopus biology? What about other microbe-animal interactions? How is everything connected? Featuring Beth, Janet, Julie, Randi
  - Costa Rica Desconocida - Jorge, Marino, Fiorella, Leo, Valeria
- one science story
  - María
- one highlight reel
- Artists at sea focused on Diego Gamero’s journey

Products being made by Artist-At-Sea Diego Gamero:

TV interviews: pending

**VIP tour during demobilization:**