**Jul 2019**

**R/V Rachel Carson**

**Chesapeake Bay Cruise Plan**

**HPL Anoxia/Hypoxia Cruise**

**Sunday, 21 Jul 2019**

* HPL team (Cram, Silsbe, Malkin, + ) to drive down Sunday evening
* RFO load final gear (CTD; gravity corer with top adapters; bottom water pump)

**Monday, 22 Jul 2019 (departs from CBL; overnight at HPL)**

* Load R/V Rachel Carson 0800 (?) (HPL team, JHU team)
* Steam to southern stations (CB 5.1, CB5.1W, CB5.5);
* All hands LUNCH @ ~12
* R/V Rachel Carson returns to HPL

Activities and Order of Operations at Stations CB5.1, CB5.1W, CB5.5

* + CTD profile (Cram with Silsbe); to include pH and DO
  + Nisken rosette water column sampling (Cram)
  + irradiance measurements – profile? floats? (Silsbe)
  + Gravity coring (Malkin with Gomes); CH4 core sampling immediately (Liau)

Activities at HPL

* + filtering (Cram lab; on ship and at lab)
  + primary production (Silsbe lab)
  + H2S sediment flux (maybe) (Gomes lab)
  + sediment porewater extraction (Malkin and Gomes labs)
  + sediment microsensor profiling (Malkin)
  + sediment microbial community sampling (Malkin lab)

**Tuesday, 23 Jul 2019 (departs HPL; overnight at HPL)**

* Load R/V Rachel Carson with additional equipment if needed
* Steam to upper mesohaline stations (CB 3.3C, CB3.3W, CB4.3C);
* All hands LUNCH @ ~12
* R/V Rachel Carson returns to HPL

Activities and Order of Operations at Stations CB5.1, CB5.1W, CB5.5

* + CTD profile (Cram with Silsbe) (Temp, Sal, pH, O2)
  + Nisken rosette water column sampling (Cram)
  + irradiance measurements – profile? floats? (Silsbe)
  + \*\*NEW: pycnocline pump sampling – multiple depths simultaneously (Cornwell system)\*\*
  + Gravity coring (Malkin with Gomes); CH4 core sampling immediately (Liau)

Activities at HPL

* + filtering (Cram lab; on ship and at lab)
  + primary production? (Silsbe lab)
  + H2S sediment flux? (Gomes lab)
  + sediment porewater extraction (Malkin and Gomes labs)
  + sediment microsensor profiling (Malkin)
  + sediment microbial community sampling (Malkin lab)

**Wednesday, 24 Jul 2019 (departs HPL; returns to CBL)**

* Steam to northern stations (CB 3.1, CB3.2);
* All hands LUNCH @ ~12
* R/V Rachel Carson returns to HPL to unload gear and samples
* R/V Rachel Carson returns to homeport CBL

Activities and Order of Operations at Stations CB3.1, CB3.2

* + CTD profile (Cram with Silsbe) (Temp, Sal, pH, O2)
  + Nisken rosette water column sampling (Cram)
  + irradiance measurements – profile? floats? (Silsbe)
  + Gravity coring (Malkin with Gomes); CH4 core sampling immediately (Liau)

Activities at HPL

* + filtering (Cram lab; on ship and at lab)
  + primary production? (Silsbe lab)
  + H2S sediment flux? (Gomes lab)
  + sediment porewater extraction (Malkin and Gomes labs)
  + sediment microsensor profiling (Malkin)
  + sediment microbial community sampling (Malkin lab)

**Important Phone Numbers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Institution | Mobile Phone | Shore Contact | Shore Contact Phone | Notes |
| Clara Fuchsman | HPL |  |  |  |  |
|  |  |  |  |  |  |
| Jacob Cram | HPL |  |  |  |  |
|  |  |  |  |  |  |
| Jeff Cornwell | HPL |  |  |  |  |
| Greg Silsbe | HPL | 678-753-9946 |  |  |  |
| Anna Windle | HPL |  |  |  |  |
| Sairah Malkin | HPL | 678-753-9845 |  |  |  |
| Pinky Liau | HPL | 732-325-5448 |  |  |  |
| Carol Kim | HPL |  |  |  |  |
| Maya Gomes | JHU |  |  |  |  |
| Kalev Hantsoo | JHU |  |  |  |  |
|  |  |  |  |  |  |

**Station Coordinates, all Chesapeake Bay**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Station** | **lat\_DD** | **long\_DD** | **UTMX (NAD83)** | **UTMY (NAD83)** | **depth mean (m)** | **Bottom Water DO (uM; Jul avg, past years)** |
| CB3.1 | 39.24950 | -76.24050 | 392959 | 4345197 | 13.3 | 85 |
| CB3.2 | 39.16369 | -76.30631 | 387143 | 4335754 | 12.2 | 54 |
| CB3.3C | 38.99596 | -76.35967 | 382254 | 4317207 | 24.1 | 10 |
| CB3.3W | 39.00462 | -76.38810 | 379807 | 4318205 | 9.0 | 104 |
| CB4.3C | 38.55505 | -76.42794 | 375578 | 4268368 | 27.1 | 8 |
| CB4.3W | 38.55728 | -76.49402 | 369824 | 4268707 | 9.9 | 69 |
| CB5.1 | 38.31870 | -76.29215 | 387043 | 4241966 | 34.3 | 11 |
| CB5.1W | 38.32522 | -76.37574 | 379746 | 4242795 | 9.2 | 130 |
| CB5.5 | 37.69180 | -76.18967 | 395112 | 4172286 | 17.7 | 56 |

**Shipboard Attire/Personal Items**

* Shipboard attire should be planned according to the season, weather and type of work planned.  Foul weather gear and boots are NOT provided by the vessel and should be brought aboard as necessary.  Adequate warm clothing and gloves are highly recommended for varied weather operations.  OPEN-TOED SHOES OR SANDALS ARE NOT PERMITTED.  Moving about the vessel in bare feet is not permitted.
* BRING SUN SCREEN, SUN GLASSES and HATS

**Galley Procedures and Meals**

* Breakfast & lunch will be provided during cruises according to the departure time and length of cruise.  Breakfast will normally be continental style; lunch will be sandwiches, chips and drinks.
* Bottled water is provided for all cruises.
* Because of crew size, it is imperative that the scientific party shares in some housekeeping chores while underway, such as putting away food and washing dishes after a meal or assisting in meal preparation.