

MOCNESS CTD data from the R/V Thuwal cruise in the Red Sea during January 2014 (Red Sea Krill project)

Website: <https://www.bco-dmo.org/dataset/630187>

Version: 2015-12-28

Project

» [Red Sea Krill](#) (Red Sea Krill)

| Contributors | Affiliation | Role |
|---------------------------------|-----------------------------------------------------|------------------------|
| Wiebe, Peter H. | Woods Hole Oceanographic Institution (WHOI) | Principal Investigator |
| Copley, Nancy | Woods Hole Oceanographic Institution (WHOI BCO-DMO) | BCO-DMO Data Manager |

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Dataset Description

CTD data from the MOCNESS-1/4m² tows taken in the Red Sea near Economic City (ECDEEP), January 2014.

Methods & Sampling

Three day trips were made aboard the R/V Thuwal to a location referred to as the Economic City Deep or ECDEEP: a ~700 m deep basin located north of KAUST at 22.5° N, 39.03° E). A 1/4-m MOCNESS (Multiple Opening/Closing Net and Environmental Sensing System; Wiebe et al., 1985) with 200 µm mesh nets was used to sample the zooplankton.

Field sampling: The MOCNESS was obliquely towed four times from the stern A-frame using 11.43 mm conducting cable to 600 m depth with a ship speed nominally of 2 kts (Fig. 2; Table 1). Two MOCNESS tows were taken during daytime, one each on 7 and 8 January 2014, and two night tows were taken on 12 January 2014. The first day tow (m-25-001) was equipped with 5 nets that sampled 600-400, 400-200, 200-100, and 100-0 m. The second day tow (m-25-002) and the two night tows (m-25-003, m-25-004) each had six nets that sampled 600-400, 400-200, 200-100, 100-50, and 50-0 m. The first tow was done without having GPS data input to the MOCNESS acquisition program, so positions from the bridge were obtained for the tow start and end, and at each opening of a net. GPS positions were logged for the other three tows. The MOCNESS system was equipped with the standard SeaBird temperature and conductivity probes. Volume of water filtered by each net was based on the net frame angle and flowmeter counts using equation 10b in Wiebe et al., 1985.

Data Processing Description

Pressure was corrected by subtracting the reading at the surface from collected data. For tow 1, this was 15.8 meters; for tow 2, 4.9 meters; tow 3, 4.0 meters, and tow 4, 3.9 meters.

BCO-DMO Processing:

- added conventional header with dataset name, PI name, version date
- renamed parameters to BCO-DMO standard
- removed columns with no data: fluor, ptran, oxygen, irradiance, irradiance current

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Data Files

| File |
|------------------------------------------------------------------------------------------------------------------------------------------------------|
| MOC_ctd_mda.csv (Comma Separated Values (.csv), 483.19 KB) MD5:059a3020976c02f4f529f446d9dcfdcf Primary data file for dataset ID 630187 |

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Related Datasets

IsRelatedTo

Wiebe, P. H. (2022) **Tow krill raw counts and species abundance collected from the R/V Thuwal cruise in the Red Sea during January 2014**. Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version 3) Version Date 2022-05-26 doi:10.26008/1912/bco-dmo.620329.3 [[view at BCO-DMO](#)]

Relationship Description: Data from the same tow.

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Parameters

| Parameter | Description | Units |
|-------------------|--------------------------------------------------------------------------------------------------------|------------------------------------|
| cruise_id | cruise identification | unitless |
| station | sequential station | unitless |
| tow | MOCNESS tow number | unitless |
| year | year | yyyy |
| month_local | local month, 1-12 | mm |
| day_local | local day, 1-31 | dd |
| yrday_local_start | local year-day at start tow | unitless |
| yrday_local_end | local year-day at end tow | unitless |
| lat_start | latitude at start of tow; north is positive | decimal degrees |
| lat_end | latitude at end of tow; north is positive | decimal degrees |
| net | net number | unitless |
| lon_start | longitude at start of tow; east is positive | decimal degrees |
| lon_end | longitude at end of tow; east is positive | decimal degrees |
| press_corr | corrected pressure | decibars |
| press | uncorrected pressure | decibars |
| yrday_local | local day and decimal time; as 326.5 for the 326th day of the year or November 22 at 1200 hours (noon) | unitless |
| temp | temperature | degrees Celsius |
| potemp | potential temperature | degrees Celsius |
| sal | salinity | PSU |
| sigma | potential density | kilograms/meter ³ -1000 |
| angle | angle of net opening relative to the vertical/horizontal? | degrees |
| flow | flow counts from flow meter | counts |
| hzvel | horizontal velocity | m/min |
| vtvel | vertical velocity | m/min |
| vol_filt | volume filtered | cubic meters |
| lat | latitude; north is positive | decimal degrees |
| lon | longitude; east is positive | decimal degrees |

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Instruments

| | |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dataset-specific Instrument Name | MOCNESS-.25 m ² |
| Generic Instrument Name | MOCNESS.25 |
| Dataset-specific Description | This MOCNESS sampled with either 5 or 6 nets, 200 micron mesh. |
| Generic Instrument Description | The Multiple Opening/Closing Net and Environmental Sensing System or MOCNESS is a family of net systems based on the Tucker Trawl principle. The MOCNESS-1/4 carries nine 1/4-m ² nets usually of 64 micrometer mesh and is used to sample the larger micro-zooplankton. |

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Deployments

Thuwal-2014-01

| | |
|--------------------|-----------------------------------------------------------------------------------------------------|
| Website | https://www.bco-dmo.org/deployment/620087 |
| Platform | R/V Thuwal |
| Start Date | 2014-01-07 |
| End Date | 2015-01-12 |
| Description | Three day trips to sample krill at ECDEEP station near Economic City, Saudi Arabia, north of KAUST. |

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Project Information

Red Sea Krill (Red Sea Krill)

Coverage: Red Sea

The krill population at station ECDEEP was characterized via MOCNESS sampling and CTD casts.

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Funding

| Funding Source | Award |
|------------------------------------------------------------|--------------------------------------|
| King Abdullah University of Science and Technology (KAUST) | KAUST-Kaartvedt-2014 |

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