

Crabeater Seal physiology collected on ARSV Laurence M. Gould cruises LMG0104, LMG0106, LMG0203, and LMG0205 in the Southern Ocean from 2001-2002 (SOGLOBEC project; Crabeater Seal Foraging project)

Website: <https://www.bco-dmo.org/dataset/2379>

Data Type: Cruise Results

Version: 1

Version Date: 2005-03-31

Project

- » [U.S. GLOBEC Southern Ocean](#) (SOGLOBEC)
- » [Foraging Ecology of Crabeater Seals \(Lobodon Carcinophagus\)](#) (Crabeater Seal Foraging)

Programs

- » [U.S. GLOBal ocean ECosystems dynamics](#) (U.S. GLOBEC)
- » [U.S. GLOBal ocean ECosystems dynamics](#) (U.S. GLOBEC)

| Contributors | Affiliation | Role |
|----------------------------------|---|---------------------------|
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Abstract

Crabeater Seal physiology collected on ARSV Laurence M. Gould cruises LMG0104, LMG0106, LMG0203, and LMG0205 in the Southern Ocean from 2001-2002 (SOGLOBEC project; Crabeater Seal Foraging project)

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Coverage

Temporal Extent: 2001-05-07 - 2002-09-09

Dataset Description

Seal Studies, Southern Ocean GLOBEC, Seal Physiology Data

For additional details on sampling and analytical methods see:

Burns, Jennifer M., Daniel P. Costa, Michael A. Fedak, Mark A. Hindell, Corey J.A. Bradshaw, Nicholas C. Gales, Birgitte McDonald, Stephan J. Trumble, Daniel E. Crocker, 2004. Winter habitat use and foraging behavior of crabeater seals along the Western Antarctic Peninsula. Deep-Sea Research II vol 51, pp 2279-2303.

Links to companion seal files:

[General Seal Background Information](#)

[Seal Morphometrics](#)
[Seal Predicted Mass](#)
[Seal Tracking Locations From Satellite Tags](#)

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Data Files

| File |
|---|
| seals_phys.csv (Comma Separated Values (.csv), 3.50 KB) MD5:021314dfa0a6b160bc5612a58e2d4786 Primary data file for dataset ID 2379 |

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Parameters

| Parameter | Description | Units |
|----------------|---|-----------------|
| year | Year cruise occurs | |
| tagid | SealTagID = Flipper Tag | |
| month_local | Month of year, local time (1-12) | |
| day_local | Day of year, (1-31) local time | |
| mass | Mass of seal | kilograms |
| hct | Packed cell volume | |
| hb | Hemoglobin. Measured using Sigma kit 525A | |
| mchc | Mean Corpuscular Hemoglobin Content (std. abbrev.) Calculated by: hb/hct | |
| rbc | Red Blood Count: counted using hemocytometer | |
| plasma_vol | Plasma volume, determined by Evans blue dye | liters |
| plasma_vol_pct | Plasma volume | percent by mass |
| blood_vol | Blood volume | liters |
| blood_vol_pct | Blood volume | percent by mass |
| num_smears | Number of blood smears collected | |
| hem_lip | Were blood samples hemolyzed (red cells broken) or lipemic (contained visible lipids) | |
| comments | Free text | |

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Deployments

LMG0104

| | |
|-------------------|---|
| Website | https://www.bco-dmo.org/deployment/57637 |
| Platform | ARSV Laurence M. Gould |
| Report | http://www.ccpo.odu.edu/Research/globec/cruises/gould0103_0104.doc |
| Start Date | 2001-04-20 |
| End Date | 2001-06-05 |

LMG0106

| | |
|-------------------|---|
| Website | https://www.bco-dmo.org/deployment/57639 |
| Platform | ARSV Laurence M. Gould |
| Report | http://www.ccpo.odu.edu/Research/globec/cruises01/lmg0106_menu.html |
| Start Date | 2001-07-21 |
| End Date | 2001-09-01 |

LMG0203

| | |
|-------------------|---|
| Website | https://www.bco-dmo.org/deployment/57642 |
| Platform | ARSV Laurence M. Gould |
| Report | http://www.ccpo.odu.edu/Research/globec/main_cruises02/lmg0203/menu.html |
| Start Date | 2002-04-07 |
| End Date | 2002-05-20 |

LMG0205

| | |
|-------------------|---|
| Website | https://www.bco-dmo.org/deployment/57644 |
| Platform | ARSV Laurence M. Gould |
| Report | http://www.ccpo.odu.edu/Research/globec/main_cruises02/lmg0205/report_lmg0205.pdf |
| Start Date | 2002-07-29 |
| End Date | 2002-09-18 |

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Project Information

U.S. GLOBEC Southern Ocean (SOGLOBEC)

Website: http://www.ccpo.odu.edu/Research/globec_menu.html

Coverage: Southern Ocean

The fundamental objectives of United States Global Ocean Ecosystems Dynamics (U.S. GLOBEC) Program are dependent upon the cooperation of scientists from several disciplines. Physicists, biologists, and chemists must make use of data collected during U.S. GLOBEC field programs to further our understanding of the interplay of physics, biology, and chemistry. Our objectives require quantitative analysis of interdisciplinary data sets and, therefore, data must be exchanged between researchers. To extract the full scientific value, data must be made available to the scientific community on a timely basis.

Foraging Ecology of Crabeater Seals (*Lobodon Carcinophagus*) (Crabeater Seal Foraging)

Coverage: Southern Ocean

The U.S. Global Ocean Ecosystems Dynamics (U.S. GLOBEC) program has the goal of understanding and ultimately predicting how populations of marine animal species respond to natural and anthropogenic changes in climate. Research in the Southern Ocean (SO) indicates strong coupling between climatic processes and ecosystem dynamics via the annual formation and destruction of sea ice. The Southern Ocean GLOBEC Program (SO GLOBEC) will investigate the dynamic relationship between physical processes and ecosystem responses through identification of critical parameters that affect the distribution, abundance and population dynamics of target species. The overall goals of the SO GLOBEC program are to elucidate shelf circulation processes and their effect on sea ice formation and krill distribution, and to examine the factors which govern krill survivorship and availability to higher trophic levels, including penguins, seals and whales. The focus of the U.S. contribution to the international SO GLOBEC program will be on winter processes. This component will focus on the distribution and foraging behavior of adult female crabeater seals, using a combination of satellite-linked tracking, specialized diver recorders, and stable isotopic tracers. This research will be coordinated with components focused on prey (krill) distribution and the physical environment. The results will be analyzed using an optimality model. The result of the integrated SO GLOBEC program will be to improve the predictability of living marine resources, especially with respect to local and global climatic shifts.

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Program Information

U.S. GLOBAL ocean ECosystems dynamics (U.S. GLOBEC)

Website: <http://www.usglobec.org/>

Coverage: Global

U.S. GLOBEC (GLOBAL ocean ECosystems dynamics) is a research program organized by oceanographers and fisheries scientists to address the question of how global climate change may affect the abundance and production of animals in the sea.

The U.S. GLOBEC Program currently had major research efforts underway in the Georges Bank / Northwest Atlantic Region, and the Northeast Pacific (with components in the California Current and in the Coastal Gulf of Alaska). U.S. GLOBEC was a major contributor to International GLOBEC efforts in the Southern Ocean and Western Antarctic Peninsula (WAP).

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Funding

| Funding Source | Award |
|--|-----------------------------|
| NSF Antarctic Sciences (NSF ANT) | ANT-0003956 |
| NSF Antarctic Sciences (NSF ANT) | ANT-9981683 |

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