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/htc	
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).

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

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

Coverage: Global

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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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