Crabeater Seal predicted mass from 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/2381
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
Burns, Jennifer	University of Alaska, Anchorage (UAA)	Co-Principal Investigator
Costa, Daniel P.	University of California-Santa Cruz (UCSC)	Co-Principal Investigator
Allison, Dicky	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Abstract
Crabeater Seal predicted mass from 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 - 2002

Dataset Description

Seal Studies, Southern Ocean GLOBEC, Predicted Mass & Age Data

Reference: Laws, R. M., Baird A., Bryden M. M., 2003. Size and growth of the crabeater seal *Lobodon carcinophagus* (Mammalia: Carnivora). Journal of Zoology (London) **259**, 103-108.

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 Physiology
Seal Morphometrics
Seal Tracking Locations From Satellite Tags

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Last updated April 25, 2006

Methods & Sampling

Seal Studies, Southern Ocean GLOBEC, Predicted Mass & Age Data.

Data Processing Description

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.

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Data Files

File
seals_predmass.csv (Comma Separated Values (.csv), 2.11 KB) MD5:656e1d9f0f749685ff5affcb84f7b8a6 Primary data file for dataset ID 2381

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Parameters

Parameter	Description	Units
cruiseid	Cruise Identifier. (e.g., LMG0103, NPB0104)	
year	year cruise occurs	
tagid	SealTagID = Flipper Tag	
ageclass	as estimated in field, (text i.e. adult)	
sex	Sex of organism, (as text i.e. male)	
std_len	standard length of seal: straight line measurement from the tip of nose to tip of tail, measured above the dorsal surface, animal on its belly	cm
girth_ax	axilla girth	cm
mass	mass (weight) determined in the field	kg
mass_pred	mass (weight) determined from LG2 (standard Length x Girth^2) vs Mass regression,based on data from Antarctic Pack Ice Seals program (APIS) and GLOBEC cruises.	kg
age_by_len	From Laws *et al.*, 2003, using calculated mass with APIS and GLOBEC data combined, (reported as age in years or text i.e. adult)	
age_by_mass	From Laws *et al.*, 2003, using calculated mass with APIS and GLOBEC data combined, (reported as age in years or text i.e. adult)	

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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
Description	**Methods & Sampling** Seal Studies, Southern Ocean GLOBEC, Predicted Mass & Age Data. **Processing Description** 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">http://dx.doi.org/10.1016/j.dsr2.2004.07.021'>Winter habitat use and foraging behavior of crabeater seals along the Western Antarctic Peninsula. Deep-Sea Research II vol 51, pp 2279-2303.

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
Description	**Methods & Sampling** Seal Studies, Southern Ocean GLOBEC, Predicted Mass & Age Data. **Processing Description** 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">http://dx.doi.org/10.1016/j.dsr2.2004.07.021'>Winter habitat use and foraging behavior of crabeater seals along the Western Antarctic Peninsula. Deep-Sea Research II vol 51, pp 2279-2303.

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
Description	**Methods & Sampling** Seal Studies, Southern Ocean GLOBEC, Predicted Mass & Age Data. **Processing Description** 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">http://dx.doi.org/10.1016/j.dsr2.2004.07.021'>Winter habitat use and foraging behavior of crabeater seals along the Western Antarctic Peninsula. Deep-Sea Research II vol 51, pp 2279-2303.

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
Description	**Methods & Sampling** Seal Studies, Southern Ocean GLOBEC, Predicted Mass & Age Data. **Processing Description** 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">http://dx.doi.org/10.1016/j.dsr2.2004.07.021'>Winter habitat use and foraging behavior of crabeater seals along the Western Antarctic Peninsula. Deep-Sea Research II vol 51, pp 2279-2303.

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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

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.

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Funding

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