

Event log from ARSV Laurence M. Gould LMG0602 in the Southern Ocean from February to March 2006 (SouthernSalps project)

Website: <https://www.bco-dmo.org/dataset/2914>

Version: 02 August 2012

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Project

» [Salpa Thompsoni in the Southern Ocean: Bioenergetics, Population Dynamics and Biogeochemical Impact](#)
(SouthernSalps)

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Dataset Description

Log of events from cruise LMG06-02. Sampling activities included: CTD casts to characterize the water column, salp sampling using bongo nets and MOCNESS tows, use of the Large Area Plankton Imaging System (LAPIS) to capture images of large plankton, and laboratory experiments.

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Data Files

File
eventlog_img0602.csv (Comma Separated Values (.csv), 30.50 KB) MD5:32cd298655de29cf4c4cfd1c9eae57b3
Primary data file for dataset ID 2914

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Parameters

Parameter	Description	Units
cruiseid	Cruise identifier, e.g. LMG0602 = ARSV Laurence M. Gould cruise number 0602.	dimensionless
year	Year, e.g. 2006.	YYYY
platform	Name of the ship.	dimensionless
timezone	Number of hours added to local time to convert to GMT (e.g. +4).	hours
event	Event or sampling operation number.	dimensionless
inst	Instrument used to collect data. (Note: LAPIS = Large Area Plankton Imaging System)	dimensionless
cast	Cast number.	dimensionless
station	Consecutive station number.	integer
day_local	Day of month, local time.	dd
month_local	Month of year, local time.	mm
time_local	Time of day, local time, using 2400 clock format.	HHMM
se_flag	Sampling operation start (s) or end (e) flag.	text
lat	Latitude, negative = South.	decimal degrees
lon	Longitude, negative = West.	decimal degrees
depth_w	Depth of water.	meters
depth	Depth of sample.	meters
si	Scientific investigator's name.	text
region	Geographical area of sampling.	text
day_gmt	Day of month, gmt time.	dd
month_gmt	Month of year, gmt time.	mm
time_gmt	Time of day, GMT.	HHMM
comments	Free text comments about the event.	free text
depth_mwo	Mean wire out.	meters

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Deployments

LMG0602

Website	https://www.bco-dmo.org/deployment/57843
Platform	ARSV Laurence M. Gould
Start Date	2006-02-14
End Date	2006-03-16
Description	The goal of the LMG06-02 cruise was to continue the studies begun in 2004 (LMG04-14) on the population biology, feeding, and energetics of <i>Salpa thompsoni</i> in the waters near the Antarctic Peninsula.

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Project Information

Salpa Thompsoni in the Southern Ocean: Bioenergetics, Population Dynamics and Biogeochemical Impact (SouthernSalps)

Coverage: Southern Ocean

This project is also referred to as "B-307: Salpa thompsoni in the Southern Ocean". (B-307 was the USAP project/event number).

NSF Award Abstract:

Salps are planktonic grazers that have a life history, feeding biology and population dynamic strikingly different from krill, copepods or other crustacean zooplankton. Salps can occur in very dense population blooms that cover large areas and have been shown to have major impacts due to their grazing and the production of fast-sinking fecal pellets. Although commonly acknowledged as a major component of the Southern Ocean zooplankton community, often comparable in biomass and distribution to krill, salps have received relatively little attention. Although extensive sampling has documented the seasonal abundance of salps in the Southern Ocean, there is a paucity of data on important rates that determine population growth and the role of this species in grazing and vertical flux of particulates. This proposed study will include: measurements of respiration and excretion rates for solitary and aggregate salps of all sizes; measurements of ingestion rates, including experiments to determine the size or concentration of particulates that can reduce ingestion; and determination of growth rates of solitaries and aggregates. In addition to the various rate measurements, this study will include quantitative surveys of salp horizontal and vertical distribution to determine their biomass and spatial distribution, and to allow a regional assessment of their effects. Measurements of the physical characteristics of the water column and the quantity and quality of particulate food available for the salps at each location will also be made. Satellite imagery and information on sea-ice cover will be used to test hypotheses about conditions that result in high densities of salps. Results will be used to construct a model of salp population dynamics, and both experimental and modeling results will be interpreted within the context of the physical and nutritional conditions to which the salps are exposed. This integrated approach will provide a good basis for understanding the growth dynamics of salp blooms in the Southern Ocean. Two graduate students will be trained on this project, and cruise and research experience will be provided for two undergraduate students. A portion of a website allowing students to be a virtual participant in the research will be created to strengthen students' quantitative skills. Both PI's will participate in teacher-researcher workshops, and collaboration with a regional aquarium will be developed in support of public education.

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Funding

Funding Source	Award
NSF Antarctic Sciences (NSF ANT)	ANT-0338090

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