



CCAMLR

COMM CIRC 10/93
SC CIRC 10/50

Friday, 3 September 2010

Notification for Scientific Research in 2010/11 - Germany

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**TO ALL MEMBERS OF THE COMMISSION
AND THE SCIENTIFIC COMMITTEE**

**COMM CIRC 10/93
SC CIRC 10/50**

3 September 2010

Notification for Scientific Research in 2010/11 – Germany

In accordance with Conservation Measure 24-01, Members are advised that Germany has submitted a notification to conduct scientific research in Area 48 between February and April 2011 (see attached). This notification falls under paragraph 2 of Conservation Measure 24-01.

Andrew Wright
Executive Secretary

Attch.

**NOTIFICATION OF RESEARCH VESSEL ACTIVITY
IN ACCORDANCE WITH PARAGRAPH 2 OF
CONSERVATION MEASURE 24-01**

CCAMLR MEMBER :

GERMANY

SURVEY DETAILS :

The expedition is part of an international scientific project to compare sub-Antarctic with high Antarctic waters. During this cruise a set of independent research objectives shall be addressed:

- 1.) Distribution of marine species on sub-Antarctic and Antarctic shelf areas.**
- 2.) Taxonomy and genetics of marine fish and invertebrates.**
- 3.) Benthic-pelagic-coupling processes and food web studies**
- 4.) Physiological adaptation of Antarctic species to cold environments**
- 5.) Possible changes in species distribution due to climate changes**
- 6.) The role of shelf ice conditions in the species distribution on continental shelves.**
- 7.) Water temperature and salinity at sampling localities**

Survey Area/Subarea/Division

An overview about the cruise track and sampling areas is given in Fig. 1. All sampling activities, with the exception of some plankton catches, will take place on the shelf and slope in a water depth between 100 and 800 m (Fig 2 - 4).

In all areas a 2 to 3 days sampling program is planned:

- 3 - 4 Bottom trawls (20 minutes on the bottom) (fish and epibenthos)**
- 3 - 4 Agassiz trawls (20 minutes on bottom) (fish and epibenthos)**
- 3 - 4 Baited traps (fish and amphipods)**
- 3 - 4 Multibox-Corer (invertebrate infauna)**
- 4 - 6 CTD measurements and water sampling**
- 10 Plankton catches**

Please note: In the area SO (Fig.3) no activities will take place within the new MPA "South Orkney Islands".

In the areas LA (Larsen AB) and Bendix (BE) on the western and eastern Weddell Sea shelf an intensive program is planned to study benthic-pelagic coupling processes, food web studies and studies to estimate the role of the shelf ice conditions for species distribution and biodiversity. The program includes fishing activities (Bottom trawls (20 minutes), Agassiz trawls (20 minutes on the bottom), benthic-pelagic trawls (1h for catching *Pleuragramma antarcticum*), short term moorings (sediment traps, CTD for 10 days), CTD measurements with water samples, Plankton catches with Multinet and Bongo, Video

transects with ROV for benthos studies and Multibox-Corer samples for sediment analysis and infauna studies. In both areas we plan to operate between 10 and 15 days, the number of samples depends on weather and ice conditions.

In all areas fishes and invertebrates will be catch for physiological experiments on board and / or in home laboratories.

Proposed dates of survey: from **2011 / 02 / 08** to **2011 / 04 / 18**

Name(s) and address of the chief scientist(s) responsible for planning and coordinating the research:

Dr. Rainer Knust
Alfred - Wegener - Institute for Polar and Marine Research
Am Handelshafen 12
27570 Bremerhaven
Germany

Number of scientists **53** and crew **45** to be aboard the vessel.

Is there opportunity for inviting scientists from other Members?

NO

Scientists from member states are already included: Argentina, Belgium, Chile, France, Germany, Italy, Spain, Sweden

If so, indicate a number of such scientists **0**

DESCRIPTION OF VESSEL

Name of vessel

RV POLARSTERN

Name and address of vessel owner

Federal Republic of Germany
Alfred - Wegener - Institute for Polar and Marine Research
Am Handelshafen 12
27570 Bremerhaven
Germany

Vessel type (dedicated research or chartered commercial vessel)

Polar research vessel

Port of registration

Bremerhaven

Registration number

IMO : 8013132

Radio call sign

DBLK

Overall length

117,91 m

Tonnage

3.532,30 (net tonnage)

Equipment used for determining position

D-GPS

Fishing capacity (limited to scientific sampling activities only or commercial capacity)

Limited to scientific sampling activities only

Fish processing capacity (if vessel type is commercial)

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Fish storage capacity (if vessel type is commercial)

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DESCRIPTION OF FISHING GEAR TO BE USED

- Agassiz - Trawl (frame 1,520m x 0,500m / mesh size = 20mm / inlet cod end 10mm)
- Agassiz - Trawl (frame 3,400m x 1,000m / mesh size = 20mm / inlet cod end 10mm)
- Bottom trawl 140" (mesh size 60mm / cod end 40mm)
- Benthopelagic trawl 1088 (mesh size 120mm / 60mm / inlet cod end 20mm)
- Short-term moorings (36h) for catching fish and invertebrates in baited traps.

Other sampling gear as plankton nets, CTD probes, water samplers, etc. (specify)

CTD - Rosette system :

- Temperature, salinity, depth, O₂, water samples

Plankton gears :

- 0,5x0,5m Multinet frame / mesh size 100µm
- 0,6m Bongonet / mesh size 300 / 500 µm

Sediment grabs for invertebrate benthos :

- Multi-Box-Correr 9 x 12x20cm for invertebrate Infauna
- Multi-Corer 12 x 50mm² for invertebrate meiofauna.

Video and images from the sea bed:

- ROV (Remote Operating Vehicle) for underwater video recordings.

DESCRIPTION OF ACOUSTIC GEAR TO BE USED

Type _____ Frequency _____

SCANMAR - Net sonar system
EK 60

42 kHz / 96 kHz
38 / 70 / 120 / 200 kHz

SURVEY DESIGN AND METHODS OF DATA ANALYSES

Survey design (random, semi-random)

Semi-random and re-sampling of station from previous expeditions (1998 / 2000 / 2002 / 2003-04 / 2006-07)

Target species

all

Stratification (if any) according to:

Depth strata between 100 and 800 m water depth (shelf)

Duration of standard sampling stations/hauls (preferably 30 min)

20 min

Proposed number of hauls in total :

20 Bottom trawls

12 Benthic pelagic trawls

30 Agassiz trawls

Proposed sample size (total):

max. 20 minutes on ground -> number and weight differ between sample areas (between 50 and 1000 specimens / 5 and 200 kg)

Proposed methods of survey data analyses

Swept area method

DATA TO BE COLLECTED

Haul-by-haul catch and effort data in accordance with CCAMLR Form C4 for reporting results of fishing for research purposes:

Haul-by-haul catch (number of specimens and biomass per swept area)

Fine-scale biological data in accordance with CCAMLR Forms B1, B2 and B3:

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Other data (as applicable)

CTD Data (temperature / salinity / O2)

Fig. 1 : Cruise track (Overview)

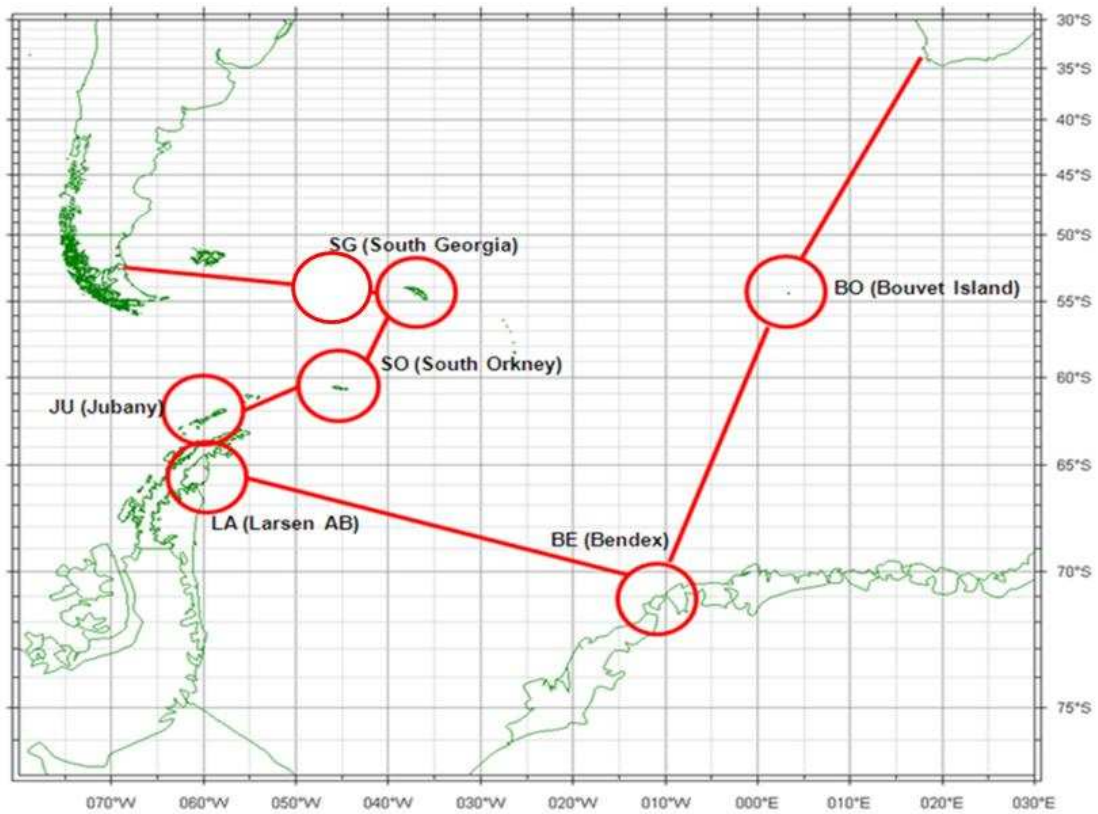


Fig. 2 : Working area South Georgia (SG)
The red circles indicate the approximate station localities.

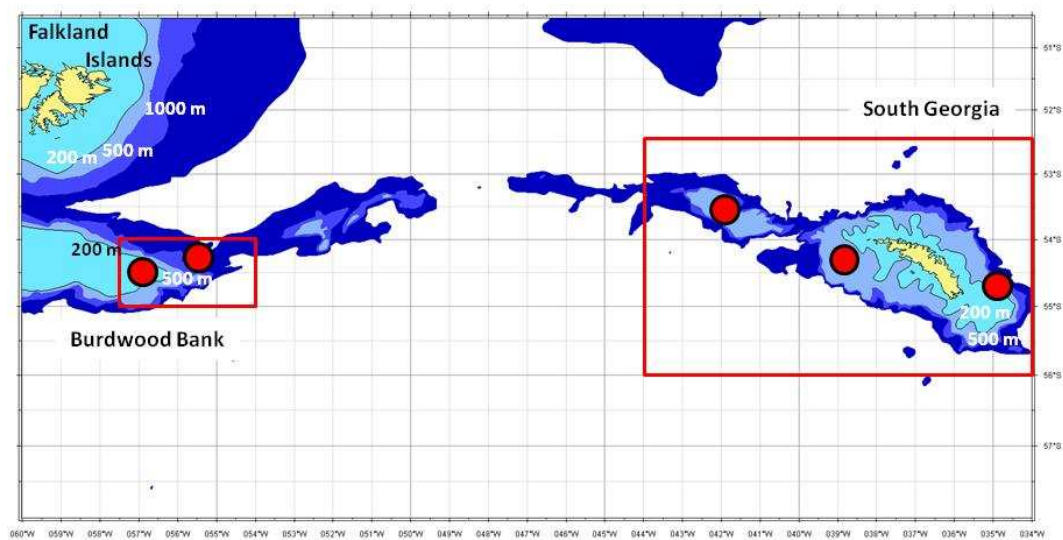


Fig. 3 : Working Area South Orkney Islands (SO)

Please note: The sampling stations are located north from the new MPA South Orkney Island
Within the MPA, no activities will take place.

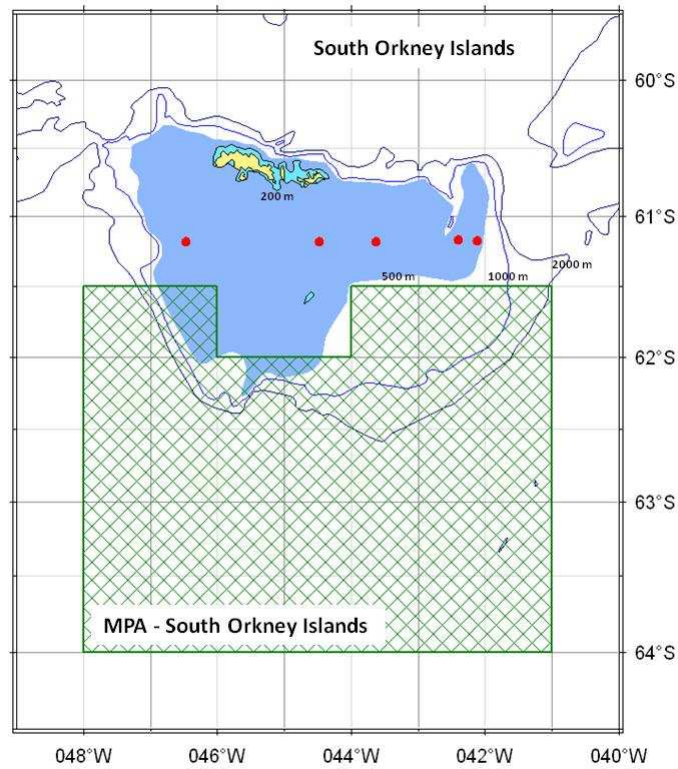


Fig. 4 : Working Area Bouvetoya Island

