

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS  
SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH

ANNUAL SCAR REPORT ON  
NATIONAL ANTARCTIC SCIENTIFIC ACTIVITIES  
2000/2001  
AND PLANNED NEW PROGRAMMES

Member Country: New Zealand

**National SCAR Committee**

*Title* Royal Society Committee on Antarctic Science

*Address* Royal Society of New Zealand

PO Box 598

WELLINGTON

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<i>Secretary</i>	Mr E Davis	Royal Society of New Zealand, PO Box 598, Wellington

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**to SCAR Working Groups**

<i>Biology</i>	Dr C Howard-Williams	NIWA, PO Box 8602, Christchurch
<i>Geodesy and Geographic Information</i>	T Bevin	Land Information New Zealand, PO Box 5501, Wellington
<i>Geology</i>	Prof P Barrett	Victoria University, PO Box 600, Wellington
<i>Glaciology</i>	Dr W Lawson	University of Canterbury, Private Bag 4800, Christchurch
<i>Human Biology and Medicine</i>	Dr G D Steel	Lincoln University, PO Box 94, Canterbury
<i>Physics and Chemistry of the Atmosphere</i>	Dr T Clarkson	NIWA, PO Box 14-901, Wellington
<i>Solar-Terrestrial and Astrophysical Research</i>	Dr G Fraser	University of Canterbury, Private Bag 4800, Christchurch
<i>Solid Earth Geophysics</i>	Dr F J Davey	GNS, PO Box 30-368, Lower Hutt

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<i>COMNAP Representative</i>	Gillian Wratt	Antarctica New Zealand, Private Bag 4745, Christchurch
<i>SCALOP Representative</i>	Julian Tangaere	Antarctica New Zealand, Private Bag 4745, Christchurch

**Wintering Stations**

<i>Name</i>	<i>Location</i>	<i>Coordinates</i>
Scott Base	Ross Island	77°55'03"S, 166°45'45"E

**Summer-only Stations**

<i>Name</i>	<i>Location</i>	<i>Coordinates</i>
Cape Bird	Ross Island	77°14'S, 166°28'E

**Automatic Recording Stations/Observatories**

<i>Name/Identifier</i>	<i>Coordinates</i>	<i>Parameters Recorded</i>
Arrival Heights	77°49', 166°39'E	Meteorology, ionospheric physics, trace gases, ozone
Scott Base	77°55'03"S, 166°45"E	Seismicity, Geomagnetic

## New Zealand National Programmes/Projects by Working Group 2000/2001

<b>Biology</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Fish	Circulatory physiology	McMurdo Sound	2000 – 2002 (S)	Dr Bill Davison	11
Fish	Antarctic fish biology	McMurdo Sound	2000 – 2002 (S)	Dr John Macdonald	25
Mosses	Genetic variation	Cape Hallett	2000 – 2002 (S)	Dr Allan Green	18
Plant Life	Antarctic terrestrial biodiversity	McMurdo Sound	2000 – 2002 (S)	Prof Roberta Farrell	13
Hydrocarbons	Biodegradation	McMurdo Sound	2000 – 2002 (S)	Dr Jackie Aislabie	1
Aquatic ecosystems	Ecology physiology	McMurdo Sound	2000 – 2002 (S)	Dr Ian Hawes	22
Penguins	Molecular ecology	McMurdo Sound	2000 – 2002 (S)	Prof David Lambert	24
Penguins	Population dynamics	McMurdo Sound	2000 – 2002 (S)	Dr Peter Wilson	34
Weddell Seals	Mating systems	McMurdo Sound	2000 – 2001 (S)	Dr Joseph Waas	33
UV Effects	Sea ice algae	McMurdo Sound	2000 – 2002 (S)	Dr Ken Ryan	30
Mosses	Genetics	Cape Crozier	2000 – 2002 (S)	Dr Chrissen Gemmill	17
Fish	Evolutionary adaptation	Scott Base	2000 – 2002 (S)	Dr Craig Marshall	26
Invertebrates	Biodiversity	McMurdo Sound	2000 – 2002 (S)	Dr Ian Hogg	23

<b>Geodesy and Geographic Information</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
No projects.					

<b>Geosciences</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Glacial erosion	Dating	Allan Hills	2000 – 2002 (S)	Prof Peter Barrett	3
Sedimentary basins	Seismic	McMurdo Sound	2000 – 2002	Dr Fred Davey	10
Magmatic evolution	Mapping and analysing	McMurdo Sound	2000 – 2002 (S)	Assoc Prof Alan Cooper	8
Glacial evolution	Holocene glacial dating	Northern Victoria Land	2000 – 2002 (S)	Dr Paul Augustinus	2
Seismicity and Geomagnetism	Observatory recordings	Scott Base	2000 – 2002	Dr Fred Davey	10
Shallow coring	Holocene climate history	Allan Hills	2000 – 2002 (S)	Dr Warren Dickinson	12
Ice coring	Holocene climate history	Victoria Glacier	2000 – 2002 (S)	Ms Nancy Bertler	4

<b>Glaciology</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Glaciotectonic Structures	Origin and preservation	Taylor Valley	2000 – 2002 (S)	Dr Sean Fitzsimons	14
Basement Geology	Paleozoic terrain correlation	Reilly Ridge NVL	2000 – 2002 (S)	Prof John Bradshaw	5
Soil	Geophysical response to contaminants	Scott Base	2000 – 2002 (S)	Dr David Nobes	29

<b>Human Biology and Medicine</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Psychology	Cold expectations	Scott Base	2000 – 2002 (S)	Dr Gary Steel	32

<b>Physics and Chemistry of the Atmosphere</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Trace Gases	Air Sampling	New Zealand – McMurdo Sound	1997 – 2004	Dr Gordon Brailsford	6
Ozone	Observation	Scott Base/Arrival Heights	1997 – 2004	Dr Stephen Wood	35
Meteorology	Observations	Scott Base	1997 – 2004	Dr Andrew Harper	20
Sea Ice	Break-up processes	McMurdo Sound	1996 – 2002 (S)	Dr Tim Haskell	21
Air Pollution	Aircraft particulates	McMurdo Sound	1999 – 2002 (S)	Dr David Shooter	31

<b>Solar Terrestrial and Astrophysical Research</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Mesosphere	Ionisation and dynamics	Scott Base	2000 – 2002	Dr Graham Fraser	16
Geomagnetic pulsations	Propagation	Arrival Heights	2000 – 2002	Assoc. Prof Brian Fraser	15

(S) = summer project only

## New Zealand Planned New Programmes/Projects by Working Group

<b>Biology</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Terrestrial Biodiversity	DNA Diversity in Antarctic Biotopes	McMurdo Sound and Dry Valleys	2001 – 2002 (S)	Prof Roy Daniel	9
Plant-soil systems	Natural Subsidies in Antarctic Soils	Dry Valleys	2001 – 2002 (S)	Dr Laurie Greenfield	19
Marine Biodiversity	Human Impacts and the Ecology of Antarctic Sponges	New Harbour and Cape Evans	2001 – 2002 (S)	Prof Murray Munro	27
Penguins	Stress Response in Adelie Penguins	Cape Bird	2001 – 2002	Dr John Cockrem	7

<b>Geodesy and Geographic Information</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Sea level monitoring	Tide gauge and GPS Operation	Cape Roberts	Ongoing	G Blick and USGS	36
Crustal Deformation	Trans Antarctic Mountain Deformation Monitoring	Transactartic mountains	Ongoing	USGS and G Blick	36
Geodetic Datum	Establishment and extension of Datum	Ross Sea Region	Ongoing	G Blick	36
Spatial Infrastructure	Mapping, Charting and Geodetic Programme	Ross Sea Region	Ongoing	T Bevin and J Spittal with NZAI	37/38
Hydrography	Hydrographic Charting	Northern Ross Sea	Ongoing	J Spittal	38
Mapping	Topographic mapping	Ross Island	Ongoing	J Spittal	38

<b>Geosciences</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
Seismic Survey	Seismic and Reconnaissance Survey for Stratigraphic Drill Sites	New Harbour and Windless Bight	2001/02	Dr Tim Naish	28

<b>Glaciology</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
No new projects.					

<b>Human Biology and Medicine</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
No new projects.					

<b>Physics and Chemistry of the Atmosphere</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
No new projects.					

<b>Solar Terrestrial and Astrophysical Research</b>					
<i>Subject</i>	<i>Investigation</i>	<i>Locality</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Address</i>
No new projects.					

(S) = summer project only

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