

SCAR

SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH

BULLETIN

ARGENTINA AUSTRALIA BELGIUM
CHILE FRANCE JAPAN NEW ZEALAND
NORWAY SOUTH AFRICA UNITED KINGDOM
UNION OF SOVIET SOCIALIST REPUBLICS
UNITED STATES OF AMERICA

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SCAR BULLETIN

No 16, JANUARY 1964

SEVENTH MEETING OF SCAR, CAPE TOWN

23 TO 27 SEPTEMBER 1963

Present:

President: G. R. Laclavère.

Delegates: Argentina, R. N. M. Panzarini; Australia, B. P. Lambert; France, C. Lorius; Japan, T. Tatsumi; New Zealand, R. W. Willett; Norway, T. Gjelsvik; South Africa, S. Naudé; United Kingdom, G. de Q. Robin (Secretary); USA, L. M. Gould; IGU, W. J. Talbot; IUPAC, E. F. C. H. Rohwer; WMO, H. R. Philpot; IUGG, G. R. Laclavère; IUGS, R. W. Willett.

Observers: SCOR, J. H. Day; COSPAR, H. W. Wells.

Advisers: Australia, T. R. McLeod; France, P. Bellair, R. Bost, P-E. Victor; Japan, T. Torii; South Africa, J. H. Day, S. A. Engelbrecht, S. P. Jackson, J. K. Mallory, D. C. Neethling, E. S. W. Simpson, J. J. Taljaard, F. C. Truter, M. P. van Rooy, E. Boden, H. J. Claassens; United Kingdom, R. J. Adie, V. E. Fuchs; USA, A. F. Blanchard, J. E. Mooney, J. R. Reedy, W. J. Tressler, H. W. Wells.

Assistant Secretary: G. E. Hemmen.

President's opening address

The President pointed out that the level of scientific research in Antarctica had been maintained during the preceding year. He expressed SCAR's regret that Belgium, Chile and the USSR were not represented at the meeting. He paid tribute to Professor C. Skottsberg, Dr C. R. Eklund and J. Smallberger who had died during the past year. The meeting stood in silence as a token of respect.

Matters arising from the minutes of SCAR VI

(a) *Constitution.* (i) It was reported that the Executive Board of ICSU had approved *Recommendation VI. General-1* amending the constitution of SCAR to permit WMO to be represented on SCAR, and that Dr K. Langlo had been appointed.

(ii) It was reported that the International Union of Physiological Sciences had indicated its desire to have a representative on SCAR. It was agreed that this would be welcome.

(b) *IGY/IGC data.* It was announced that a summary of the present status of collection of IGY/IGC Antarctic data, and a list of data received since 1 September 1962, were now available.

(c) *Exchange of information on activities.* It was noted that Argentina and the USSR had supplied information in accordance with *Recommendation VI. General-3*. The importance of exchange of this type was confirmed and all countries were urged to continue to provide information on changes in published programmes.

(d) *Conservation of natural conditions.* It was reported that the only comments received in accordance with *Recommendation VI. General-5* indicated that no measures to preserve natural conditions in Antarctica in fields other

than biology are required at present. Some Working Groups are still considering the matter.

(e) *IAAC and ICSU Special Fund.* (i) It was noted that as a result of *Recommendation VI. M-2*, the Executive Board of ICSU at its XIVth Meeting, October 1962, agreed to establish a special fund to assist the operation of the International Antarctic Analysis Centre and granted the fund a loan of \$10000 and the Treasurer of ICSU, President of SCAR and Secretary-General of WMO had been appointed Trustees.

(ii) It was noted that, in response to an appeal to SCAR National Committees for support, the United Kingdom National Committee had made a contribution of \$1000 to the fund. Mr Phillpot reported that the WMO Congress had agreed to support Antarctic Meteorological symposia and research and that in addition the possibility of obtaining professional support for the IAAC was being explored. The next meeting of the WMO Executive Committee would decide the allocation of available funds and it seemed possible that substantial support for IAAC might be forthcoming.

(iii) Mr Lambert pointed out that due to lack of adequate support, the Centre had failed somewhat in its activity and that unless the situation improved the whole concept would have to be reviewed.

It was later decided to refer the problem of operating the IAAC to the Australian Academy of Science for a re-appraisal of the project, and to request a report prior to the Eighth Meeting of SCAR.

Liaison with other international organizations

(1) *COSPAR.* SCAR notes that the activities of COSPAR are of general interest to SCAR and of particular interest to several of its working groups. Experiments with satellites of high inclination can provide new and valuable Antarctic data on cloud distribution, radiation balance, distribution and movement of ice, navigation systems, geodesy, aurora, ionosphere, and high energy particles. SCAR is also interested in the possible needs and advantages of real-time telemetry for such satellites. SCAR further notes that its Upper Atmosphere Working Group is maintaining close liaison with appropriate COSPAR groups and is preparing a comprehensive statement to COSPAR on activities and facilities in high southern latitudes and recommends continued co-operation as required to ensure a maximum co-ordination of effect.

(2) *IGY/IGC Symposium.* SCAR had been represented by Dr G. de Q. Robin at this symposium held at Los Angeles, 12-16 August 1963. It was noted that a complete session had been devoted to the Antarctic, and that the Antarctic had featured in other sessions.

(3) *WHO.* SCAR had been represented by Dr K. Rodahl at WHO Conference on Medicine and Public Health in the Arctic and Antarctic, Geneva, on 28 August-2 September 1962.

(4) *IUGG.* SCAR had been represented by Dr G. de Q. Robin and Dr O. Schneider at the Thirteenth General Assembly of IUGG, Berkeley, 19-31 August 1963.

(5) *CIG/IQSY.* Dr F. Jacka represented SCAR at the Second CIG/IQSY

General Assembly, Rome, 19–22 March 1963. It was noted with pleasure that CIG/IQSY had supported many of the research programmes of SCAR.

(6) WMO. The Fifth Progress Report of WMO's activities of special interest to SCAR and various WMO references to Antarctic meteorology were received.

(7) SCOR. SCAR had been represented by Dr G. E. R. Deacon and G. E. Hemmen at the Sixth Meeting of SCOR, Halifax, 4–9 April 1963.

(8) International Biological Programme. SCAR notes the interest and concern of the International Biological Programme in the conservation of wild life in the Antarctic and recommends that the secretary of the SCAR Working Group on Biology co-operate with the secretary of SCAR in preparing a communication to the International Biological Programme informing them (a) that SCAR is the appropriate body for advising on the conservation of wild life in the Antarctic, and (b) of the activities of SCAR in biological research and wild life conservation.

(9) Antarctic Treaty, Telecommunications Meeting. SCAR had been represented by A. H. Sheffield at this meeting held in Washington, 24–28 June 1963.

SCAR notes with thanks the efforts and actions taken at the Telecommunications Conference towards providing an adequate communications network in fulfilling the meteorological requirements of the International Antarctic Analysis Centre and the Antarctic stations.

Pending the re-appraisal of the functions of the International Antarctic Analysis Centre, SCAR advises the Chairman of its Working Group on Communications:

(i) that it is hoped that the cessation of broadcasts of analysis statements by the IAAC is a temporary measure;

(ii) that all member countries of SCAR should continue to transmit meteorological data to the Centre with minimum practicable delay;

(iii) that the meteorological schedules now operating should be continued.

SCAR notes the Telecommunications Meeting Recommendation IV concerning rationalization of international communication links. It records a concurrence in principle, but recommends that direct discussions between Antarctic stations of different countries should continue.

SCAR notes also that the responsibility for co-ordination and overall supervision of the Antarctic telecommunications network remains a responsibility of the Communications Working Group, and considers that the general functions of the Working Group remain as given in *Recommendations V. C-1* and *V. C-2* until such time as the Treaty powers provide an effective alternative.

The Secretary of SCAR was instructed to follow up the above resolutions by correspondence with the Chairman of the Communications Working Group and the SCAR Executive.

Functions of SCAR concerning data exchange

SCAR considered a proposal from the United States Committee on Polar Research that it should adopt the CIG guides to data exchange whenever possible. Certain recommendations were submitted by recent meetings of

Working Groups and the Secretary of SCAR was instructed to complete the collection of recommendations on data exchange from Working Groups by the end of March 1964, to draw up a composite document in consultation with the Executive Committee of SCAR and to distribute it to National Committees.

Proposed Swiss expedition to Antarctica

SCAR requests ICSU to convey to the leaders and organizers of the Swiss Expedition, through Société Helvétique des Sciences Naturelles and the Government of Switzerland, the anxiety of SCAR at the lack of information about the plans and to urge them in their own interests and in the interests of existing members, to inform SCAR of their detailed plans in order that all concerned may be assured of a successful outcome of the expedition.

Sub-Antarctic islands

The list of sub-Antarctic islands within the sphere of interest of SCAR was reviewed (*SCAR Bulletin*, No 1, 1959, p 5) and it was decided that no alterations were required.

Observations on whales

It was agreed that SCAR was generally in sympathy with a request that ships of SCAR nations undertake certain regular observations on whales in Antarctic waters, but that the Secretary should request further information from the International Whaling Commission.

Netherlands Committee for Antarctic Research

A letter was considered from the Royal Netherlands Academy of Science and Letters informing SCAR that a National Committee for Antarctic Research had been formed, and that four Dutch scientists would be participating in a forthcoming Belgian expedition. It was agreed that SCAR should welcome this interest in Antarctic research and that the secretary should provide documentation as requested.

SCAR programme in glaciology

SCAR recommends the form of presentation of the draft revised programme in glaciology and draws the attention of other SCAR working groups to the desirability of presenting all programmes along similar lines.

Notice of Working Group meetings

SCAR recommends that six months' notice be given of working group meetings, particularly of those to be held in conjunction with SCAR meetings.

*International Association of Meteorology and Atmospheric Physics
Commission on Polar Meteorology*

SCAR notes with interest the formation, by IAMAP, of a Commission on Polar Meteorology and invites the Association to suggest specific research problems, and programmes for solving them.

IQSY programme on meteorology

SCAR supports the WMO/CIG/IQSY programme in meteorology and urges all members to participate to the fullest possible extent. Special attention was drawn to the high altitude sounding and STRATWARM (sudden Stratospheric warmings) programmes.

SCAR programme for meteorology

(a) SCAR should make efforts to expand the meteorological network in the study of radiation, atmospheric chemistry, air-sea interaction, air-ice interaction, the stratosphere and the mesosphere.

(b) SCAR should stimulate research studies on the dynamic and synoptic aspects of the Antarctic atmosphere using the IGY World Weather Map series (Southern Hemisphere section prepared by South Africa) and the IAAC series.

(c) SCAR draws the attention of its members to the possibility of an internationally co-ordinated constant-level balloon sounding system (transosonde) as a practicable and economical means of obtaining meteorological data over the great areas of the Southern Hemisphere which cannot be served by fixed networks.

(d) SCAR recommends that observations from meteorological satellites be used.

SCAR symposia

(a) It was reported that the Proceedings of the *SCAR Symposium on Antarctic Logistics*, Boulder, 13-17 August 1962, had been published. SCAR recorded its gratitude to the United States Polar Committee and the National Academy of Sciences for the speedy publication of this outstanding volume. It was reported that Admiral Reedy, USN, had written a revised section on Logistic support (aviation) which would be distributed.

(b) It was reported that the *Proceedings of the SCAR Symposium on Antarctic Biology*, Paris, 2-8 September 1962, will be entitled *Biologie Antarctique*, and publication is expected by the end of 1963.

(c) It was reported that arrangements had been made with the North Holland Publishing Company to publish the Proceedings of the Symposium on Antarctic Geology, Cape Town, 16-21 September 1963, in a volume to be entitled *Antarctic Geological Research* containing about 750 pages. It was now apparent that the total number of pages would be near 1200 and the contract would have to be re-negotiated. The Finance Committee was asked to examine the original contract and to recommend the degree of support SCAR might give to the publication of a larger volume should this be required.

(d) (i) SCAR approved a proposal from the Working Group on Glaciology that a Symposium on Antarctic Glaciology be held in 1967 in conjunction with a SCAR meeting.

(ii) SCAR approved a proposal from the Working Group on Oceanography that a Symposium on Antarctic Oceanography should be held in conjunction with a meeting of SCAR in 1966.

(iii) It was noted that WMO is interested in promoting a Symposium on

Antarctic Meteorology and the SCAR Working Group on Meteorology was requested to follow the matter up with WMO.

(iv) It was agreed that Working Groups be requested to submit proposals for future symposia, provided these did not compete with symposia being arranged by the Unions.

Working Groups

(a) The appointment of the following officers to Working Groups was confirmed:

Biology	Secretary	R. Carrick
Communications	Chairman	A. H. Sheffield
Geodesy and Cartography	Secretary	B. P. Lambert
Geology	Chairman	R. W. Willett
Glaciology	Secretary	C. Lorus
Meteorology	Chairman/Secretary	M. J. Rubin

It was noted that E. I. Robertson had expressed a wish to resign as Secretary of the Solid Earth Geophysics Working Group but would continue in office until a replacement had been elected.

Working Group reports

The recommendations of the Working Groups which met during the Seventh SCAR meeting—Geology, Oceanography, Finance and *ad hoc*—were approved after amendments had been made (see Annex).

Reports on formal and informal Working Group meetings held since the Sixth Meeting of SCAR were received as follows:

Glaciology:	Obergurgl, September 1962
	Berkeley, August 1963
	Proposed SCAR programme in Glaciology
Geodesy and Cartography:	Berkeley, 1963
Geomagnetism:	Berkeley, August 1963
Meteorology:	Berkeley, August 1963
Solid earth geophysics:	Berkeley, August 1963
Upper atmosphere physics:	Berkeley, August 1963

Election of President of SCAR 1963–66

Dr L. M. Gould was unanimously elected president. He paid a warm tribute to the services rendered to SCAR, and Antarctic research in general, by the retiring President, and proposed that he should be elected an honorary member of SCAR; this proposal was unanimously supported. Ing-General G. R. Laclavère thanked Dr Gould for his tribute, and all members of SCAR for their support during his term of office. He expressed himself highly gratified at the Honorary Membership conferred upon him.

Acknowledgements

The President expressed the thanks of SCAR, and of the members of the symposium on Antarctic Geology, to the South African Council for Scientific and Industrial Research, the Department of Transport, the Administration of

the Cape Province, the University of Cape Town and others responsible for the admirable organization of the meeting and the generous hospitality shown to its members.

Date and place of next meeting

No invitations having been received for the next meeting of SCAR, it was decided to hold it in Paris in 1964 should a formal invitation be received from the French Academie de Sciences.

ANNEX

Reports and Recommendations of Working Groups

FINANCE COMMITTEE

L. M. Gould (Chairman), B. P. Lambert

Recommendation VII. F-1. That expenditure incurred for sending SCAR representatives to meetings of other scientific bodies should be limited to \$2000 in 1964.

Recommendation VII. F-2. That up to \$1000 be made available during 1964 for administrative assistance for the editors of the proceedings of the Geological Symposium.

Recommendation VII. F-3. That the increase of SCAR income of \$15000 per annum from national contributions be confirmed.

Recommendation VII. F-4. That SCAR applies to ICSU for a subvention of \$8000 per annum for the two years, 1964 and 1965, to clear its accumulated deficit and to support SCAR representation at meetings of other ICSU bodies.

The Finance Committee, considering the situation regarding the ICSU special fund for IAAC, pointed out that the fund had been established on a loan from ICSU and recommended:

Recommendation VII. F-5. That SCAR again appeals to nations unable to send meteorologists to the centre, to support the fund by voluntary financial contributions and to remind countries which have meteorologists who wish to work at the centre but who cannot be supported from national sources, that application might be made to the fund for per diem and travel expenses.

GEOLOGY

R. W. Willett (Chairman/Secretary), R. J. Adie, P. Bellair, T. Gjelsvik, L. M. Gould, I. R. McLeod, D. C. Neethling, E. F. C. H. Rohwer, E. S. W. Simpson, W. J. Talbot, T. Tatsumi, F. C. Truter.

SCAR-IUGS Symposium

The Working Group congratulated all concerned with the successful Symposium on Antarctic Geology (Cape Town, 16 to 21 September 1963) and stressed the importance of immediate publication of the proceedings in a suitable form. The Editor, R. J. Adie, would be assisted by E. S. W. Simpson and F. C. Truter.

Recommendation VII. G-1. That future geological symposia continue to be under the auspices of SCAR-IUGS and that the next be in 5-7 years' time.

Recommendation VII. G-2. That the attention of IUGS be drawn to the problems of Antarctic palaeobotany and palaeozoology concerning incorrect determinations and nomenclature.

Recommendation VII. G-3. That the desirability of encouraging fossil spore and pollen work in the Antarctic be stressed.

Recommendation VII. G-4. That when opportunity offers the Beacon Group should be the subject of detailed studies.

Recommendation VII. G-5. That geological parties travelling between outcrop areas be urged to carry out seismic reflection work where and when feasible. The development of some suitable portable apparatus is further urged.

Recommendation VII. G-6. That SCAR member nations be most strongly urged to see that their correct and officially accepted geographical place-names appear on published maps.

Recommendations VII. G-7. That the orientation of all maps of Antarctica should comply with that of *Recommendation V. Gd-5* of the Geodesy and Cartographic Working Group (*SCAR Bulletin*, No 10, p 141).

Recommendation VII. G-8. That the attention of geologists of SCAR countries be drawn to the availability, in reprint form, of the section dealing with "Recent Polar Literature" in the *Polar Record*.

The value of the *Polar Record* as a reliable source of information available to all countries was stressed.

International Stratigraphic Lexicon

Recommendation VII. G-9. That in view of the extensive geological activity demonstrated by the large number of papers presented at the Symposium on Antarctic Geology, it is urged that the Antarctic section of the *International Stratigraphical Lexicon* be completed as soon as possible and that the Chairman (R. W. Willett) and E. S. W. Simpson be responsible for the completion of this task. They should aim to finish this by the end of 1964.

Geological map of Antarctica

Recommendation VII. G-10. That R. J. Adie be nominated as Vice-President for Antarctic geology on the Commission for the Geological Map of the World.

Recommendation VII. G-11. As it is considered desirable that one or two of the Southern Hemisphere SCAR members undertake the compilation, preparation and publication of the Antarctic geological map, SCAR recommends that Australia and New Zealand explore the possibility of jointly collecting, preparing and publishing the Geological Map of Antarctica.

Isotope dating

Recommendation VII. G-12. SCAR notes the publication of valuable lists of isotope dates, and recommends that E. E. Picciotto continue these publications in consultation with SCAR.

Recommendation VII. G-13. That the increased use of as many reliable methods of isotope dating as possible be urged and it be stressed that samples selected for dating should be from exposures where field structural and stratigraphic relations are known as fully as possible.

Translations

Recommendation VII. G-14. That SCAR commends the usefulness of lists of translations into English, and recommends that this practice be continued and that the possibilities of publication in the *Polar Record* or *SCAR Bulletin* be explored. It further recommends that T. Gjelsvik be compiler.

Depositions

Recommendation VII. G-15. That subject to the agreement of the National Committees on Antarctic Research of South Africa and New Zealand, SCAR recommends that the member nations be asked to regard the Geology Department, University of Cape Town, South Africa, and that of the University of Canterbury, Christchurch, New Zealand, as additional depositories of all published geological information. It also recommended that, where feasible, representative specimens of rocks and fossils be deposited at these centres. The purpose of this recommendation is to make literature and specimens available for inspection by expedition geologists, many of whom could visit such collections en route to and from the Antarctic.

Exchange of personnel

Recommendation VII. G-16. That SCAR encourage the exchange of geological personnel in order to increase the understanding of Antarctic geology.

Preservation of geological features

Recommendation VII. G-17. That all SCAR nations be urged to draw to the attention of their Antarctic personnel the importance of preserving unique geological sites (features, outcrops or deposits) in Antarctica.

Next meeting

Recommendation VII. G-18. That in view of the increasing importance of geology within the SCAR programme, a meeting of the Working Group on Geology in 1965 would be desirable.

Exchange of data

The Working Group considered the recommended resolution of United States Committee on Polar Research regarding the adoption of CIG "*Guide to International Data Exchange through World Data Centers for the Period 1960-Onwards*" and is of the opinion that the dissemination of raw geological data does not lend itself to this method. It is considered that prompt publication of findings, reports and maps is a more effective means of data exchange.

OCEANOGRAPHY

R. N. M. Panzarini (Acting Chairman), J. H. Day, G. E. Hemmen (Acting Secretary), J. K. Mallory, T. Torii, W. J. Tressler.

Research programme of SCAR

The Report of SCAR representatives at the Sixth Meeting of SCAR was received. The Working Group supported the view that random measurements taken from vessels with other prime tasks do not add significantly to existing knowledge and emphasized the importance of complete stations i.e. to include Antarctic bottom water, meridional standard sections with closely spaced stations, and of seasonal coverage including, if possible, stations through ice holes in winter. It was agreed that the SCAR programme in oceanography should be revised and that a proposed new programme should be circulated to Working Group members for comment and approval.

International Biological Programme

The SCAR Working Group discussed a letter from Mr Glover, convenor of the IBP Committee of Marine Biology, and agreed to the following resolution which should be conveyed to Mr Glover and copied to SCOR for information:

Recommendation VII. O-1. The SCAR Working Group on Oceanography is interested in, and wishes to be kept informed of, the development of plans for a marine biological programme in IBP but does not feel that the international organization of an extensive marine biological programme is worthwhile at the present time. The SCAR Working Group is of the opinion that there is insufficient basic knowledge available to determine those projects which might be organized with greatest benefit under an international biological programme, and that there has been insufficient intercomparison of biological methods and techniques.

It is unlikely that SCAR nations would be able to devote to marine biology under IBP any appreciable resources other than those currently devoted to, or likely to be available for, SCAR programmes but would be prepared to co-operate. This recommendation to be referred to the Working Group on Biology for comment.

Data exchange

It was agreed that the SCAR view of oceanographic data exchange through World Data Centres should be conveyed to CIG and SCOR as follows:

Recommendation VII. O-2. That in view of the activities of CIG, SCOR and IOC with regard to WDCs for Oceanography, the SCAR Working Group on Oceanography wishes to record its opinion that the data to be included in the WDC system should be:

Temperatures	Transparency	} to be sent to the existing specialized centres as at present
Salinities	Colour	
Nutrient elements	Tides	
Oxygen	Bathymetry	
CO ₂		

For all other oceanographic observations, WDCs should not seek to hold the actual data but should maintain catalogues of what measurements have been made, and from whom the data are available on request, so that individual scientists can apply direct. Until such time as WDCs accept this responsibility, interested oceanographers should communicate with the Secretary of the Working Group. Meteorological data from ships are adequately covered by existing national meteorological services practices.

International Antarctic Tide Gauge programme

Recommendation VII. O-3. That the proposal for an International Antarctic Tide Gauge programme submitted by the British National Committee on Antarctic Research be adopted in principle, and that all SCAR nations be urged to participate and be requested to inform the Secretary of SCAR the precise location of all tide gauges currently in operation and what new ones they might instal under the new programme. The Director of the Permanent Service for Mean Sea Level and the Secretary of SCOR are to be informed of this recommendation.

Symposium on Antarctic oceanography

Recommendation VII. O-4. That the session on Antarctic Oceanography be deleted from the programme for the Second International Oceanographic Congress and that SCOR and IAPD be invited to co-sponsor with SCAR a three-day Symposium on Antarctic Oceanography in conjunction with a meeting of SCAR in 1966.

It was agreed that this recommendation be conveyed to ICSU for transmission to UNESCO, and that should UNESCO decline to delete the session as recommended the situation should be reconsidered.

Officers of the Working Group

Recommendation VII. O-5. That Dr M. M. Somov be confirmed as Chairman of the group and Dr W. Tréssler be appointed Secretary.

Next meeting of the Working Group

Recommendation VII. O-6. That the Working Group meet in 1966 at the time of the proposed Symposium on Antarctic Oceanography and should also meet on the occasion of the Second International Oceanographic Congress 1965 if sufficient members of the group are present.

NATIONAL COMMITTEES OF SCAR

Argentina: Instituto Antártico Argentino, Cerrito 1248, Buenos Aires

Australia: National Committee for Antarctic Research, Australian Academy of Science, Gordon Street, Canberra

Belgium: Centre National de Recherches Polaires, 3 avenue Circulaire, Bruxelles, 18

Chile: Comité Nacional de Investigaciones Antárticas, Casilla 13518-Correo 15, Santiago

France: Ing. Gen. G. R. Laclavère, 57 Avenue de Breteuil, Paris 7e

Japan: Science Council of Japan, Ueno Park, Tokyo

New Zealand: National Committee on Antarctic Research, Royal Society of New Zealand, P.O. Box 8018, Wellington

Norway: Det Norske Videnskaps Akademi, Drammensveien 78, Oslo

South Africa: South African National Antarctic Committee, CSIR, P.O. Box 395, Pretoria

United Kingdom: Royal Society, Burlington House, Piccadilly, London, W. 1

United States: United States Committee on Polar Research, National Academy of Science, 2101 Constitution Avenue N W, Washington 25, DC

USSR: Soviet Committee on Antarctic Research, Academy of Sciences of USSR, 1-y Akademichesky pr 30a, Moscow, B-333

PERMANENT DELEGATES TO SCAR

Argentina: Contraalmirante R. N. M. Panzarini, Instituto Antártico Argentino, Cerrito 1248, Buenos Aires

Australia: Professor K. E. Bullen, Department of Applied Mathematics, University of Sydney

Belgium: Professor J. van Mieghem, Institut Royal Meteorologique, 3 avenue Circulaire, Bruxelles

Chile: Professor don Humberto Fuenzalida, Casilla 18518-Correo 15, Santiago

France: C. Lorius, Laboratoire de Géologie, Collège de France, Place Marcelin, Berthelot, Paris V

Japan: Professor T. Nagata, Geophysical Institute, Tokyo University

New Zealand: E. I. Robertson, Geophysics Division, DSIR, 156 The Terrace, Wellington

Norway: Dr T. Gjelsvik, Norsk Polarinstitut, Observatoriegat 1, Oslo

South Africa: S. M. Naudé, CSIR, P.O. Box 395, Scientia, Pretoria

United Kingdom: Dr G. de Q. Robin, Scott Polar Research Institute, Cambridge

USA: Dr L. M. Gould, US Academy of Science, 2101 Constitution Avenue, Washington 25

USSR: Dr M. M. Somov, Soviet Committee on Antarctic Research, 1-y Akademicheskoy pr, 30A, Moscow B-333

IGU: Dr V. Schytt, Geografiska Institut, Drottninggatan 120, Stockholm, Va

IUPS: Professor J. G. Baer, Institut de Zoologie, Université de Neuchâtel

IUGG: Ing. Gen. Laclavère, 140 rue de Grenelle, Paris 7

IUGS: R. W. Willett, Geological Survey, DSIR, Box 368, Lower Hutt, New Zealand

IUPAC: No delegate, correspondence to R. W. Morf, Secretary, c/o Hoffman-La Roche Co. Ltd., Grenzacherstrasse 124, Basel

IUPS: L. Irving, Laboratory of Zoophysiology, University of Alaska, College

URSI: F. J. Hewitt, National Institute of Telecommunication Research, Box 10319, Johannesburg

WMO: K. Langlo, WMO Secretariat, Geneva

EXCHANGE SCIENTISTS IN THE ANTARCTIC, 1962-63

Name	Country of origin	Subject	Host country
G. Francischini	USA	Meteorology	USSR (<i>Ob'</i>)
N. Kudryavtsev	USSR	Oceanography	USA (<i>Ellanin</i>)
M. Pryor	USA	Oceanography	USSR (<i>Mirny</i>)
Tarakanov	USSR	Biology	USSR (<i>Mirny</i>)
		Meteorologist	USA ("McMurdo")

STATIONS OPERATING IN THE ANTARCTIC, WINTER 1963

(Those marked * are north of lat 60° S)

Argentina

"Decepcion", lat 62° 59' S, long 60° 43' W

"General Belgrano", lat 77° 58' S, long 38° 48' W

"Esperanza", lat 63° 24' S, long 56° 59' W

"Orcadas", lat 60° 45' S, long 44° 43' W

"Teniente Matienzo", lat 64° 58' S, long 60° 03' W

Australia

- *Maquarie Island, lat 54° 30' S, long 158° 57' E
- Mawson, lat 67° 36' S, long 62° 52' E
- Davis, lat 68° 35' S, long 77° 58' E
- "Wilkes", lat 66° 15' S, long 110° 32' E

Chile

- "Capitán Arturo Prat", lat 62° 29' S, long 59° 39' W
- "Presidente Pedro Aguirre Cerda", lat 62° 56' S, long 60° 36' W
- "General Bernardo O'Higgins", lat 63° 19' S, long 57° 55' W
- "Presidente Gabriel Gonzalez Videla", lat 64° 49' S, long 62° 52' W

France

- *"Camp Heurtin", lat 37° 50' S, long 77° 34' E
- *Port aux Francais, lat 49° 21' S, long 70° 12' E
- "Dumont d'Urville", lat 66° 40' S, long 140° 01' E

New Zealand

- "Scott base", lat 77° 50' S, long 166° 44' E

New Zealand/USA

- "Hallett", lat 72° 18' S, long 170° 18' E

South Africa

- *Marion Island, lat 46° 53' S, long 37° 52' E
- *Gough Island, lat 40° 19' S, long 9° 51' W
- "Sanac",

United Kingdom

- Deception Island, lat 62° 59' S, long 60° 34' W
- Hope Bay, lat 63° 24' S, long 56° 59' W
- Stonington Island, lat 68° 11' S, long 67° 00' W
- Argentine Islands, lat 65° 15' S, long 64° 15' W
- Signy Island, lat 60° 43' S, long 45° 36' W
- Adelaide, lat 67° 46' S, long 68° 54' W
- Halley Bay, lat 75° 81' S, long 26° 38' W
- *Grytviken, South Georgia, lat 54° 17' S, long 36° 30' W

USA

- "Amundsen-Scott", South Geographical Pole
- "New Byrd", lat 80° 01' S, long 119° 32' W
- "McMurdo", lat 77° 51' S, long 166° 40' E
- "Eights", lat 75° 15' S, long 77° 06' W

USSR

Mirny, lat 66° 33' S, long 93° 00' E

"Novolazarevskaya", lat 70° 46' S, long 11° 49' E

"Molodezhnaya", lat 67° 40' S, long 45° 51' E

"Vostok", lat 78° 27' S, long 106° 52' E

CHANGES OF ADDRESS

Australia: Australian National Antarctic Research Expeditions, 568 St Kilda Road, Melbourne, SC3, Victoria

Belgium: Centre National de Recherches Polaires, 3 avenue Circulaire, Bruxelles 18

PERMANENT WORKING GROUPS OF SCAR

(Amendments to *SCAR Bulletin*, No 14, 1963, p 235-40)

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Japan: Dr D. Miyadi, Faculty of Science, Kyoto University, Kitashirakawa, Sakyo-ku, Kyoto

South Africa: Dr E. M. van Zinderen Bakker, Department of Botany, University of the Orange Free State, Bloemfontein

COMMUNICATIONS

Argentina: J. M. Cohen, Instituto Antártico Argentino, Cerrito 1248, Buenos Aires

Chile: Commandante A. Soto W., Estado Mayor de la Defensa Nacional, Ministerio de Defensa, Santiago

GEODESY AND CARTOGRAPHY

Japan: Dr I. Tsubokawa, Geographical Survey Institute, Ministry of Construction, Meguro-ku, Tokyo

GEOLOGY

Japan: Dr T. Tatsumi, Department of Geology, University of Tokyo

GLACIOLOGY

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LOGISTICS

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Shinjuku-ku, Tokyo

SOLID EARTH GEOPHYSICS

South Africa: Dr D. J. Malan, Bernard Price Institute, University of the
Witwatersrand, Johannesburg

UPPER ATMOSPHERE PHYSICS

South Africa: R. W. Vice, National Institute for Telecommunications
Research, University of the Witwatersrand, Johannesburg

NOTICE

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Contributions are invited, and should consist of factual notes on the membership, equipment and activities of Antarctic parties; articles on matters of particular interest in connection with these activities are also welcome. Contributions should be sent to the Editor, Scott Polar Research Institute, Lensfield Road, Cambridge, England.

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