

Book Reviews

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Science in the snow - fifty years of international collaboration through the Scientific Committee on Antarctic Research

D.W.H. Walton & P.D. Clarkson with additional material by
C.P. Summerhayes
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SCAR, the Scientific Committee on Antarctic Research, was the child of the International Geophysical Year, IGY, 1957–58. The International Council for Science, ICSU, which played a key role in launching the IGY, established SCAR as one of its special committees to initiate, promote and co-ordinate scientific research in the Antarctic. SCAR was born in 1958. Fifty years later it is time to look back on the history of Antarctic research and scientific cooperation from the perspective of SCAR, as well as taking a close look at SCAR itself, its development and achievements.

Few people could have been better positioned to write the history of SCAR than David Walton and Peter Clarkson. Peter was the executive secretary of SCAR during the period 1989–2005. David has played many important roles for SCAR, especially in relation to environmental affairs and conservation as well as in the contacts between SCAR and the Antarctic Treaty. Hence they know SCAR history from the inside as well as having close access to the SCAR archives at the Scott Polar Research Institute. Another prominent SCAR person, Colin Summerhayes, the executive director of SCAR, 2004–10, has also made important contributions.

In the appendices of the volume one gets a quick overview of the SCAR history, in terms of numerous business meetings, symposia, key people, and publications. These are impressive lists of activities and a challenging source of facts and memories for a book. There are several histories to tell which partly coincide: the progress of Antarctic science as such, scientific international cooperation (not always related to SCAR), SCAR's role for science and SCAR's internal affairs. Moreover, the relationships to the political arena, notably the Antarctic Treaty and later to the Council of Managers of Antarctic Programmes, COMNAP, play an increasingly important role. It goes without saying that it is impossible to make a consistent historical presentation of all these parallel tracks without overlaps and gaps.

It is recognized that Antarctic science did not start with SCAR fifty years ago, although the SCAR period covers the most dynamic and most important period of research. The history of research is still only a couple of hundred years, briefly described in the introductory chapter. More importantly, the events leading up to IGY and the formation

of SCAR is discussed in some detail, as well as the earlier international polar years, 1882–83 and 1932–33, and the critical steps which were taken after the Second World War to make science a leading principle and hence to ensure political stability to the continent (in the time of Cold War). This chapter provides valuable insights and useful reading for anyone actively engaged in present-day Antarctic research.

To follow the development of SCAR thereafter is a fascinating journey, sometimes entertaining, sometimes confusing. The authors sort out this complex material in a way that makes it relatively easy to follow the chronology of events. The important message is that achievement in science is the driving force and rationale for SCAR. However, success has shifted over time and sometimes been overshadowed by organizational issues. The president Claude Lorius (1986–90) voiced concerns about the operations of SCAR and the increasing pressures from political and environmental groups as well as noting that: "SCAR is so busy doing detailed business that there is no time for discussing visions, new ideas and opportunities".

The original SCAR consisted of twelve members. It was a closed club and documents from the meetings were kept secret. The first step to open up SCAR was taken in 1978 when the two German states were accepted as full members. More nations were to follow in the mid 1980s and onward. In 2008 SCAR had 31 full members as well as four associate members.

This development has had a range of ramifications which provide an important story line in the book. At the same time the science has grown and become both more specialized and integrated in large-scale ventures, such as EPICA and BIOMASS. Moreover the demand for scientific input for decision making, primarily in the Treaty and CCMA LR has become more pressing. It is a remarkable fact that SCAR has, for more than fifty years, been able to deliver in this stressful environment, albeit not always to the satisfaction of everyone. Critical episodes are described in the book and one can feel the frustration of the authors who probably sometimes were directly involved. One such example, described in some detail, is the negotiations leading up to the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA). In many ways this process highlighted the dilemma of SCAR in its advisory role to the Treaty as well as having SCAR experts acting as members of national delegations and SCAR's position in relation to environmental organizations (e.g. environmental constraints versus access to scientific research). Of course CRAMRA was never implemented and was replaced by the Protocol on Environmental Protection (signed in 1991). It turned out that SCAR's future as an advisory body to the Treaty would become closely linked to the development of the Protocol.

The review and the following restructuring of SCAR beginning in the year 2000 is described as a milestone and turning point for the organization (compare the quotation from Lorus above). The key was to find ways of getting the scientific community more involved and being able to draw on the expertise which SCAR (at least potentially) had access to. This also required a more active and science-heavy leadership of the organization, i.e. a strengthening of the core of SCAR, the secretariat at Scott Polar. It is too early to tell if this modernisation of the organization will have a lasting value. No doubt the change has revitalised SCAR and the authors seem quite hopeful that the future will be bright for Antarctic science and that SCAR will continue to play an important role.

The book is written by people who have had a direct involvement in SCAR with a first-hand knowledge of much of the material described. Although the authors never talk in the first person, the reader is made aware of the fact: "I was there". The text is sprinkled with small anecdotes and value judgement (the wine was excellent at the banquet, ridiculous solutions and strange ideas on medical ethics etc.). It makes the narrative more amusing and helps to lighten up descriptions which tend otherwise to be rather repetitive and monotonous. On the other hand, these random comments make the reader somewhat uncertain about the facts and the objectivity of the presentation. The inserts with short biographies and pictures of SCAR presidents are very nice. There is an interesting collection of photos in the book (you usually have high expectations about pictures in a book about Antarctica!).

You can always complain about missing details in a presentation covering a wide scope of activities over such a long period. One event which could have been interesting to have comments on from a SCAR perspective was the building of the Greenpeace station on the Antarctic continent. Actually the whole issue of station establishments and their political (as well as scientific) roles is given less attention in the presentation than it might deserve.

The book is no doubt an extremely valuable source for information about SCAR and its history. It is a volume to come back to and find facts and data that one might be looking for and, for all of us who have had a relation to SCAR over the years, also a book of good memories. It does not claim to be the final account of SCAR. It will be the task of historians in the future, with the benefit of hindsight and with a distance to the sources of information and distance to the events, to return to this subject.

One last remark. The title *Science in the Snow* is not the most remarkable or creative invention. For many of us coming from the north and living in the snow for many months of the year the title does not point us in the direction of Antarctica!

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Putting South Georgia on the map

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The South Georgia survey expeditions of the early 1950s provide an inspiring example of private enterprise applied to Antarctic exploration. Whilst it is commonplace for independent expeditions to claim altruistic objectives, few can have delivered more than the three survey missions to South Georgia between 1951 and 1956 masterminded by Duncan Carse (1913–2004). Alec Trendall was the geologist accompanying the first two of these expeditions, in the 1951–52 and 1953–54 summers, but has written a fascinating account of the entire exercise, drawing extensively on the diaries and reminiscences of his colleagues during those two periods and the third expedition in the 1955–56 season. His record of the field activities is supplemented by well-researched reviews of the conception and aftermath of Carse's ambitious project. Appendices provide biographical details of the participants - a quite extraordinary group of men - and a discussion of the possible route taken by Shackleton on his epic crossing of the island in 1916, an aspect that Carse had hoped to clarify during the survey work (Carse 1959). Separately, Trendall's two accounts of his geological investigations were published (Trendall 1953, 1959) as scientific reports by the Falkland Islands Dependencies Survey, forerunner of the British Antarctic Survey.

On 1 January 1952 Trendall fell into a crevasse, high up between the Spenceley and Ross glaciers, and sustained a serious leg injury. Accordingly, much detail of the first expedition, including the account of Trendall's rescue and evacuation, is provided by Walter Roots, an experienced mountaineer working with the survey party. Trendall made a good recovery and rejoined the second of the survey expeditions, which was beset with difficulties - logistical, medical and strategic - such that of the original four-man party only he and Carse completed the full season. Trendall's account of the third, more successful, expedition utilizes diaries and letters from five of the eight-man team, all of which he skilfully melds with informed commentary and assessment. It is our good fortune that the diarists were literate and imaginative. We share their aspirations, eccentricities, lyrical appreciation of their surroundings, and frustrations with each other and South Georgia's weather. They also provide some vivid insights into the whaling and sealing work pursued by companies based at the onshore stations in Stromness and Cumberland bays. All of these disparate themes are well illustrated in colour, reflecting the photographic talents of several expedition members but also, more significantly, the serious effort made to record all aspects of the teams' progress. This policy has allowed almost