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1991

SCIENTIFIC ARCHIVISTS GROUP

NEWSLETTER

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A LETTER FROM THE CHAIR

Welcome to the new style Newsletter. I hope you approve. The idea of the loose cover is to facilitate ease of photocopying and to be able to easily remove any forms without spoiling the Newsletter. As one of our aims is membership participation this could happen quite frequently. The issue has been sponsored by Incremental Systems and, because it is the first issue, the contents are similar to past Newsletters - but I hope in future you will make lots of contributions and provided sponsors and advertisers. I am sure many of you will have guessed that I got the idea for the Sagacity feature from Dr. David Moore (D.O.H.) and his design for our T-shirt at the Edinburgh meeting. As it means high intelligence I thought it would well describe the effect of the articles on members. If you have any comments on the newsletter please make them constructive - but possible!

Since last writing to you there have been three events which I know some of you attended.

In January was the course at Madingley Hall. I have included in the minutes of the B.A.S. meeting a summary of the papers given - to wet the appetites of anyone interested in attending next year. What isn't mentioned is the special dinner on the Thursday evening. Madingley Hall dates back to 1543 and the gardens were landscaped by Capability Brown. It was a perfect setting for the Burns Night Dinner.

Then we had a very successful S.A.G. meeting at B.A.S. in May. The committee had a 4½ hour meeting on Wednesday May 15th. As you can see by the Members Session we had much to discuss and Jo Kolbiarz's offer of help at such short notice was invaluable. Thank you Jo. In the evening members had dinner at the University Centre and were joined by Dr. and Mrs R.B. Heywood (Assistant Director B.A.S.). The meal was very enjoyable and made complete with a harp recital by Elaine Pamphilon who very amusingly explained how the harp works. The main meeting on May 16th was again a success. All the talks were extremely interesting and the film was absolutely breathtaking. The visits in the afternoon were very absorbing and instructive and the high standard of record keeping by scientists working in such extreme conditions was very impressive. Chris Dafforn and I had been asked to talk to B.A.S. scientists on May 16th under the headings "Trust The Scientist?" and "Trust The Data?". There was a good interchange of information and it was very encouraging to talk to scientists with such an interest in data.

AIOPi held a meeting at Heathrow on June 4th. I have enclosed the list of speakers. It was another very informative day and the meal around the pool was much enjoyed (food again!).

I am very sorry Jane Pennick has had to resign from S.A.G. She could always be relied upon to help in any way and made an invaluable contribution when on the committee. Sometimes the newsletter would not have appeared without the help of her superb minutes. Jane is now a Health and Safety Inspector so I am sure the south coast will be a safer place under those eagle eyes. I would personally like to thank her for taking me on my first trip out after I had been ill last year. We eventually finished up at an Indian Restaurant (no not in India, it just seemed that far). It was eventful and resulted in my second trip out!

I need volunteers to help run the workshops at the next meeting!!

If you are interested in volunteering for the committee please let me know in writing before the next meeting.

You will see there are three coloured forms at the back:

1. THE QUESTIONNAIRE

Tony Buick explains the questionnaire in his talk on training (page 22). Please support our efforts to organise a training programme by returning this.

2. THE REGISTRATION FORM FOR THE NEXT MEETING

As most of you know, it will be our 10th Anniversary and we would like to make it a special occasion so let's have a record turnout of members. There will also be invited guests and hopefully there will be some surprises for you and it will be "a bit of a do". On the serious side, we have not finalised the speakers yet but the theme will be 'Computer Records'. The one speaker I have definitely arranged is Dr. David Moore (D.O.H.). Although he is a GLP Inspector his talk will be very useful for all members. The cost by the way includes the meeting levy.

3. APPLICATION FOR MEMBERSHIP

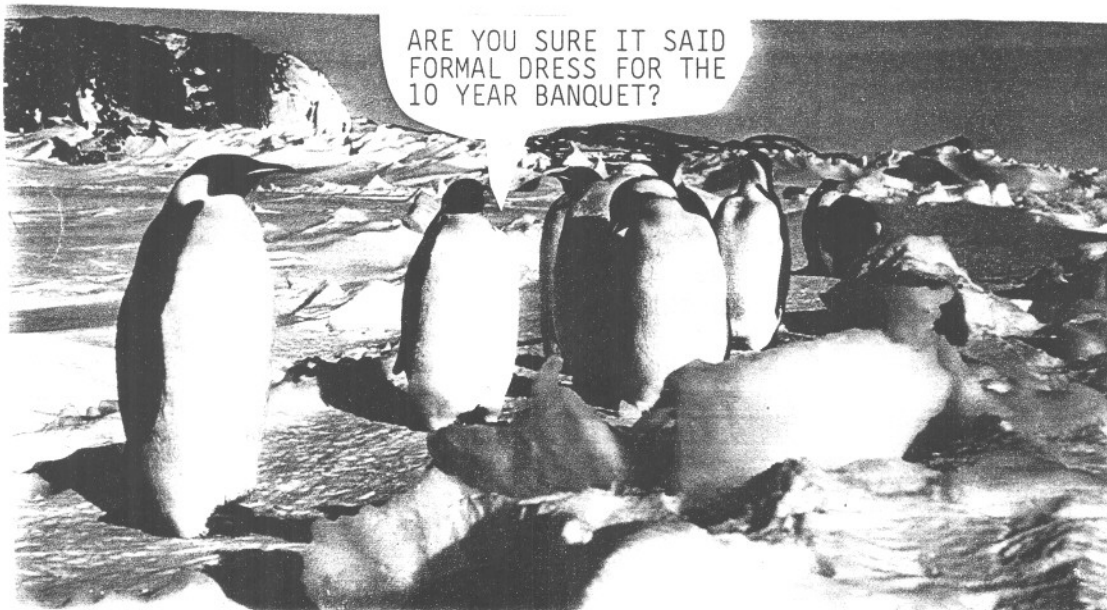
These must be completed and returned to Yvonne Arrowsmith by November 30th 1991, together with £10 membership for December 1991-November 1992. Membership will be strictly limited Scientific Archivists, either full or part-time, but our meeting will be open, at a reasonable fee, for anyone with an interest in the programme. The membership fee includes 2 editions of Newsletter. Extra copies can be purchased at £2.50 members and £5.00 non-members.

Finally I would like to thank David Ryan (Pfizer) for assisting me with the minutes and Cathy Wood (H.U.K) without who's help your Newsletter would not have been transformed into its new image.

I look forward to seeing you at our 10th meeting. Don't forget to send your contributions for the next Newsletter.

Best Regards,

Margaret



SCIENTIFIC ARCHIVISTS GROUPSPRING MEETING16 May 1991, at the British Antarctic Survey, CambridgeFINAL PROGRAMME

All events take place in the Conference Room on the first floor at the top of the stairs leading from the Reception Area.

- | | | |
|-------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 9.00 | Registration | |
| 9.15 | Introduction and Notices | Margaret McCabe, Chairperson |
| 9.25 | Welcome | Dr David Drewry, Director,
B.A.S. |
| 9.30 | B.A.S. Audio-Visual presentation | Chris Gilbert, Photographer,
B.A.S. |
| 10.00 | The Royal Greenwich Observatory
Archives, Cambridge | Adam Perkins, Archivist,
R.G.O. |
| 10.25 | COFFEE | |
| 10.50 | British Research in the Antarctic - Management of Past and Present
Data | |
| | B.A.S. Archives,
The Past Ten Years | Joan Smith, Archivist |
| | Atmospheric Sciences Data and
The Ozone Hole | Brian Gardiner,
Head, Radiation & Ozone
Section |
| | Ice Cores and Climate Change | Eric Wolff, Glaciochemist |
| | The Geological Database and the
Antarctic Geographical Information
System | Paul Cooper Geology/G.I.S.
Database Manager |
| | Biological Databases and the
Southern Ocean | Julian Priddle, Phytoplankton
Biologist |
| | The Development of N.E.R.C.
Data Policy | David Walton, Division Head,
Terrestrial and Freshwater
Life Sciences. |

- 12.00 Report on 'The Management of GLP Data and Documentation' Course at the Anglia Higher Education College. Chris Dafford, I.C.I.
- Future Courses Malcolm Wright, A.H.E.C.
- 12.20 Update on Training Programme Tony Buick, Wellcome
- 12.35 Update of Regulations
- 12.45 LUNCH - buffet served in the canteen.
Please eat in the Conference Room
- 2.00 Visits - in six groups
- Old Building - visits
- | | <u>Hosts</u> |
|-----------------------------------------|-------------------------------------|
| Logistics Store | Ian Collinge, Logistics Procurement |
| Rock Store | Steve Davison, Geology Technician |
| Mapping & Geographic Information Centre | Janet Thomson, Mapping Manager |
- New Building - visits
- | | |
|---------------------------------------------------------------|--------------------------------------------------------|
| Controlled Environment Facility, Aquarium & Plant Collection. | Jon Ward, Technical Resources Manager, Life Sciences |
| Registry & Archives | David Fletcher, Joan Smith |
| Herbarium | Shaun Russell, Antarctic Resource Centre Manager. |
| Upper Atmospheric Data Centre | Mark Gallani, Data Manager, Upper Atmospheric Sciences |
- 2.45 Group News
- Members Help Session
- 4.00 TEA

MINUTES OF THE SCIENTIFIC ARCHIVISTS MEETING

BRITISH ANTARTIC SURVEY - CAMBRIDGE

18th MAY 1991

HOSTED BY: JOAN SMITH (BAS) CHAIRED BY: MARGARET McCABE (HAZLETON UK)

INTRODUCTION AND NOTICES

Margaret welcomed all members and guests and thanked B.A.S. for hosting the meeting.

Apologies for absence were received from six members. One of these was Yvonne Arrowsmith who is the Treasurer. Ian Robinson acted as Treasurer for the duration of the meeting.

Steven Rowe (Roussell) was not available for the committee, so at extremely short notice Jo Kolbiarz agreed to attend the committee meeting held on 17th May and act as Secretary.

Margaret made a request for a volunteer to act as secretary for the meetings. None were forthcoming so the committee will take minutes. As it is already policy to ask speakers for a summary/copy of their presentations these will only be needed for question times when delegates will be asked to stand and identify themselves.

Margaret drew attention to the AIOPI meeting to be held on June 4th -
FACING UP TO THE ELECTRONIC RECORDS: DO THE RULES FOR PAPER APPLY?

Frank Coffrey (Record Management Society) gave information on their International Meeting.

The winner of the logo competition was Anne Salmon and her staff who were presented with a bottle of champagne.

WELCOME TO THE BRITISH ANTARTIC SURVEY

Dr David Drewery (Director) welcomed guests. He explained the role of the archives in a scientific institution and their relevance to scientific, administration and technical work. He emphasised the importance of co-operation and understanding between the scientist and the archivist.

Chris Gilbert (Photographer) gave a 25 minute audio visual presentation outlining the history and work of the B.A.S. in Cambridge and the Antarctic.

THE ARCHIVES OF THE ROYAL GREENWICH OBSERVATORY

ADAM PERKINS (Archivist R.G.O.)

Though I always enjoy speaking to others about the job that I do, I may say, have the privilege of doing, it is a particular pleasure to speak to a group of people who actually understand what it is that I do, without any explanation. Indeed, since I address scientific archivists, no preamble concerning professional classification is required - what bliss!

As with any collection from an individual institution, the history of the establishment is vital to the understanding of its records. The Royal Observatory was founded by Warrant in 1675, three months after the appointment by Charles II of John Flamsteed as his "astronomical observator".

Charles is renowned as a level-headed man, and he usually took actions for two sound reasons: love and money. In founding the Observatory, both came into play in his thinking to some extent. The King's amour of the day, a French lady who later became Duchess of Portsmouth, first aroused his interest in the problem of finding the longitude of an observer at sea or in some distant place. Once interested, Charles clearly saw that the solution of a problem which he had hardly recognised previously could not but benefit his nation of seafarers and its trade. What benefited the Kingdom's trade benefited the King.

Though from ancient times it had been known that a mariner or explorer could find his latitude, even by the late 17th century there was no way of finding his longitude, the distance east or west of some fixed point. By the early 1670s, it was accepted that one feasible method of ascertaining longitude was to observe the position of the Moon in relation to the fixed stars. There was no exact knowledge of the positions of the stars - the most accurate star catalogue was by then a century old, giving observations which of course pre-dated the invention of the telescope - and there was no understanding of the forces governing the Moon's motion, and thus no manner in which this motion could be predicted.

So, the Royal Observatory was founded for one practical purpose only, as the Warrant stated "...to find out the so-much desired longitude of places...". This Warrant appointed Flamsteed at an annual salary of £100, with £26 per year also authorised to pay a 'labouring man' as an assistant. £500 was allowed to Christopher Wren for the construction of an Observatory in Greenwich Park, though the final cost was just over £520.

For the first century of its being, the search for a method of finding a longitude was the abiding preoccupation of the Astronomers Royal; for a century after that, it was the perfection of the successful methods which had been discovered that formed the Observatory's raison d'etre. It is only over the past 100 years that endeavouring to answer the question "what...?" about the heavenly bodies has superseded the question "where...?".

Only because the public servant most concerned with the foundation of the Observatory in 1675 was the Master of the Ordnance of the day, the cost of the building and the subsequent quarterly remuneration of the Astronomer Royal and his assistant was paid through the Board of Ordnance, this Board being properly responsible for the provision of cannon to both the Army and the Navy. The Board continued as the controlling body of the Observatory until 1820, when responsibility was handed over to the Admiralty. The Royal Observatory continued on its site in Greenwich Park until after the Second World War, when the light and atmospheric pollution of the London conurbation forced its move from thence to Herstmonceux Castle in East Sussex. The Admiralty

relinquished control of the Royal Greenwich Observatory, as it became known after the move to Sussex, to the Science Research Council on the creation of that body in 1965.

Some of the great natural philosophers at the time of the founding of the Royal Observatory in 1675 were Isaac Newton and his colleagues of the Royal Society. Newton's great endeavour was the founding work of classical mechanics and the conception of his theory of universal gravitation. The practical observations which he required to confirm his theory were accurate positions of the Sun, Moon, planets and stars, a requirement which closely reflected the observational data produced by the Observatory.

The large telescopes given to the Observatory at the end of the last century and a change in emphasis in its work brought about by the scientific interests of a new Astronomer Royal changed the thrust of its work towards astrophysical enquiry. An even larger telescope was given to the Royal Observatory in the 1930s and after the move to Herstmonceux the gift of a large glass mirror blank led to the construction there of the largest telescope yet built for use in this country. In the 1960s and 1970s RGO staff were the prime movers in the construction of a large telescope in Australia, and during the last dozen years or so the Observatory has built a completely new astronomical facility on the Canary Islands. The Observatory of the 1990s is a very different creature from the one of the 1890s, though a full circle has been turned. The work on large telescopes has led to a great diminution of the effort expended on pure research over recent years, and the RGO's role is now seen as in constructing telescopes and in providing support for their users from the academic astronomical community.

There are three ways in which the records of the Royal Observatory may be viewed. Firstly as reflecting the historical development of a scientific establishment; secondly in the context of the development of the science of astronomy; and lastly as reflecting the characters of the Astronomers Royal, only eleven of whom held office between 1675 and 1971.

The Archives of the Royal Greenwich Observatory are Public Records by definition of the first schedule of the 1958 Public Records Act, and for reasons concerned with the recent history of its creating establishment, it is now in the main housed in Cambridge University Library, where I work as the keeper of this collection. The papers fall naturally into various groups of classes.

From the point of view of the historical record of the Observatory in the long term, the most important are the papers of the Astronomers Royal. From its foundation in 1675 until the early days of the tenure of the post by John Pond, the sixth Astronomer Royal, a period of some 140 years, the staff of the Royal Observatory consisted of the Astronomer Royal and the one assistant. Astronomers' Royal papers - and there are only ten classes of these, if voluminous ones, covering the years 1675 to 1971 - really represent a complete historical summary of the development of the institution. Complete, that is to say, insofar as original documents are ever complete; some parts of the record, and some important parts at that, have been lost.

Not everything in the Astronomers' Royal papers is concerned with astronomy; perhaps half of the total amount has an astronomical content. The balance is accounted for in associated scientific work, the inevitable administrative papers, general correspondence and in the miscellany of papers which make up the agglomeration of any person's working papers. Particular examples which spring to mind are a little notebook of observations made during an experiment to 'weigh a mountain' in Scotland; a collection of letters concerning the vitriolic dispute between Isaac Newton and Edmond Halley on the one hand and

John Flamsteed on the other; a student common-place book with love poems written from one end and mathematical workings from the other; of especial joy to the archivist, a stern notice issued by one Astronomer Royal, George Airy, to his staff to say that 'no paper may be discarded without my express authority'; the papers on the experiment which demonstrated that one prediction of Einstein's theory of general relativity was correct; and a long series of observations of an asteroid which yielded the distance from the Earth to the Sun, which the final answer written down neatly and doubly underlined, just as it might have been in a school exercise.

Approximately 5000 linear feet of records make up the entire collection of RGO Archives, some 20% of this consisting of the papers of the Astronomers Royal. 30% is made up of runs of glass plate negatives of celestial subjects, principally 150,000 stellar and 22,000 solar photographs. These latter are still retained at the Royal Greenwich Observatory.

Another important class group are the deposited papers of other establishments, government bodies and individuals. The Royal Observatory at the Cape of Good Hope, established in 1820, was controlled by the Royal Observatory and the Astronomer Royal up until the 1970s. Many of its records, particularly from its earlier days, have found their way back to the RGO collection.

Our single most used class falls into this category, this being the papers of the Board of Longitude. A quite separate body from the Observatory, the Board nonetheless had intimate connections with it. Created by Act of Parliament in 1714, it was intended to promote the search for a successful solution to the 'longitude problem' and was disbanded in 1828. George Airy, the man with the proper sense of the preservation of manuscript material, a dedicated record keeper if ever there was one, ensured that the Board's papers came to the Royal Observatory after the Board's demise. The papers are particularly rich in the records of our great navigators. The papers include logs and narratives of their voyages; Vancouver, Flinders and, Cook, are represented. The British Antarctic Survey in its literature refers to Cook's second voyage, a circumnavigation of the globe around Antarctica, as the earliest British expedition to the continent; we have in RGO Archives the log book of that voyage.

Many astronomers have deposited their papers for permanent preservation in RGO Archives. Guy Porter, who in the 1940s and 1950s gave monthly "Night Sky" radio broadcasts and who worked at the RGO, becoming something of a radio 'Patrick Moore' in his day, left his papers for RGO Archives. Roderick Redman, a Cambridge astronomer who had much contact with RGO over the project to build the large telescope in Australia but who did not work there, similarly left his papers.

But by far the greater part of this half of the Observatory's records is made up of the departmental records of the RGO, including of course its administration.

The first of the Astronomers Royal to retire under Civil Service regulations, was William Christie in 1910, and from that date the Observatory certainly tended away from being an institution which was 'one man's empire' to a typically Civil Service establishment with a hierarchical departmental structure. As more departments, and their necessary departmental heads, were created, so there was an ensuing explosion in the amount of paper produced by the Observatory; there was a Solar Department, a Time Department, an Astronomy and Astrophysics Department, an Engineering Department, a Photographic Department. In 1937, the Nautical Almanac Office, created in 1832 as an independent office under the Admiralty, became a department of the Royal

Observatory. Each of these departments could, and did, create as many, and as diverse, records as the Astronomer Royal of the time himself.

Into our own era, large projects undertaken by the Observatory have created large classes of records. The building of the Isaac Newton telescope at Herstmonceux - which took a mere 21 years from the date of the gift by the Americans of the Pyrex glass mirror blank - is one instance. Currently accruing classes (and please note that the collection does accrue in an ordered fashion and by criteria laid down by the Public Record Office) cover the telescopes built on the Canary Island of La Palma and the construction of the La Palma Observatory site itself over the past decade.

And I need hardly observe to the present audience that modern copying devices have greatly increased volume of paper records deposited, unhappily without a concomitant increase in their quality.

In the early 1980s, the listing of RGO Archives consisted of a short title catalogue assigning a number of an approximate date to perhaps 1000 pieces of the Astronomers' Royal papers from 1675 to 1910.

In 1983, thanks entirely to the Librarian and Archivist then employed at RGO, a project was set up under the Community Programme of the Manpower Services Commission to catalogue the whole collection, the project being entirely funded by the MSC.

Over the next five years project members systematically renumbered or numbered, catalogued and boxed the collection as described above, and much more besides. Some 30 man-years of effort was expended and about 20,000 pieces of the paper record were identified and catalogued, perhaps 60% of the total accrued papers as of 1990 January 1, and in addition 22,000 glass solar plates and about 10,000 of the stellar plates referred to before were all listed and enclosed in acid and sulphur free four flap folders.

An index to the 18th and 19th century correspondence of the Astronomers Royal, the Cape Royal Observatory and the Board of Longitude, approximately 250,000 entries on 80,000 index cards, was also created.

The total expenditure on this project, including immediate consumables but no overheads was approximately £350,000. I was recruited to RGO to take charge of the work, which I supervised for the first four years of its operation.

The catalogue, which remains the main finding aid, itself occupies 3 feet of shelf space and the Chadwyck - Healey National Inventory of Document Sources project estimates that when transferred to microfiche it will take up approximately 40 fiches. Much of this listing exists in the form of word processor files which have recently been converted from 80 dedicated 5¼" discs to ASCII files which can, potentially, be transferred to the University Library VAX computer's catalogue files. One day I hope that the catalogue will be available over the JANET network.

Had all this work not been done, the transfer of the records from Herstmonceux to Cambridge University Library, which began in 1989 January and was completed on schedule on 1990 April 30, would have been a far more difficult operation than it was. So far as my current audits of the contents of the collections have revealed, no loss of material has been sustained during this transfer.

The papers are now maintained and administered as a part of the University Library's Manuscript Department collections and are produced in the Department's Reading Room, much as any other papers would be. Conservation work by the Library's conservators is proceeding to some extent.



BRITISH RESEARCH IN THE ANTARCTIC -
MANAGEMENT OF PAST AND PRESENT DATA

B.A.S. ARCHIVES - THE PAST TEN YEARS

JOAN SMITH (Archivist)

An outline of the variety of material in the Archives and how it came to be there, is essential to an understanding of procedures adopted for managing the records in the decade or so since the Archives was established in 1979. It will also set in context the accounts of current scientific data which will become the archives of the future.

The story starts almost fifty years ago with 'Operation Tabarin' a wartime naval expedition which occupied bases in the Antarctic from 1944-45. Men with polar experience were gathered together from the forces and sent out there in great secrecy to set-up and over-winter at the bases. The object was to assert British sovereignty and deny whaling station oil supplies to the German fleet. Scientific work was undertaken to keep the men, who were mostly scientists, occupied over the winter. The records, in true naval fashion, were meticulously listed and duplicated. Each set was sent home by a separate ship to minimise loss.

In 1945 'Operation Tarbarin' was taken over by the Colonial Office, renamed the Falkland Islands Dependencies Survey and run by the Governor of the Falkland Islands with an advisory committee in London. The scientific work was continued to find out more about territory where our claim was increasingly disputed by certain South American countries.

Before the war research in the Southern Oceans had concentrated on hydrographic charting for shipping and biological research especially of whales and seals. This had been overseen by the Discovery Committee of the Colonial Office. Their records and specimens had gone mainly to the British Museum Natural History Department and been housed in the Discovery hut.

'Operation Tabarin' specimens and records were also sent there to be joined by the early F.I.D.S. records. But gradually some were dispersed - meteorological records to the Met. Office and topographical survey data to the Directorate of Colonial Surveys which had the cartographic capability to produce maps.

In 1950 a F.I.D. Scientific Bureau was set up in London charged with managing the scientific records and specimens and farming them out to

various universities for study. This activity grew over time until F.I.D.S. scientific units were established - atmospheric sciences at Edinburgh, Geology at Birmingham, Life Sciences at Queen Mary College, London. The London Office at the Crown Agents dealing with supplies for the Governor and the Bureau gradually merged and became larger and stronger than the F.I.D.S. office in Stanley.

The International Geophysical Year in 1957-58 brought a major international scientific collaborative project and several other nations to the Antarctic. This peaceful co-operation was institutionalised by the Antarctic Treaty which was signed in 1959 and became operative in 1961.

Consequently upon it the F.I.D. Survey changed its name to the British Antarctic Survey in 1962 to reflect the designation of the Dependency territory on the Antarctic Peninsula as the separate British Antarctic Territory.

In 1967 B.A.S. was passed to the new Natural Environment Research Council. The Stanley Office was reduced to one member of staff and in 1976 the Cambridge headquarters was built. This brought together for the first time the administration from London and all the scientific units from the universities.

It also brought together for the first time all the records and specimens which had survived remarkably intact a series of moves from the Discovery hut to numerous offices in London and Cambridge to say nothing of the farming out to individual scientists and our own units. This care can be traced to the early and continuing consciousness in B.A.S. that the information was unique and obtained at great cost. It is the geographic base to our work in such a remote and difficult area which has had this effect and also meant that we are a multi-disciplinary scientific institute - unique in that respect also.

This history has had a fundamental effect on our management in the following ways.

Firstly we are a mixture of public and non-public records as defined by the Public Records Act of 1958. Until we came under N.E.R.C. which, as a 'quango' was not covered by the Act, our records are public records. Connected papers are to be found in Admiralty and Colonial Office classes at the P.R.O. To keep those records we sought and obtained designation as an official 'Place of Deposit for Public Records'. This led to a scrutiny of our records for sensitive material by the F.C.O. Registry before being opened to the public under the thirty year rule.

This affects not only our administrative files but also the scientific records. A case in point is that without this status our Archives could not have reclaimed its early topographical survey data when the successor body to the Directorate of Colonial Surveys closed in 1987.

Secondly we inherited a mass of closed administrative files. It was important to deal with these not only because of bulk but because in them we can trace the thinking behind the direction that our research took and the international projects to which we contributed. The files set the context for the actual scientific records.

The new building spawned a new filing system, laudably set up on good records management principles but administered without expert control.

The confused records being received led the Archives into reorganising it and taking over the Registry. International and interdisciplinary co-operation has grown enormously in the last decade so that these files are essential for providing the policy and even the semi-protocol documentation for our research.

Scientific data and specimens came in with the units. The tradition of curation of specimens by the scientists themselves persists to this day so that we have no responsibility for them. A survey of potential records, a classification scheme and a simple listing procedure were the first jobs undertaken by the Archivist. Slowly scientific data records have been handed over as assurance has grown that they will be secure and made available.

However, from the beginning it was decided to go for computerisation. It seemed the obvious choice to use the latest technology for a new Archives in an organisation already familiar with it. The other main reason was that though the Archivist might view scientific records as needing to be catalogued to record their provenance as fundamental to their evidential value, the users, that is the scientists, were primarily concerned with their information content. This suggested the need for extensive indexing for which computers were theoretically ideal.

All of this was easier said than done. No archival software existed. It couldn't even be written since no agreed descriptive standards existed. B.A.S. Archives did not want to plough a lonely furrow as we could foresee that data exchange was one of the obvious benefits of computers. We have always striven to be as compatible as possible with allied information resources both within and without the institute.

The long and short of it all has been that we have put considerable effort into the movement to establish a standard of archival description now embodied in the 'Manual of Archival Description' published by Liverpool University. At the same time we have taken the lead in trying to express that in a computer application. We have progressed through FAMULUS, GOS and MUSCATEL to our present bespoke application MODES (Archives). This has been developed by this office in conjunction with the originators and marketers of MODES, the Museum Documentation Association. It supports the conclusions of MAD and is already in use by several very different Archives.

MODES is PC based and cheap - essential for poorly funded archives. Its only drawback is lack of on-line retrieval although improved versions are gradually introducing versions of that facility. Meanwhile we are moving on to transferring our Registry work from MODES to ORACLE, which is the B.A.S. in-house database management system. Hopefully our archive indexes will follow. The full catalogue text, unsuitable for 'table' treatment, would become available in ORACLE TEXT for full text searching at a later date.

We remain true to our first principles of maintaining compatibility and so widening access in a cost-effective manner. MODES is now in use in the Geology Division for printed map cataloguing. Our archive cataloguing of photographs can be implemented for the current photographic library. As all this moves to ORACLE we shall be moving into the SQL environment which is fast becoming a major international standard. So hopefully both our listing content and its medium will maintain maximum compatibility at minimum cost.

ATMOSPHERIC SCIENCES DATA PROCEDURES AND PERSPECTIVES

Brian G. Gardiner
British Antarctic Survey

Notes from a talk given to the Scientific Archivists Group on 16 May 1991

Characteristics of atmospheric data sets

In the atmospheric sciences, many data sets have two common characteristics: they are long-term, and they are numeric. Their long-term nature presents problems well known to archivists, and their numeric nature means that nowadays they are generally stored on magnetic media. These characteristics are rather obvious, but I would like to draw your attention to some other, less obvious, aspects of atmospheric sciences data sets.

To my mind, atmospheric data sets fall into three categories:

1. Climatological
2. Hybrid
3. Experimental

In the first category, the data are gathered over a long period in order to establish the normal climatological statistics for an atmospheric variable, or to monitor departures from that norm. The procedures are stable and routine, with well-established international standards. Measurements of surface temperature at meteorological stations fall into this category.

Jumping down to the third category, we have experimental data in which the procedures are unstable and volatile. The experimenters change the protocols in response to the results of the experiment, and there are no standards specific to the data sets, other than those set by the experimenters themselves. Spectrometric measurements of obscure trace gases might fall into this group.

In the middle category we find data sets which have some long-term characteristics, but where the measurements have experimental aspects. The procedures are stable and regularised, and there are international standards, but the measurements are not straightforward, and considerable skilled manipulation of the data is required in order to obtain reliable results. Measurements of stratospheric ozone are a case in point.

Curation requirements

For the first (climatological) category, the data are relatively easy to use, but nevertheless occasionally susceptible to misinterpretation. A temperature data set was issued on magnetic tape by a national institute overseas. The data covered many decades, but the user discovered by chance that the later data were derived from the average of eight temperature measurements made at three-hourly intervals on each day, whereas the early data came from the average of a morning reading of the minimum thermometer (representing the cool of the night) and an evening reading of the maximum thermometer (representing the heat of the day). Any attempt to extract information on climate change from this tape would therefore be fraught with danger. What was missing was supporting documentation, either on paper or on the tape itself.

At the other extreme, in the third category, the data are experimental. Their provenance is so fluid that it is necessary to have one's finger on the pulse of the experiments in order to interpret the results. Detailed work therefore requires collaboration.

In the intermediate category, there is a danger that the data will be issued to the user in a form which looks like climatological data, but which actually has some of the characteristics of experimental data. For example, it may be prompt or preliminary data, which are valuable and suitable for some purposes (perhaps for examining the smaller-scale temporal and spatial variations and morphology of the parameters) but which are quite unsuitable for extracting more subtle results such as permanent shifts in the norm. To avoid such pitfalls, it is necessary for the user and the originator to enter into a dialogue.

Moral for archivists

Besides the duty of caring for the data set so that it remains intact and accessible, the archivist should attempt to bring the user and the original experimenter as close as possible together, through documentation, dialogue, or collaboration, as appropriate.

Moral for scientists

Keep in close touch with your data. Talk to those who are in close touch with theirs.



Keeping a cool head for data

ICE CORES AND CLIMATE CHANGE
ERIC WOLFF (Glaciochemist)

The glaciology group in BAS carries out two main types of work, both concerned with global change. One looks at the stability of the vast ice sheet that covers Antarctica. It collects, interprets and models data on ice movement, thickness, temperature and other observations. The other type of research is studies of ice cores.

Ice contains within it a record of the atmosphere at the time that the snow fell. The snow falls in layers that can be dated. By drilling into the ice sheet, we can retrieve ice that fell hundreds, thousands or even hundreds of thousands of years ago. The chemical impurities and physical properties of the ice tell us about past temperatures, wind speeds, sea ice extent, biological productivity, and over shorter timescales about any pollution reaching Antarctica. By understanding the causes of past changes, we contribute to attempts to predict changes that may occur in the future, particularly those related to the greenhouse effect.

The prime data consists of chromatograms, spectrometer readings and other types of data that are stored on floppy discs and on paper. These are only referred to if an individual data point is in question. The data that are generally referred to are individual numbers keyed to depth in the core, stored in spreadsheets and in Dbase 3 format. We may have 10 or more samples per year for hundreds of years, with perhaps 20 analytical measurements on each sample. The data are used for comparisons within our own set and, with more difficulty, with other people's cores and other data sources. More challenging will be to organise data from international projects, such as one in Greenland that will drill to 3000 metres, with over 30 scientists from 8 European nations taking part.

Apart from data, the other item we must archive are ice cores themselves. Perhaps this is an extreme example of environmental constraints, because of a couple of hours at temperatures above freezing is enough to make the cores almost worthless to us.

GEOLOGY AND GEOGRAPHIC SYSTEMS B.A.S.
PAUL COOPER (Geology/G.I.S. Database Manager)

Paul Cooper spoke about the information gathered by this department which is held on a geology database. Every location visited is recorded, together with every sample collected and all further processing, analysis and description. This information can vary in quality depending on the situation and capability of the scientist. This Oracle database uses SQL for searching. The data are held in tables.

The stations table contains location data, location description and work done at that location. The specimens table holds descriptions of specimens and other tables are also included. GIS provides a means of linking many databases on geographic criteria, allows novel analyses to be carried out and the data availability to be checked rapidly, and provides a tool for efficient planning of field campaigns. The department is also compiling a digital database of topographic data on Antarctica for CD ROM release in Summer 1992.

BAS MARINE LIFE SCIENCES

SCIENCE, DATA AND SAMPLES BY DR J PRIDDLE

Background

The British Antarctic Survey has undertaken marine biological research for over forty years. Until the mid 70s, this was almost exclusively shore-based, examining land-based predators such as seals, penguins and other seabirds, and a programme of coastal marine biology centred on South Georgia and the South Orkney Islands. More recently, a programme of shipboard research has been undertaken and this represents the major effort by the Division.

The major motive for investigating the Southern Ocean ecosystem has been a concern over the vulnerability of a range of species to developing fisheries. Whale stocks, and more recently some fish populations, have suffered drastic decline through over-exploitation. The international conservation measures agreed by Antarctic Treaty nations aim to preserve the ecosystem as a complete unit rather than simply conserving target species. This task is laudable, but involves a very much more detailed understanding of the population dynamics of all important species, together with an understanding of how they interact. Continuation of the land-based studies of seabirds and seals, and the long-term study of the nearshore ecosystem provide important insights into the overall patterns of biological and environmental variation.

More recently, the scientific effort has also focused on the role of the oceans in modifying global climate. The realisation that significant proportions of anthropogenic carbon dioxide may be transferred from the atmosphere to the ocean and there contained in a form which does not affect the planet's heat balance has led to major studies of the processes of carbon cycling in the oceans. The Southern Ocean is likely to be extremely sensitive to climate change, as the annual pattern of advance and retreat of sea-ice plays a major part in biological processes.

Data Acquisition

Modern oceanography and marine biology produce a very wide range of data, from remote sensing and underway instrumentation logging very large volumes of data, to individual human observations on various living plants and animals. Measurements may be made at scales ranging from ocean basins to processes observed under a microscope or in a chemical analytical instrument. This diverse collection of data has to be reduced to digital data suitable for electronic storage. Whilst this is not a problem with modern automatic instrumentation, the logging of data relating to individual specimens often requires considerable effort on data entry.

All data eventually find their way into an ORACLE database. As well as the main Divisional database which is concerned with oceanographic data, there are separate databases for various data from bird and seal research, and the investigation of seasonal changes in the nearshore environment. The MLSD also houses the database for the international BIOMASS programme, which has undertaken a long-term investigation of the Southern Ocean with respect to fisheries.

Biological data often produce further problems in terms of validation. It is relatively simple to establish criteria for the acceptance of physical or

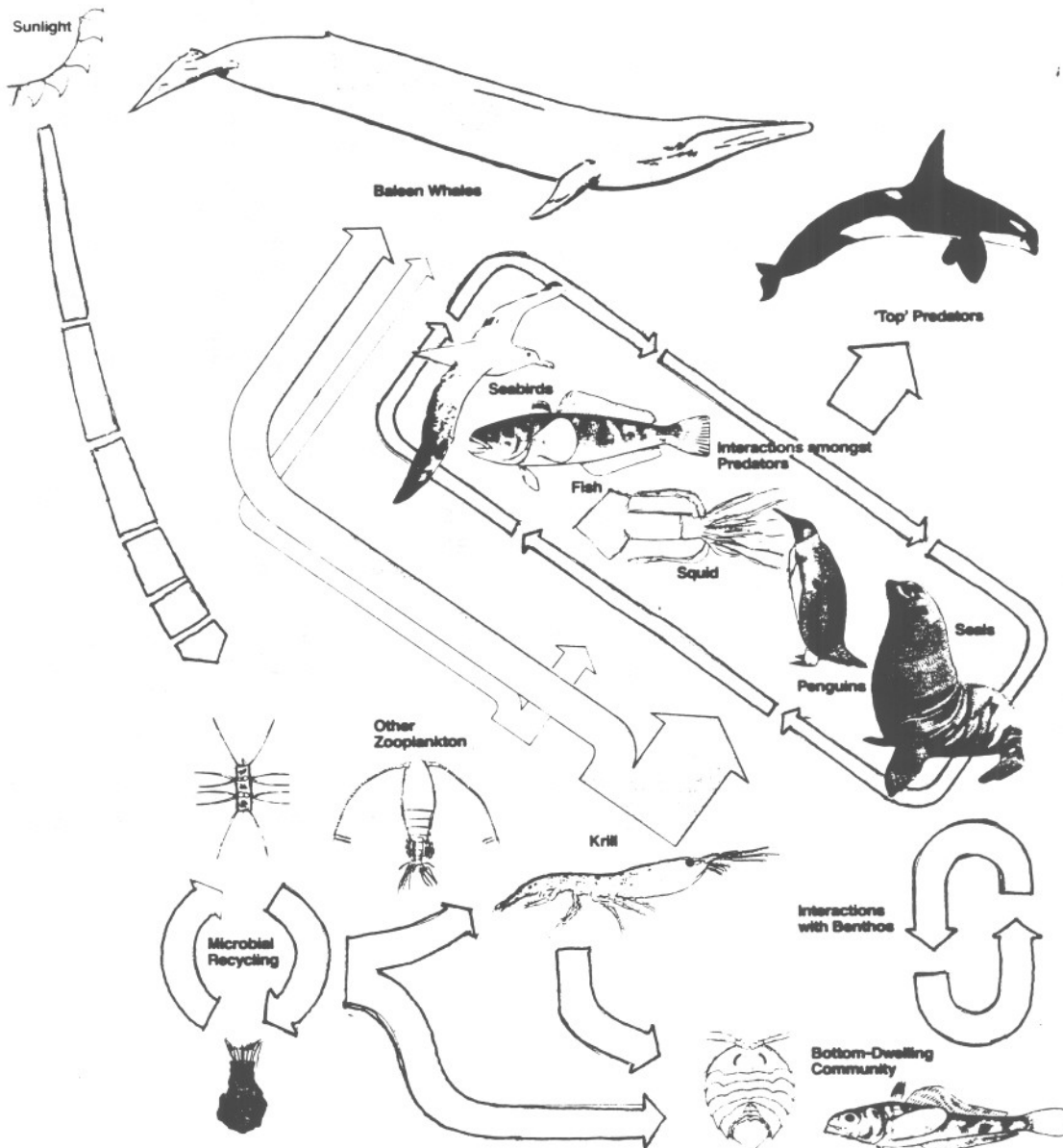
chemical data - certain values are clearly abnormal and these will often be screened very early, and automatically, in data acquisition or processing. Many biological observations are dependent on the skills of human observers. Cross-referencing between cruises may be complicated by inconsistencies in measurements or nomenclature.

Samples

Those aspects of the programme which involve sampling plants and animals often involve collections of specimens which need to be preserved and inventoried. Although we retain a living collection of fish and other marine animals in aquaria at Cambridge, most of the specimens returned to the UK are pickled. Most will eventually be counted, measured etc and will probably be disposed of - this merely represents a very protracted data acquisition. Some are retained as reference samples to assist in future identification. New species are only encountered rarely and then specimens have to be deposited with a recognised body.

Conclusion

Biological oceanography probably spans as wide a range of spatial and temporal scales as any other scientific discipline. Data acquisition is similarly varied, ranging from gigabytes of satellite data to a biologist sitting on a ship with a notebook, pencil and a pile of dead fish. The challenge for the data manager is bringing this wide range of information into a common format in order that it becomes accessible to the users.



AN INFORMATION POLICY FOR THE NATURAL ENVIRONMENT RESEARCH COUNCIL

D.W.H. WALTON (Division Head Terrestrial and Freshwater Life Sciences)

In these days of value for money all research organisations are looking carefully at how they can best utilise all their resources. The Research Councils are no different and, having to earn a substantial proportion of their income from contracted research, they have recently come to realise that their vast data resources may well have a market value.

A research organisation as diverse as NERC has problems with developing a sensible policy which can cover all contingencies. Its institutes cover terrestrial and freshwater ecology, geology, hydrology, virology, marine biology and oceanography and atmospheric sciences as well as the complete gamut of sciences for Antarctica.

At present NERC is grappling with all the usual problems of access, ownership, reliability etc. for the data held in hundreds of different databases, in maps, files and specimen stores. These questions have been solved in various ways in commercial and quasi-commercial organisations but the research councils find themselves with apparently irreconcilable objectives. On the one hand they would like to ensure that for commercially valuable data they obtain the market rate, but on the other hand they have a charter requirement to provide free access to bona fide research workers. Many of the data that they hold have been gathered as part of jointly funded international studies, whilst in other cases particular institutes act as world data centres for specific disciplines. Clearly charging for the use of these data has its problems. There are two further special cases. In the case of the Antarctic special considerations apply since the Antarctic Treaty requires free access to all Antarctic data by any interested party. The complete reverse of this is where an institute holds data that were obtained as part of a commercial contract; normally this is not available for any purposes except those authorised by the original customer.

The situation is fraught with difficulties. The extremes are easy to legislate for whilst the grey middle area needs interpretation before application of policy. Who should do this and how is the subject of detailed discussion. One way forward does seem clear. Where the data has been substantially reworked, or interpreted by NERC scientists it then effectively becomes a new data set and as such has, for most purposes, added commercial value which could be realised. Having agreed that there will need to be clear guide-lines for valuing the data and this can be difficult if it is, as often happens, the only data of the type or extent.

It will not be easy finding a policy that is both fair, straight forward to operate and commercially helpful to NERC. Nevertheless, the search goes on.

ANGLIA POLYTECHNIC CAMBRIDGE

Malcolm Wright (Anglia Polytechnic) talked about the courses available and of future plans.

Chris Dafforn (I.C.I) gave a brief resume of the Management of CLP Data and Documentation course held there in January 1991 at which he, Tony Buick and Margaret McCabe gave papers and helped to run workshops.

MANAGEMENT OF GLP DATA AND DOCUMENTATION COURSE CAMBRIDGE 24/25 Jan 1991

The course has been designed as an introduction to the requirements of GLP applicable to data and documentation. It will appeal to those new to GLP and to those with some experience wishing to gain a broader knowledge of the subject.

The course is designed for those responsible for:

- generating, storing, retrieving and archiving data and documentation.
- formulating and implementing data and document policies and procedures.
- assuring the quality of data and documentation.

The principles described during the course are equally applicable to the management of GCP data and documentation.

DAY 1

GLP and its influence on Company Policy

Mr T.R. Stiles

An explanation of why companies need to interpret the GLP regulations and translate them into data and document management policies which can be understood and implemented by staff throughout the organisation.

Formulation and Content of Company Policies

Dr. P.J. Heywood

A definition of the factors which need to be addressed when formulating company policies for managing experimental data and documentation.

Workshops and Company Data and Documentation Policy

Including format and content of company data and document management policies.

Preparation and Control of Key Documents

Dr. A.R. Buick

A description of the factors involved in controlling the registration, preparation, review, authorisation, distribution, use, amendment and withdrawal of key GLP documents including SOPs, protocols and reports.

Workshop on the Format and Content of Standard Operating Procedures
Including which SOPs need to be generated and what instructions they
should contain.

Workshop on the Creation and Control of Key Documents
Including registration, preparation, review, authorisation,
distribution, amendment and withdrawal of key documents.

Storage and Retrieval of Experimental Data
Mr C. Dafforn

How should 'raw data' be defined, identified, stored and retrieved
within the laboratory? How and where should 'inactive' data be stored
prior to its formal transfer to the archive for long-term retention?
The need to 'track' data as it is transferred within the company (eg to
QA or the archive) will be described as will the suitability of
different recording media for long term retention.

Management of Electronic Data
Dr. P. Heywood

The need to specify, analyse, design and implement computerised data
capture and manipulation systems (including UMS) which meet GLP
requirements is well known. But what records need to be created and
maintained to demonstrate the integrity or 'fitness for purpose' of
computer hardware and software, and how (and by whom) should the data
captured by the system be managed?

Workshop on the Management of Experimental Data
Stages in the identification, storage, retrieval, transfer and collation
of data prior to archiving.

Staff, Equipment and Facilities Records
Mr A. Stavrou

A description of the formal records which need to be created, maintained
and archived to demonstrate the suitability of facilities, staff and
equipment for carrying out GLP work.

The Operation of the GLP Archive
Mrs M. McCabe

A description of the operation of the GLP archive within the company
including the formal 'handover' of data and documentation for long-term
retention and its subsequent storage, retrieval and disposal.

TRAINING UPDATE

DR. A. BUICK (Welcome)

Just to lead into the update, many of you will remember that training of Scientific Archivists, leading to a recognised/professional qualification enabling members to put letters after their name, was first put forward about 6 years ago at the Hazleton SAG Conference in 1985.

The idea was rejected - principally because of the time people would have to spend constantly organising and controlling the qualification.

It was also discussed again at the Schering SAG in 1988 but the determination to go ahead, prompted by many members enthusiasm for such a qualification, really started at the middle of last year and a working party of Chris Dafforn, Margaret McCabe, Yvonne Arrowsmith and myself was set up.

We gave a presentation of our views and progress at the May & Baker SAG last October, when the main points were that firstly we would need the backing of a College or University to deal with the ratification of a professional qualification. Secondly that we must ensure the relevance of the training to scientific archiving and thirdly that the training must also include a basic selection of topics to give a wider prospective to the qualification.

At the meeting Jean Samuels of Pfizer put us in the picture of what was going on along the same lines elsewhere. Jean is a member of a working group of the Society of Archivists in conjunction with the Record Management Society and I was invited as a SAG representative to attend their last meeting in January this year.

The meeting was held at the British Medical Association House, Tavistock Square, London, 11 January 1991.

They opened the meeting by reviewing presently available courses:-

CLARE, CLUBB, VCW

There are at present four main courses for archivists which are graduate or postgraduate level.

1. LIVERPOOL - 1 year course leading to a MAA, Master of Archive Administration
2. LONDON, UCL - 1 year course leading to DAA(s?), Diploma in Archive Administration or dissertation over summer and convert to an MA

3. UNIVERSITY OF WALES, Diploma in Archive Administration, UCW
4. SOCIETY OF ARCHIVISTS, Distance learning course → Diploma (DAA)
 Various library courses, B.LIB, B.LIB
 CITY AND GUILDS, Records Management, for lower grades
 Society of Archivists is also considering a course for Archivist's Assistants.

The main point to come out of that meeting was that there seems to be a mismatch between the jobs of archiving and records management and the type of recruit since they often came with unrelated experience and expertise.

The working party decided that more information was needed on company and individual requirements and they will be addressing that by sending a questionnaire to the top 200 companies and other selected companies to represent a good geographical spread as well as sending some to us to distribute to SAG members. The information will be collated into a report with recommendations of training and qualifications required. The questionnaire is to be sent out shortly and the report is expected around September time.

A possible course content leading to a qualification was discussed and it would consist of 50% general archiving and records management topics which would give people a basic knowledge common to all archivists and 50% would be devoted to a specialist topic, in our case scientific archiving. The advantage of this for us would be to have a more widely recognised qualification but we would have to have a significant input to make sure it had a good scientific archiving content acceptable to use.

Our thoughts at present are therefore twofold. Firstly to continue to liaise with the SOA/RMS working group and see what recommendations are made. Secondly to also pursue as an alternative setting up our own SAG qualification e.g. in conjunction with the Anglia Higher Education College here in Cambridge so we will continue to discuss this possibility with Malcolm Wright.

To get more information we will also construct our own questionnaire to SAG members in time to get a response by the next meeting. We will need feedback on the time people could have to attend a course and what level it should be aimed at from both the employer and members point of view.

One course format considered to be acceptable might be similar to one being run in Finland which consists of distance learning plus summer school plus some long weekends.

To summarise we feel that members wish us to progress this training and qualification topic as quickly as possible and we need your opinions on what we are doing and your suggestions to make sure we get it right.

BRITISH ANTARCTIC SURVEY

where science is cool

AFTERNOON VISITS B.A.S.

TERRESTRIAL AND FRESHWATER LIFE SCIENCES RESOURCE CENTRE
SHAUN RUSSELL (Resource Centre Manager)

The T.F.L.S. Resource Centre has been recently established as B.A.S. and incorporates the herbarium collection of plant specimens from the Antarctic and adjacent regions, and an associated computer data-base of 50000 records. It is intended that specimens and information on invertebrates, soils, nutrients, microclimate etc., will also be included in the data-base in future.

The herbarium was initiated in 1969 and is the largest collection of Antarctic plants in existence. It comprises mainly mosses and lichens representing the dominant flora of the Antarctic's ice-free areas. There are also many specimens from sub-Antarctic islands and neighbouring southern continents.

Visitors to the herbarium were interested to learn the many of the dried and packeted plants in the herbarium were of species that are highly resistant to the extreme conditions of the Antarctic. These plants can often be 'revived' and regrown after many years of storage, through the simple addition of water to the specimen.

The Resource Centre's database is currently held on the IBM 4381 computer at the Institute of Hydrology in Wallingford and is managed using the 'STATUS' textbase retrieval system. Transfer of the information to an 'ORACLE' data-base running on an in-house, high capacity P.C. system is currently being investigated.

Information in the data-base is used for a range of purposes including; basic taxonomic and bio-geographic studies; assessment of the environmental impact of Antarctic 'developments' e.g. airstrips, new scientific station; delimitation of specially managed sites of conservation importance etc.

MAPPING AND GEOGRAPHIC INFORMATION CENTRE
JANET W THOMSON

The BAS has been the UK Antarctic Mapping Centre since 1984. Prior to the date the centre was housed at the Directorate of Overseas Surveys in Tolworth. The Mapping and Geographic Information Centre (MAGIC) was established in 1989.

BAS, as the UK repository for Antarctic maps, receives two copies of most of the Antarctic maps published by other nations. One reference copy is housed in the BAS Archives and a working copy is held in the Map Room in BAS MAGIC. BAS Archives began cataloguing the map collection using MODES (Archives) - this continuing task has become the responsibility of the BAS Map Curator. The map collection contains some 1300 Antarctic maps in total - MAGIC is also responsible for the curation of 3550 satellite images and several thousand aerial photographs. During computerisation the existing card catalogue and MODES database are being checked against "Antarctica: A Catalogue of Maps & Charts", published in 1988 by the Scientific Committee on Antarctic Research.

BAS and its predecessor the Falkland Islands Dependencies Survey, have been responsible for mapping the British Antarctic Territory (BAT) since 1946. The early maps were prepared at 1: 200 000 and 1: 250 000 scale using traditional ground survey data and aerial photography acquired by the Falkland Islands and Dependencies Aerial Survey Expedition in 1955-57. However, the survey network and aerial survey cover were inadequate for the preparation of conventional maps at these scales for the entire length of the Antarctic Peninsula. With the advent of satellite imagery in the early 1970s, BAS became the first organisation in the world to publish a photomap based entirely on satellite imagery.

Conventional maps and photomaps have been used to compile a series of unpublished sketch maps of BAT at 1: 250 000 scale, as the base to a published series of 1: 500 000 scale reconnaissance geological maps. These linework maps are now being digitized as part of an international collaborative project to prepare a digital topographic database of Antarctica. The completed database will be published on a CD-ROM in 1992. Up-dating, refinement of data and incorporation of new datasets (e.g. survey networks, bathymetry, environmental data) will be a continuing task, leading to the creation of an Antarctic GIS.

UPPER ATMOSPHERIC SCIENCES DATA CENTRE
MARK GALLANI (Data Manager)

The Auroral Studies Group receives approximately 4.5Gb of data per year on about 200 10.5" tapes, the vast majority of which are produced by the Advanced Ionospheric Sounder (AIS). The number and bulk of these tapes caused the data store to fill up rapidly, as well as needing a great deal of effort to transport from one end of the globe to the other, so it was decided to store the data on optical discs, using an internal optical disc drive on a P.C.

The process of transferring existing data from tape to optical disc began in mid-89, allowing the tapes which were backed-up off site to be re-used in the Antarctic.

The logical next step was to have instruments in the Antarctic recording data directly to optical discs, thereby reducing the effort needed to

pack the data storage media at the end of the season, and the amount of temperature-controlled storage needed on ship. This commenced at the start of 1991.

On average, the contents of 40 tapes will fit onto the 2 sides of the Maxtor/storage Dimensions 5.25" 800Mb WORM optical discs we use, (which are treated by the PC as very large floppy discs) which means that 200 times less data storage space is needed. It is also 8.5 times cheaper to use optical discs, and there is a weight saving of 250 times.

Erasable optical discs were not available when the decision was taken to use optical discs, but since they are mainly used for long-term storage there is little need to change. Erasable optical discs have lower capacities than WORM discs, and the Maxtor discs are still among the highest capacity WORM discs available.

LIFE SCIENCES CONTROLLED ENVIRONMENT FACILITY AND MARINE AQUARIUM
JON WARD (Technical Resources Manager, Life Science)

Visitors were first shown the Marine Sciences Marine Aquarium. This is a purpose built room cooled to -1°C which houses several species of Antarctic marine animals and plants. Visitors were shown Antarctic cod, Antarctic krill, giant marine isopods and Nemertean worms together with other smaller species.

Secondly visitors were shown the Controlled Environment Facility which consists of holding and storage rooms in a range of sizes and temperatures together with more specialised units that can control parameters such as humidity, light levels and variable temperature under computer control. These units are used to hold all the Life Sciences frozen, cooled and live plants and animals used for biological research at BAS.

Finally a range of botanical Antarctic specimens were demonstrated including some South Georgia flowering plant species collected and sent back during the 1990 season. Other species shown included mosses, and lichens.

Questions and answers came thick and fast and the tours proved to be very rewarding both for us and the visitors.

ROCK STORE AND PALAEOLOGICAL COLLECTIONS
STEVE DAVISON (Geology Technician)

The rock collections held by BAS are housed in large mobile racks within a purpose-built rock store. These collections are split into two main sections, working collections which have been collected by serving members of staff and which form the subject of their current research activities, and the archive collection which consists of all rock specimens collected by BAS and its predecessors from 1944 onwards. Collections from various National Antarctic expeditions dating back to 1901 are also held in this section.

Specimens are stored in numerical order, the number being allocated at the time of collection. This number consists of three parts, a base prefix letter, which indicates from which base the scientist was working, a locality number and a specimen number. This information, together with a brief description of the specimen is recorded in a series of specimen registers and on a computer database. Unfortunately some of the pre-1944 collections have incomplete locality information and as a result are of limited scientific value. However, these are retained for their historical value.

The palaeontological collection is stored partly in the rock store and partly in a large laboratory. It is composed of a number of collections from different geographical areas within Antarctica, some comprising only a few specimens and others containing more than 10,000 specimens. These collections are stored in numerical order within major taxonomical groups.

The palaeontological collection also contains a substantial number of type and figured specimens, housed separately in dust proof cabinets. Amongst the 2000 specimens in this collection are 48 holotypes and over 400 paratypes, these being mainly molluscs and cephalopods.

Access to the archived rock collections and the palaeontological collections is controlled by the curator.

LOGISTIC STORE

Ian Collinge, Logistics Procurement, took us for a tour round his most impressive logistics store. It was most impressive. Not only are they responsible for equipping everyone going to the Antarctic with all their needs for the time they are there, but they also have responsibility for all the equipment from jumpers to JCB's, scissors to sledges and everything in between. They have to pack everything as compact as possible and ensure that as well as the people having excellent equipment they are also in excellent health. It was interesting to hear that the women are issued with the same clothing as men - except for Y-fronts! It is essential that the system for record keeping must be efficient as lives depend on correct and sound equipment being delivered.

M E M B E R S O N L Y S E S S I O N

No-one had yet volunteered to be Meeting Secretary. It was hoped to have a volunteer before the next meeting. A member suggested taping question times.

The position of Administrative Co-ordinator will be offered to Cathy Wood (Hazleton). In this role she will be responsible for sending out mailings and collating all information from meetings and other sources to produce and distribute the Newsletter. It was agreed a fee would be payable.

It was felt the Newsletter required a more professional appearance. Margaret McCabe had looked into the cost of different methods of production. It was agreed the most appropriate costing is to have a printed cover and laser printed contents. The next Newsletter will be in the new format.

It was decided that a membership fee of £10.00 will be charged per year in addition to a £3.00 per day meeting levy

It was felt that membership should be restricted to Scientific Archivists or persons who have partial responsibility for scientific archiving. Guests may be invited to relevant sections of meetings.

Following a mail shot by Margaret McCabe to companies who have members in SAG but have not hosted a meeting, the next five meetings can be booked.

It was proposed that there should be one meeting per year held over 2 days. The meetings could then be structured to ensure they appeal to both new and established members. Interest was shown by newer members in attending workshops/training sessions but no agreement was reached on the number of meetings per year. It was decided to organise the next meeting for two days with workshops and training on the first day and a specific theme on the second day. The most requested subject was any computer related topics.

The new logo was discussed and, as agreed at the previous meeting, the final choice of design rests with the committee. A member suggested changing "Archivist" in the groups title but the meeting overwhelmingly voted to retain the SAG as this has now become widely recognised.

The next meeting will be hosted by Jean Sear at Roche, Welwyn Garden City on October 2nd & 3rd 1991.

SAGACITY

AIOPI MEETING
SHERATON SKYLINE HOTEL
BATH ROAD, HAYES, MIDDLESEX
TUESDAY 4TH JUNE 1991

FACING UP TO ELECTRONIC RECORDS; DO THE RULES FOR PAPER APPLY?

CHAired BY: A.M. CHALMERS, GLAXO a.m. J. SAMUEL, PFIZER p.m.

SPEAKERS

Particular Issues with Managing Electronic Records	D. Best, Touche Ross Consultants
Resolving the Boundaries between Computer Backup and Electronic Archiving	Lord John Woodhouse, Glaxo
Records Management and the PC Environment	N. Parrott, Sandoz Institute
Bypassing Paper: Direct Data Capture	R. Vogel, Onside Systems
Changes in Work Patterns in the Optical Disc Environment	M. Christian, Filenet Limited
The Implications of Obsolete Technology for Information Access	S. Ladyman, Pfizer

RECORDS MANAGEMENT SOCIETY

"INFORMATION SYSTEMS - THE RECORDS MANAGEMENT PERSPECTIVE"

3 Day International Conference at Reading University Campus.
18-20 September 1991. 19 speakers from 8 Countries, will discuss RM & IT,
covering disciplines & RM training workshops, visits to local Records
Repositories, Tradefair, Banquet.

£350.00

For full programme contact: Sally Templer,
25 Chiswick Lane,
London,
W4 2LR

Tel: 081 995 1791
Fax: 5150

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SOCIETY OF ARCHIVISTS INFORMATION TECHNOLOGY GROUP

Managing Microcomputer Systems

One day meeting at the University of Southampton Hartley Library Conference
room on 17th October 1991.

PROGRAMME

Microcomputer systems and the Archivist	Dr. C. Woolgar, University of Southampton
Technical aspects - security, licensing and back-up	Miss C.M. Phillips, University of Southampton
Finance and Contracts - The managerial view	Mr A. Green, Somerset Record Office
Discussion	

Fee £20 members, £30 non-members

For further details contact:

Miss C.M. Phillips,
Hartley Library,
University,
Highfield,
Southampton,
SO9 5NH

Tel: 0703 59337

SCANNER

"A MORE EFFICIENT WAY TO MANAGE RECORDS"

We can't show you a pretty picture of our product but we can show you how we can help you with your records management or archival problems. SCANNER has been DESIGNED BY RECORD OFFICERS AND ARCHIVISTS so we can understand that the areas of concern are:

SECURITY

There's no point in creating a super system just for it to be ruined by someone with plenty of enthusiasm but little knowledge, so passwords give a restricted and controlled access to a variety of simple-to-use menus, each one tailored to the users exact needs.

EASE OF LODGING AND RETRIEVAL

How nice it would be to be able to lodge and retrieve data and to know at any time why the data isn't in its location. Also where there is space for incoming data.

Lodgings can be made by physically deciding their location or SCANNER will do this for you by automatically allocating free positions.

The location of lodgings is continuously updated so retrieval of data both physically and in the form of screen enquiries is immediate. MULTIPLE SEARCH KEYS enables the speedy identification of the required data and its location with the minimum of information being required.

IMMEDIATE LOCATION

Imagine being able to locate data - even to a sheet of paper if necessary - without any searching. At the heart of SCANNER is a sophisticated SHELFPLAN maintaining up-to-the-minute records of lodgings and their location. Data can be located simply by the shelf or down to the level of an individual folder/container within a box and by labels produced by the system for visual identification.

ACCESS OF INFORMATION

Do people assume that, because you have the data, you can provide all kinds of information? You can with SCANNER. An integral part of the system is a variety of reporting and enquiry functions. Information can be obtained on the status of the data as well as specified details contained on the data. SCANNER is specially designed for DATA which must be controlled IN A REGULATORY ENVIRONMENT. Even if you do not have to comply with authorities regulations you know that if you are using SCANNER you have a system designed to the highest standards.

Because we know there is such a variety of requirements, SCANNER has been designed in a modular form to enable you to tailor make a solution which meets your exact requirements.

MODULE 1 - AN INDEX SYSTEM to enable you to locate your data.

MODULE 2 - STORAGE MANAGEMENT to enable you to have instant up to the minute information on the capacity available in which to store data.

MODULE 3 - MICROFORM to enable you to cross reference microfilm/fiche facsimilies.

MODULE 4 - IMAGE to enable you to scan documents and subsequently retrieve the data directly onto your monitor.

Perhaps you are not sure what your needs are or perhaps you are only just thinking of setting up an archive or records department. We provide a CONSULTATION SERVICE for regulatory and non regulatory problems e.g. DESIGNING THE BUILDING, ENVIRONMENTAL CONTROL, FIRE PRECAUTIONS, SHELVING, STORAGE SYSTEMS, LODGING AND RETRIEVAL METHODS, MICROFORM, SECURITY ASPECTS, STAFFING, DISASTER RECOVERY and of course computer needs.

Whatever your requirements why not get in touch with us for a consultation, demonstration or just a chat.



INCREMENTAL SYSTEMS LIMITED

Midlands

Stowe House, 1688 High Street Knowle, Solihull B93 0LY. Tel: 0564 770077

North

20 Banksfield Crescent, Yeadon, Leeds LS19 7JY. Tel: 0943 79731

North West

P.O. Box 91, Bromborough, Wirral, Merseyside L63 0QH. Tel: 051334 1560

ScanView

Scanview is a full featured Document Image Processing software package using Microsoft Windows 3.0 without the need for any specialised hardware.

This advanced system is designed to replace conventional filing techniques with efficient electronic storage and retrieval methods at low cost. Users can scan documents, store them on magnetic or optical disks and retrieve them using keyword or database field searches. The pages can then be viewed on screen and printed out if required. Retrieval is almost instantaneous with mis-filing becoming a thing of the past. When expansion is needed ScanView has network support allowing many users to have access to documents at any one time.

MORTGAGE APPLICATION

PROPERTY DETAILS

IMPORTANT: The Guidance Notes for Mortgage Applicants that go with this form are an important part of it. Please make sure that you read them. If you do not have these notes, please contact your nearest Alliance & Leicester Branch. Our staff will be pleased to give you a copy.

Please return this form to:
Alliance & Leicester Building Society
 18 Station Road,
 Solihull,
 Warwickshire B91 3BB
 Tel: 021-716 0212

Please answer in BLOCK LETTERS in the spaces provided or tick ✓ the relevant boxes.

See Guidance Notes

FIRST APPLICANT	SECOND APPLICANT
Title <input type="checkbox"/> Mr <input type="checkbox"/> Mrs <input type="checkbox"/> Miss <input type="checkbox"/> Ms <input type="checkbox"/> Other please say what	
Surname <input type="checkbox"/> Other please say what	
Present permanent address (for correspondence)	
Address _____ Postcode _____	
Address of property to be mortgaged (give the plot number if the property is on an estate that is being built)	
Is it a house <input type="checkbox"/> Bungalow <input type="checkbox"/> Detached <input type="checkbox"/> Semi-detached <input type="checkbox"/> Terraced <input type="checkbox"/> Masonry <input type="checkbox"/> or Flat? <input type="checkbox"/> Is it purpose-built <input type="checkbox"/> or a conversion? <input type="checkbox"/>	
Is there a garage? Yes <input type="checkbox"/> No <input type="checkbox"/> Soughtly how old is the property? _____ years	
If it is not built of brick or stone with a tiled roof please give details of the construction _____	
Is it Freehold <input type="checkbox"/> Leasehold <input type="checkbox"/> how many years does the lease have left? _____	
How much is the Ground Rent/Lease Charge/Peasbody (£ p.a.) Can it be increased? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If Yes please give details of increase? _____	
If there is any Maintenance or service charge please say how much? _____	
If the property is yet to be built does the builder want paying by instalments? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If the property is now or to be bought with the protection of either the: + NMBIC Insurers Scheme OR + Municipal Mutual Foundation 15 Scheme? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Living in and use of the property? See Guidance Notes	
Will you live in the property when the Loan is completed? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If No, will a dependent live in the property? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Will you or your dependent use the property for residential purposes only? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Please give the names of everyone aged 17 or over occupying applicants who will live in or part of the property and how they are related to you. _____ _____	
Tenanted? Will any tenancy be created? Yes <input type="checkbox"/> No <input type="checkbox"/> If you already own the property, to be mortgaged, is there any existing tenancy? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If Yes to either of these questions, please give details _____	

ALLIANCE + LEICESTER

INDEXING CAPABILITIES

- Cabinet Name - Type of document
- Keyword 1 - Type of Mortgage
- Keyword 2 - Issuing Branch
- Keyword 3 - Type of Property
- Document Tags

These can be any selection of keywords assigned to the document, eg. Name, Address, etc

DOCUMENT VIEWING

Document viewing features provide you with full control over how a page is displayed on screen.

- Next and previous document in group
- Next and previous page
- Full page display
- Fit to width
- Zoom
- Rotate (in 90° increments)
- Grey-scale image display

FEATURES

- Ease of use
- Full MS Windows 3.0 support
- Pull-down menus
- Shortcut keys
- Help function
- Emulates manual systems for instant familiarity

FILE FORMATS

- No compression
- CCITT III compression
- CCITT IV compression
- All resolutions up to 300 dpi supported

ARCHIVING

- Documents may be selected for archiving to optical disk using date ranges or index field specification
- Multiple optical disks supported for unlimited storage capacity

SPECIFICATIONS

- IBM PC or compatible
- 640KB minimum memory
- IBM CGA or higher resolution monitor
- One hard disk drive and one floppy disk drive or connection to a network file server

FILE SYSTEM

- Uses the "working documents" concept for multiple document support
- Cabinets hold groups of documents with user-definable index fields
- Full network support means that cabinets and documents can be shared by many users
- Full document management facilities are included for cross-filing, adding, deleting and moving pages. Index data may also be edited.

INCREMENTAL SYSTEMS LIMITED

STOWE HOUSE, 1688 HIGH STREET, KNOWLE, SOLIHULL, WEST MIDLANDS B93 0LY.

TEL: 0564 770077 FAX: 0564 770785



DOCUMENTATION OFFICER

- Develop your career in Records Management
- The R & D Laboratories of Fisons Pharmaceuticals are renowned throughout the world for the discovery of new ethical drugs, especially in the respiratory and cardiovascular fields.
- The work of our Scientists is, of course, vitally important - but we never forget the equal importance of those key people who ensure that our new products can be approved for world markets through the painstaking process of clinical trials and regulatory procedures.
- The maintenance of an efficient documentation management system is a crucial part of that process.
- As a member of a small team working on more than 20 R & D projects involving more than 1000 centres worldwide, you'll ensure that all clinical trial documentation is accountable and accessible for audit and the rapid preparation of medical reports. This will involve the continued development of our systems, the implementation of storage and retrieval policies and the maintenance of computerised indices.
- The role will appeal to a man or woman of graduate calibre with around 2/3 years' experience in the administration of records, preferably in the pharmaceutical industry.
- You'll enjoy considerable responsibility, and a varied role with international contacts. An attractive salary is on offer together with a range of additional benefits including relocation assistance, where appropriate.

Make the first move by writing with full career history and details of current salary to Jill Coekin, Personnel Officer, Fisons plc - Pharmaceutical Division, Research and Development Laboratories, Bakewell Road, Loughborough, Leicestershire LE11 0RH.

FISONS
Pharmaceuticals

T I R E D ?

Yes I'm tired. For several years I've been blaming it on middle age, poor blood, lack of vitamins, air pollution, saccharin, obesity, dieting, under arm odour, yellow wax build up and another dozen maladies that make you wonder if life is really worth living.

But I found out it isn't that.

I'M TIRED BECAUSE I'M OVERWORKED.

The population of this country is 55 million

25 million are retired. That leaves 30 million to do the work.

There are 19 million in school. That leaves 11 million to do the work.

Of this total 2 million are unemployed and 4 million are employed by the government. That leaves 5 million to do the work.

1 million are in the armed forces. That leaves 4 million to do the work.

From that total 3 million are employed by county and borough councils. That leaves 1 million to do the work.

There are 620,000 people in hospitals and 379,998 in prisons. That leaves 2 people to do the work.

You and me.

You are sitting reading this Newsletter.

NO WONDER I'M TIRED.

MMc

Any additional comments

Name

Employer's Name

Employer's address

Course

Date of qualification/first job

Career profile