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THE ROYAL SOCIETY OF NEW SOUTH WALES

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The Society originated in the year 1821 as the Philosophical Society of Australasia. Its main function is the promotion of Science by: publishing results of scientific investigations in its *Journal and Proceedings*; conducting monthly meetings; organising summer science schools for senior secondary school students; awarding prizes and medals; and by liason with other scientific societies. Special meetings are held for: the Pollock Memorial Lecture in Physics and Mathematics, the Liversidge Research Lecture in Chemistry, the Clarke Memorial Lecture in Geology, Zoology and Botany, and the Poggendorf Lecture in Agricultural Science.

Membership, as an Ordinary, Associate or Absentee Member, is open to any person whose application is acceptable to the Society. An application must be supported by two members of the Society. Subscriptions for the *Journal* only are accepted. The Society welcomes, from members and non-members, manuscripts of research and review articles in all branches of science, art, literature and philosophy for publication in the *Journal and Proceedings*.

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The Royal Society of New South Wales Community Heritage Grant

ROBYN STUTCHBURY

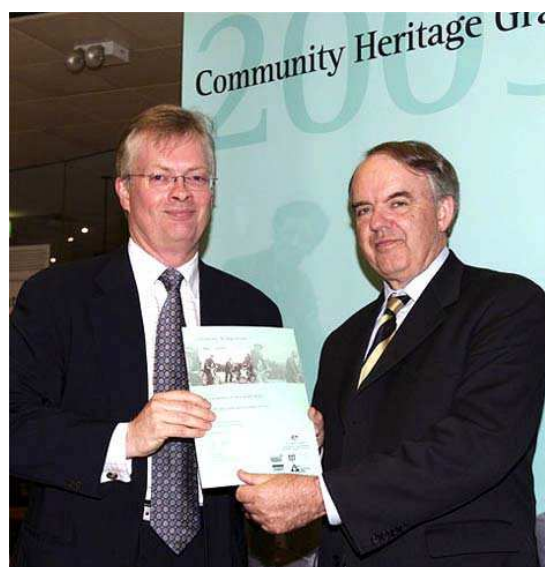
INTRODUCTION

Probably few members will be surprised to hear that the collection of books and other items owned by the Royal Society of NSW is of great historical and scientific significance. What might be more of a surprise is its degree of significance. This has been revealed by expert consultants during almost six months' investigation for our Community Heritage funded project. Their reports have been submitted together with our final report and our application for a second round of funding for 2007. The reports will be available through the Society's office and website.

Our \$5 500 (plus GST) grant was announced by the Federal Minister for the Arts and Sport, Senator the Hon. Rod Kemp, at the National Library of Australia, Canberra, on Wednesday 9 November 2005. A total of \$377 865 was distributed to 76 groups from around Australia to assist in the identification and preservation of community owned but nationally significant heritage collections. The Community Heritage Program is managed by the National Library of Australia and funded and supported by the Australian Government through the Department of Communications, Information Technology and the Arts, the National Library of Australia, National Archives of Australia, the Australian Film Commission and the National Museum of Australia.

Guidelines for the project called for a national significance assessment of the collection by a professional historian or similar expert and a preservation survey of the collection or part of a collection by an accredited professional. The recommended criteria for determining the significance of a collection are its historic, aesthetic, scientific and social values. The society's collection is rich in all of these values and the degree of significance was further assessed using the comparative criteria of provenance, rarity,

representativeness, condition and integrity, and interpretive potential.



John Hardie receiving the Community Heritage Grant on behalf of the Royal Society of NSW from the Federal Minister for the Arts and Sport, Senator the Hon. Rod Kemp.

WORKING GROUP

Soon after the Royal Society of NSW was granted Community Heritage funding, a working group of members of Council was formed to steer the project and assist consultants. All members of the working group are practising scientists with a keen interest in the history of science and the recognition that over the years, science has been sorely neglected.

Professor Jak Kelly, President, physicist;
Ms Robyn Stutchbury, Project leader,
geologist and science educator;
Mr John Hardie, Vice President,
geologist and educator;
Ms Christine van der Leeuw,
Honorary Librarian and scientist;

Dr Eveline Baker, Secretary, chemist and educator;
Mr Jim Franklin, Councillor, research physicist.

In November 2005 John Hardie attended the three-day intensive Preservation and Collection Management Training Workshop held at the National Library of Australia, the National Archives, the National Museum of Australia and the National Film and Sound Archives in Canberra. Information from the workshop proved invaluable and each person involved in the project was issued with a copy of the handbook outlining the procedures for the project.

TASKS OF THE WORKING GROUP

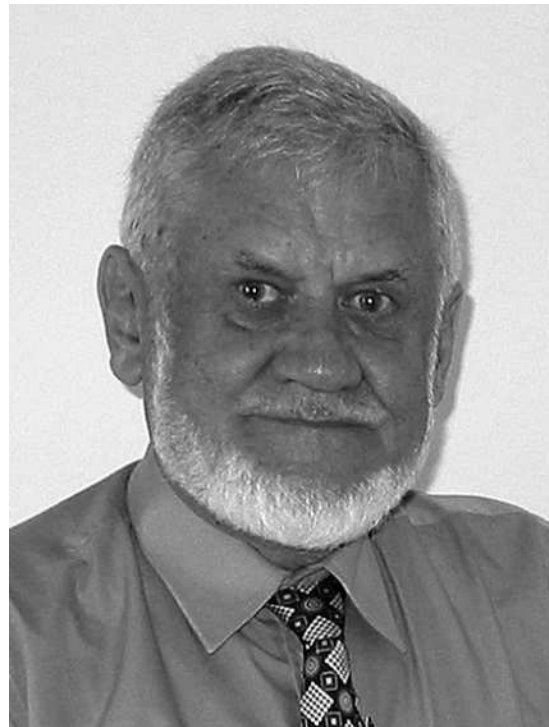
The working group contributed well in excess of 400 hours to the project. Some were spent on two major working bees at Darlington Road, where we concentrated on setting up, cleaning and labelling previously purchased metal shelving; opening 30 cartons of publications and sorting the books into topic areas. They were then listed on a spreadsheet according to the following categories: author, title, volume, year of publication, broad topic area, shelf location and comments such as condition, provenance, etc. The list could then be sorted according to any one of these categories. Our librarian also checked the Libraries Australia database for the availability of selected titles.

Time was also spent with the consultants at Mitchell Library and Prestons where, at each site, as many items as possible could be examined in one day.

EXPERT CONSULTANTS

The working group engaged two professionally qualified assessors conversant in science as well as history. Dr Peter Tyler we chose from the Professional Historians' Association list and Dr David Branagan, former Royal Society president and geologist, was chosen because of his long standing commitment to the history of science.

As indicated, each consultant tackled the project from a different perspective. Peter's overall consideration of the historical significance of the collection was based on the premise of there being a common perception that NSW (and Australia) was a cultural desert in 19th century, with little regard given to the small intellectual strata of society of the time. There is far more emphasis on convicts, bushrangers, squatters, in the early history. Peter also considered the preservation of the collection and later suggested some 30 recommendations for how it should be cared for.



Dr Peter J. Tyler, BA, MLitt, PhD, Grad.Dip.Ad.Ed., Hon.FAIEH; Consultant historian; Vice-President, Professional Historians' Association (NSW), who agreed to assess the overall historical significance of the collection according to National Library guidelines and to make recommendations for how it should be preserved and made accessible (Peter Tyler's report: 'Report on Historical Significance').

David Branagan examined the collection item by item, recording significance based on the recommended criteria and noting the condition and state of preservation of each. Both consultants generously contributed professional time far in excess of the hours covered by the grant.



Dr David Branagan, M.Sc, PhD, FGS, Hon Life Member, Geol.Soc.Aust., (Member of the Basser Library Committee, Australian Academy of Sciences) who agreed to use the criteria: provenance, rarity, representativeness, condition and integrity, and interpretive potential when assessing the significance of individual books and other items (David Branagan's report: "Report on the Cultural, Historical and Scientific Significance of the Society's Library and its State of Preservation".)

THE COLLECTION

The collection of the Royal Society has been subjected to a number of moves over a number of years with the last being from its rooms at Macquarie University to the current premises at

the University of Sydney. As a result of so many moves, the collection is now stored at various localities; some are at the Mitchell Library, where they are stored under archival conditions but without access to the public, and others are at the Darlington Road office where many of the items are in need of urgent preservation measures but have some access to members and researchers by appointment. The Royal Society's collection housed in the Dixson Library at the University of New England is in the care of librarians who provide full access to researchers and the public, whilst the eight pallet loads in commercial storage at Prestons is stored under plastic wrap and although relatively protected it is completely inaccessible for research.

Dr David Branagan has estimated that the total number of publications in the collection would be in excess of 45 000 with the bulk of these being serials at the UNE. This project examined some 1000 items that had been stored in 30 boxes at Darlington Road. Another 29 of the 48 boxes of various items at the Mitchell Library and 21 boxes (on two of eight pallets) of publications at Prestons were also examined.

IN CONCLUSION

It must be remembered that the collection has been in a state of decline since the NSW Government resumed the Society's building, Science House in Sydney, for the Rocks Redevelopment in the 1975. Although the 'green bans' movement prevented the demolition of Science House, which was the winner of the first Sulman Prize for architecture, it was never returned to science, becoming instead, Sports House. We would like to think that our collection might one day be rehoused in Science House, which was once jointly owned by the Royal Society of NSW so that in regaining it, the Society would have the opportunity to rebuild its library and collection to the standard set by the Royal Society of Victoria.

We should also take stock of the Liversidge collection and perhaps make it a focal point for future exhibitions. It is remarkable that Archibald Liversidge, who was Professor of Geology and Mineralogy, and later Professor of

Chemistry at the University of Sydney is celebrated at the Australian National University with streets and buildings named after him and yet, at the University of Sydney he goes unrecognised.

In his report, David Branagan comments, "In view of Liversidge's contribution to Australian Science and to the University of Sydney it is a sobering fact that the biography of Liversidge by Professor Roy Macleod, of the University, completed several years ago has not yet been deemed worthy of publication by Australian publishing houses. It is sad also that despite the naming of a street in Canberra for Liversidge his contribution to the University of Sydney remains without acknowledgement (by a named building etc.) within the grounds, or even within the Department of Chemistry."

Another outcome of the project is the recommendation that the Hargrave collection should be considered for World Heritage Listing. The section of the collection owned by the Power-

house Museum has already been listed and it seems fitting that the society's items should be included.

The Royal Society's Community Heritage project is seen to be the first step in preserving and making accessible the Society's collection of scientific books, journals and historical documents and other items. Our ultimate aim is to complete the assessments of the entire collection by once again calling on professional conservators, so that eventually our extensive and unique collection can be rehoused. Once rehoused, it will be possible to exhibit the rarer items and researchers and the public will be able to access various items of the collection. With this aim in mind, we have submitted the application for a second round of funding through the Community Heritage Program. Although we have all worked extremely hard to make the most of our expert consultants' contributions, we are aware that we have a long way to go before we can claim success.

R. Stutchbury
2006

The Royal Society of New South Wales

Report on the Cultural, Historical and Scientific Significance of the Society's Library and its State of Preservation

DAVID BRANAGAN

Keywords: Royal Society of NSW, Library Collection, Community Heritage Grant

INTRODUCTION

Some 750 volumes in the Society's library have been individually examined. The value of each item has been estimated based on four primary criteria: (1) historic, (2) aesthetic, (3) illustrative, and (4) scientific, research or technical. Modifiers such as representativeness; rarity; condition, completeness or intactness and integrity; and interpretive potential have been taken into consideration during the assessment.

For this collection the two criteria of most significance are (1) and (4), although a few items fall into the other two categories. Nevertheless some volumes of historic and scientific importance also are important from either or both aesthetic and illustrative categories.

The items regarded as being most valuable are set out in Table 1 (pages 102–107).

The state of preservation of each volume has been assessed and five grades assigned to separate those volumes needing most urgent attention, (some 5%), and a further 5% needing dome repair, from the remainder of the collection which varies in individual condition from moderate (the greater portion of the collection) to fine.

The items in most need of urgent preservation attention are listed in Appendix 1.

The conditions in which the library are presently housed have been examined. These are not satisfactory for a library of this value. A temporary improvement would be to move it downstairs in the Society's rooms. A truly satisfactory solution would be to move the library into the space it once occupied in Science House.

The Library covers the widest range of scien-

tific literature, from astronomy to zoology, but with major material on geology, botany, scientific and naturalist societies and catalogues of major exhibitions.

The collection contains original material by the pioneer aeronautic researcher, Lawrence Hargrave.

The library contains a collection of the works of Archibald Liversidge, including unique scientific notes. The influence of Liversidge on the development of Australian Science is evident from the collection.

While the collection has considerable value in its own right, more significantly, it also has important cultural and historical value, indicating the strength of cultural and scientific interest by a dedicated colonial society.

This library, consisting of an estimated 45 000 volumes has been in existence for at least 135 years. Including, as it does, material from even earlier Australian colonial times, it encapsulates much of the history of science, often carried out in difficult economic and practical conditions, in New South Wales – and indeed of Australia – for more than 150 years. The significance of the collection has been gradually lost sight of by successive NSW State governments.

The Most Significant Volumes

The most significant volumes appear in Table 1 on the following pages. These have been selected from a list of some 750 items held at the Society's rooms after the short-listing of over 130 volumes assessed as significant. Making the selection was very difficult.

Author	Title	Year	Significance
Tucker, T.G. & Spencer, W.B.	The Australian Critic v 1	1890	Representative of various short-lived literary and scientific publications in the Australian Colonies with distinguished editors. Of relative rarity. Front cover missing, poor condition, requires rebinding.
Lemire, C.H.	Itineraire kilometrique, voyage a pied en Nouvelle Caledonie	1877	Historically important for its links with Pacific scientific exploration. Of relative rarity and of high interpretive potential, particularly because of his extensive work in Asian archaeology. Poor condition, needs binding or casing. Only one other copy in Australian libraries – State Library of NSW
Agricola Georgius	Opuscula [disbound]	1546	One of the most significant of the Society's collection, this rare Latin volume contains 'almost all he wrote on mineralogy and geology' (Eyles, 1955). Possibly not yet translated into English. Although disbound it is preserved in a designed box. Book contents need treatment. Agricola, volume named as Rudolphus is held in one library as a book, and in another only in microfilm.
Stoliczka, F.	Scientific Results of the Second Yarkand Mission 1878-1891	1891	Links scientific work done in India with that done in the Australian Geological Surveys. W.T. Blandford, one author, developed the Gondwanaland concept. The volume is therefore of considerable historical significance and typical of a number of Asiatic Colonial volumes in the Society's collection. In reasonable condition.
Sydney University Magazine	Sydney University Magazine	1855	No. III July 1855 (to be cont'd quarterly) [includes, inter alia: Article 'Elevation of the Dry Land', quoting Rob't Chambers & G. Mantell] Periodical devoted to literature, philosophy, science and art and therefore of considerable aesthetic significance and a socially important record of the early period of the University of Sydney. In reasonable condition.

continued on next page

Author	Title	Year	Significance
Liversidge, A.	Notes of Courses of Royal School of Mines, London	1869–70	The importance of these unique volumes goes beyond the Liversidge provenance because the handwritten notes encapsulate the type of instruction of the time. The handwriting itself is aesthetically pleasing. In fine condition.
Jensen, H.I.	Unpublished work on Seasonal Forecasting	1958	Jensen was an esteemed member of the Royal Society, a student of T.W. Edgeworth David and an author of controversial articles of scientific significance to researchers. Requires some restoration. Donated by H.I. Jensen.
Klaproth, M.H.	Essays	1797	Scientifically significant European chemist, who published on Australian mineralogy. Requires some repair.
Pliny, C.	Historia Mundi	1548	Before Pliny died in the eruption of Vesuvius in AD 79, he was renowned as an historian and acute observer and recorder of natural phenomena. This is an early printed version of his work. In reasonable condition as a rebound volume.
Cuvier, G.	Lectures on Comparative Anatomy 2 vols.	1802	Cuvier's work on palaeontology influenced many scientists researching Australian fossils. French influences on Australian sciences have been largely neglected. Illustrations aesthetically pleasing. Rebound version of reasonable condition.
Adams, Quincy J.	Report on Weights & Measures	1821	Important historical record of the work of the intelligent sixth president of the USA, written several years prior to his presidency and at a time when reviews of weights and measures were being considered. Reasonable condition.
Gregory, O.	Dissertations & Letters by Don Joseph Rodriguez	1815	Trigonometrical Survey of England & Wales by Colonel Mudge & Captain Colby. The publication deals with the controversy about the methods and efficiency of the trigonometrical survey of England and Wales at a period when NSW surveys were beginning. Urgently in need of rebinding.

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Author	Title	Year	Significance
Hargrave, L.	Aeronautical and other papers, including drawings	1884– 1909	One of the most significant scientific and technological aeronautical collections in Australia and when considered in combination with the Hargrave holdings at the Powerhouse Museum and other minor holdings, this material is of international importance and should be considered for World Heritage listing. Requires urgent conservancy.
Sydney Harbour Bridge Advisory Board	Sydney Harbour Bridge Advisory Board, Plans & Designs	1903	Historical document which indicates the long drawn out stages of planning and design that preceded the building of the bridge. Requires restoration.
Bentham George	<i>Flora Australiensis: A Description of the Plants of the Australian Territory</i>	1863	One of seven volumes (1863–1878) by Bentham forming part of an extensive holding of botanical publications on the Australian flora which continued with the publications of von Meuller and J.H. Maiden, all in the Society's Library. This botanical collection formed a basis for the studies which led to the technological uses of botanical products, evident from numerous volumes in the Society's collection. Some require repair.
Curtis	Curtis's Botanical Magazine series 4	1787–ca. 1900	A major collection of some 65 generally well bound botanical magazines begun by W. Curtis 1787 and continuing with various editors through to the 1900s, of not only great historical and scientific significance, but also containing many superb coloured, and black and white plates of aesthetic value. Volumes in varying condition, but generally good.

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Author	Title	Year	Significance
Ridley, W.	Kamilaroi Dippl and Turrubul Aboriginal Languages	1866	A particularly significant volume of social importance. It is an early attempt to systematise Aboriginal languages. This volume is annotated and corrected by hand with numerous ink additions. It was owned by Hyde Clarke FRS (1868) and passed on to Liversidge in 1896. The Society's library also contains numerous other volumes of ethnographic importance. In need of repair.
Yuill, J.	Marine Algae (mounted specimens) collected by J. Yuill	1854	A unique volume of finely preserved and presented 'pressed' algal specimens from the British Isles donated to the Society in 1920. The arrangement of the specimens is particularly artistic and so of great aesthetic value. Condition reasonable for such a fragile collection.
Cyrillus	In Johannem [Latin]	1508	There are no other holdings of this volume in Australia according to our Libraries of Australia search and so very rare. Written by Saint Cyril of Alexandria circa 417 AD, it deals with the theological controversy between Cyril and Nestorius about the 'absolute oneness' of the incarnate Christ (hypostasis). Of great significance both spiritually and socially. <i>In Johannem</i> is an abbreviation of the title 'Opus insigne beati patris Alexandrini in evangelium Johannis'. Possibly passed on to the Society from Thomas George Croft, London, after 1867. It has been well rebound but edges are stained.

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Author	Title	Year	Significance
Dana, J.D.	Geology (vol X) US Exploring Expedition	1849	Of the very limited edition of this work most were destroyed by fire before distribution. The work summarises important observations of the geology of the Sydney Basin made by Dana in company with the Rev. W.B. Clarke, during their short time together in 1839–40.
Scientific Tracts	2 volumes of various papers,	1820s	These two volumes are part of the Liversidge collection consisting of early scientific papers, regarded by him as of significance worthy of preservation indicated by the binding. In reasonable condition.
Aeronautical Society of Great Britain	Annual Reports, 1–10, 1866–75 and others to 1893.	1866–1893	These volumes are being investigated as to whether they were used by Hargrave in his aeronautical research into human flight. Originally owned by Henry Richardson of Greenwich. Other details yet to be determined. Well conserved.
Tokyo Imperial University Library	<i>The Disaster of September 1st, 1923 as it affected Tokyo Imperial University and Other Places</i> together with <i>Reconstruction Album containing the final report on the Tokyo Imperial University Library, 1923–29</i>	1929 1930	These two volumes had special relevance to Sydney because members of the University were in Sydney for the second Pan-Pacific Congress at the time of the great Kanto Earthquake which destroyed much of Tokyo and its university. Professor F. Omori was at the Riverview Observatory with the Society's Councillor, Reverend Father E.F. Pigot, seismologist, and quite by chance saw the evidence of the destructive earthquake as it was being recorded on the observatory's seismograph, Father Pigot renewed physical contact with the Japanese scientists when he and other Society members visited Tokyo for the Third Pan-Pacific Congress in 1926 and viewed the rebuilding, which was well underway.

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Author	Title	Year	Significance
Haiiy, R-J	Traité Élémentaire de Physique	1803	One of the most significant scientific studies of crystallography, which formed the basis for modern research. Rebound and in good condition.
Sydney Magazine of Science and Art	The Sydney Magazine of Science and Art – orig. red cover	1858–9	A local example of the intellectual development of Sydney society. It has obvious links with other similar publications such as that of Sydney University. Of scientific and social significance. One copy in need of rebinding.
Philosophical Society of Australasia	Philosophical Society of Australasia Minute Book	1821–1822	Facsimile of the records of the society which was the forerunner of the Royal Society. The original is held in Mitchell Library. The facsimile has been bound.

THE BRIEF

In November 2005 the Royal Society was awarded a Community Heritage Grant to fund a Significance and Preservation Survey of its collections. Details of the reason for the grant and its full scope are given in Dr Peter Tyler's Report on the Historical Significance of the collections, which is presented separately and which should be read before this report. The outline of the history of the Society is also given in Dr Tyler's report and should be referred to, as it is relevant to the vicissitudes of the Library since the formation of the Society. His report gives information on the various moves of the Society since its foundation. These need not be repeated here in any detail, but occasional reference will be made where such activities have been particularly relevant to the condition and accessibility of the Society's Library.

INDIVIDUAL EXAMINATION OF THE LIBRARY'S BOOKS

My role in the project has been to examine the individual volumes, and to assess, in as far as possible, their significance based on cultural, historical and scientific criteria as well as their physical condition. An attempt has been made to assign values to each volume or set of volumes within the framework of the four primary criteria set out in the grant requirements. For a listing of the volumes regarded as most significant in one or other of the categories, see Table 1. A listing of other significant volumes is in Appendix 2.

Between February and May 2006 I have examined some 750 titles, including some long runs of journals, in the rooms of the Royal Society of New South Wales at 121 Darlington St. Chippendale, leased from the University of Sydney.

Approximately 9000 volumes, mainly of older serials, are presently in temporary storage at Prestons near Liverpool. Many of these were retained in Sydney when the bulk of the serials, some 30 000 volumes, was moved to the University of New England in the 1980s. It is clear that the presently stored volumes were consid-

ered by the Society's then librarian and Council to be important, in every sense of the word, and worthy of retention at the Society's head office in Sydney. These volumes were included in a summary listing this author made of the Society's holdings, when they were housed at the Macquarie University site in 2000. It was not possible, in the limited time available for the recent inspection, to carry out a complete check of these volumes in storage, so the range of age and condition still need to be assessed. However a brief statement is given of the sampling carried out there (Appendix 3) with a listing of the sample items examined.

I have previously examined the Serials belonging to the Society now held in the Library of the University of New England, but not for this present assessment. A copy of the catalogue of these holdings, prepared by the University of New England and the Society (1989) is available.

Other material belonging to the Society is held temporarily in care by the Mitchell Library. Most of this material is essentially archival (see Dr Tyler's report), but there are significant artefacts listed and described by Dr Tyler. Some at least of these archives relate to the history of the Society's Library.

HISTORY OF THE LIBRARY

The Library of the Society has gone through a number of stages, related mainly to the physical moves of its headquarters, which the Society has made over the years since its formation in the 1870s. The resources of the Library have naturally been affected by the various phases of activity of the Society, which has been a function of both residence, economic stability or otherwise, and variations in scientific activity within New South Wales.

The Society has had an Honorary Librarian since its earliest years, and this position continues today. At various times in the past the Society had paid library staff, particularly when the library was functioning at Science House, Gloucester Street, up to the 1970s. At present the major task of the Honorary Librarian is to ensure the recording and transfer of incoming

periodicals from around the globe to the holdings at the University of New England, Armidale, mentioned above. The reason for the placement of these holdings is explained later in this report.

The Library became well established during the Society's first residence at 5 Elizabeth Street, Sydney from 1874. At this stage it provided a somewhat specialist adjunct of scientific publications to those in the State Library and those of State Departments, such as the Department of Mines, the Royal Botanic Gardens, and the University of Sydney and the Technical College. The wide range of journals already being obtained on exchange, from both Australasian and international sources, was widely appreciated and used. Prior to 1900 Society funds – probably aided by a government subsidy – allowed the Society to carry out a considerable amount of fine binding using ornamental cloth covers, leather spines and corners, including the addition to the titles of the Society's 'logo'; a small version on spines and a larger version on covers. The binding was done by Sydney firms, among which was John Sands. This binding program was particularly important in preserving those publications originally issued in paperback, including numerous limited government issues, and the reports of local societies. While the bulk of these volumes is in relatively good condition, some of the most heavily used now require some restoration or repair.

In the 1920s the scientific and technical societies of New South Wales were heartened by the news that a building dedicated to Science would be provided by the State for a nominal rent. The State Government would retain ownership of the land. This encouragement was a great boost to Science. Science House, in Gloucester Street, was constructed and leased by the State Government to the main lessees, The Royal Society of New South Wales, Linnean Society of New South Wales and the Institution of Engineers, Australia. It became available in 1931 and a number of smaller scientific and technical Societies also occupied offices.

A joint Library was set up consisting of the holdings of the libraries of the Royal and Linnean Societies, although separate catalogues

were retained. The Linnean Society's section included a large collection of offprints supplied by authors from every part of the world. These proved particularly useful in the days before rapid copying was available. That reprint collection has now been dispersed. As far as I am aware the Linnean Society's books are lodged in the Library of the University of New South Wales, but I am not aware of whether or not the conditions involved loan or donation. The Institution of Engineers maintained its own library, which was quite specialised.

In 1934 the Royal Society became aware of serious defalcation by its then Treasurer, and lost considerable money, which was never recovered. However the Society continued to operate, albeit in more restrained circumstances. This certainly limited spending on special binding, except for exceptional items, and limited the purchase of specialist books. Nevertheless the Library operated at its most successful, and the large exchange system continued. It was efficiently maintained, with some paid staff, long hours, lending facilities and good access for members and the scientific community at large. This excellent scientific operation continued until the 1970s.

When the Government decided to offer the building to various sporting bodies (it became Sports House in 1976) the Society was offered cash compensation. The Society, in association with the Linnean Society, bought a property at 35 Clarence St Sydney, and the combined Library was re-established. Unfortunately the move to Clarence Street coincided with a downturn in the economy and the building failed to attract lessees. The Societies abandoned the project after considerable loss in 1983.

The continuing exchange of journals, mainly from international sources, increased the pressure on the Royal Society. At this time the Society entered into negotiations with the University of New England to house much of this material. This resulted in the bulk of the serials being transferred to Armidale in 1983, and, as mentioned earlier, a catalogue of this material was prepared. At this time there was a quite large active Society Branch at Armidale, mainly consisting of academics.

The Royal Society, through the good grace of Macquarie University then moved to a house in the grounds of that University, at North Ryde, within the lease of the Robert Menzies College. There the Library, including a number of the old serials mentioned earlier was housed in a series of large enclosed glass bookcases, while the separate books were housed in several smaller enclosed glass bookcases. However the venue could not be operated over the whole period of a business week, so library access was quite limited and lending and library use decreased, although cataloguing continued, particularly for the incoming serials, which were then forwarded on to the University of New England.

In 2001 the lease was revoked, as the College engaged in redevelopment, and at short notice the Society was moved into smaller quarters in an apartment in an accommodation block belonging to the University. The very limited space meant that the Library had to be almost completely packed away. Archival material was sent to the Mitchell Library at this time to join that which had previously been deposited there. The Library was packed into boxes, and the large bookcases sold to the Historic Houses Trust. Fortunately a ten-year lease was arranged with the University of Sydney in 2003 when the Society moved into its present quarters. However, while the site provides good quarters for efficient office use with an excellent venue for technical meetings nearby, the location is unsuitable for library storage and access for members and other users.

It is clear that the library has suffered considerably by the various moves. It has also suffered by the lack of permanent, paid, qualified staff, although it must be admitted that a number of dedicated honorary librarians, some qualified in both librarianship and science, have done their best to maintain the Library. To some degree there has been more attention paid to the journals, many of which are not readily available elsewhere in Australia.

In summary the Library had steady growth from its beginning, with some episodes of particular expansion, reaching its maximum period of use, and thus of social values in the 1970s. Since then, although the addition of serials and occa-

sional gifts of books continues, and the Society's journal consequently also continues to reach an international audience, the value of the Library as an accessible resource for scientific and historical research has considerably diminished.

EVIDENCE FROM THE BOOKS

Particular periods in the Library's history can be noted in various ways through examination of the volumes. The fine binding, with the Society's 'logo', in the 1890s, has already been mentioned.

There are at least three phases of date stamping of volumes recognisable (1890s, 1920s and 1960s), and, marked on the endpapers, at least three separate systems of cataloguing are evident, one using the Dewey System. These matters can probably be more accurately assessed from the several card catalogues, which are some years out-of-date. There has not been time for me to study these for the present project.

The Liversidge Collection

In the early period one of the major influences on the Society's Library was clearly Professor Archibald Liversidge. From the time of his arrival in New South Wales in 1872 Liversidge was a major activist for Science. He encouraged not only the Royal Society for which he was Honorary Secretary between 1874 and 1884 and later president, but he was also essentially the founder of the Australasian Association for the Advancement of Science (AAAS) in the 1880s through the Royal Society's Council. There is a very full set of his own bound publications, mainly reprints, which to a great extent were originally published in the Society's Proceedings. They attest to the variety of research work he undertook, the fruits of which were often presented first at the regular monthly meetings of the Society. The quality of this work must have been an inspiration to other members and indeed to researchers throughout Australasia. There are also volumes which belonged to him, and which he passed on to the Library, perhaps when he retired and returned to England

in 1907. Perhaps of even greater value from the point of view of the history of science, are the several volumes of handwritten notes he took as a student while at the Royal School of Mines in London in 1869–71. These record not only his own studies but indicate the type of instruction then being given by lecturers of the quality of Professor W. Warrington Smyth.

Liversidge was responsible for obtaining the rare volume *Geology* of the US Exploring Expedition, 1838–42 by J.D. Dana that has already been mentioned in Dr Tyler's report. Liversidge was very probably also responsible for the acquisition of the King-Fitzroy *Beagle* volumes and the *HMS Fly* Expedition volume by J.B. Jukes, all seminal works connected with Australian exploration and geology.

In view of Liversidge's contribution to Australian Science and to the University of Sydney it is a sobering fact that the biography of Liversidge by Professor Roy Macleod, of the University, completed several years ago has not yet been deemed worthy of publication by Australian publishing houses. It is sad also that despite the naming of a street in Canberra for Liversidge his contribution to the University of Sydney remains without acknowledgement (by a named building etc.) within the grounds, or even within the Department of Chemistry.

Other Society members, such as the pastoralist and Legislative Council member Henry Kater, the Reverend William Woolls and the astronomer John Tebbutt of Windsor, also made donations of library items during this early period.

Later History

A later period of binding occurred in the late 1920s, perhaps in anticipation of the move into Science House. This was less elaborate than the binding carried out in the 1890s, but was nevertheless effective. In 1933 the Society was presented with a number of volumes by the Pharmaceutical Society of New South Wales. While this 'donation' contains some interesting volumes, others are not of such value. A considerable number are in poor condition from water damage, possibly from the time they were presented. The rare items of these volumes would

benefit from rebinding.

Another period of binding occurred, probably in the 1960s. There is evidence from the mid 1960s that the value of many volumes to the Society's members was questioned by Council members. There was clearly some debate about the need to keep certain volumes in the Society's rooms, rather than possibly offering them for sale, storing them or sending them with serials to the University of New England. At least a few of the very rare and valuable volumes were appreciated and some were rebound, while a few were boxed.

It is clear that the difficulties of access to the library in the past twenty or so years because of the limited opening hours and the lack of awareness of the Library's contents by many researchers has, over the years, reduced the impact that the collection might have had. Numerous volumes have uncut pages, indicating that they have never been used, despite their potential value to researchers.

THE RANGE OF THE COLLECTION

The collection is, naturally enough, quite eclectic. Although there is a considerable number of serials which are held in other libraries within New South Wales, some runs, particularly of early issues, are not available elsewhere, as indicated by the searches of the Hon. Librarian.

Individual Volumes

What I have selected as extremely rare and valuable items have already been listed in Table 1. However there are many different items likely to attract the attention of other assessors. These are listed in Appendix 2, already referred to. In this appendix the items of interest are grouped under the various scientific disciplines usually adopted for library classification. However, many of the volumes, particularly those of the nineteenth century, contain a wide range of subjects, at a time when many of the disciplines were just emerging from a broad 'scientific' field.

Articles documenting colonial scientific activities prior to the formation of the Society and

describing the meetings of the Society's predecessor, the Philosophical Society of New South Wales, in the 1850s, are available in several local publications such as the *Sydney Magazine of Science and Art* in 1857 and 1859. The following period is covered by *Transactions of the Philosophical Society of New South Wales*, 1862–1865.

Nineteenth Century Science and Technology

Many important aspects of research and development of Australian science and technology during the second half of the nineteenth century are covered by the Library's holdings.

While the emphasis of the Royal Society has been more on the physical, chemical and geological sciences with the associated technical fields, the Library has a considerable range of important biological (particularly botanical) publications. This might seem surprising in that attention to the biological sciences has tended to be the province, within New South Wales, of the separate Linnean Society. The reason for this can probably be traced back to the period prior to the formation of the Linnean Society mainly through the Macleay family. In this prior period the Royal Society would have attracted gifts and exchanges, notably from Victoria.

Thus the Society's Library contains copies of *Flora Australiensis* by George Bentham, assisted by Baron Ferdinand von Mueller. Von Mueller continued to send his own later publications expanding Bentham's work. In addition the NSW Botanist J.H. Maiden was an enthusiastic member of the Royal Society and it was doubtless his encouragement that ensured other interesting biological items continued to reach the Library.

Following the interest in early geographical exploration there are reports on the later Horn and Elder expeditions, reminders of Leichhardt's still unsolved death, The Reverend W.B. Clarke's writings on gold and geology. Related to both geology and exploration is the documentation of a momentous mineral – social phenomenon, the discovery and development of the Broken Hill orebody. This documentation con-

sists of the Quarterly reports of the Broken Hill Proprietary Company from its inception in 1883 to 1911.

The first publications of Lawrence Hargrave relating to his aeronautical experiments are found in the Society's journal, and his drawings also come within the purview of the Library, a small volume on aeronautics possibly owes its presence in the Library's collection to Hargrave.

Interspersed with the above are copies of short-lived Australian colonial scientific and literary societies; these items are rarely to be found in Australian libraries. It is likely that these last-mentioned will, in the end, prove most useful to researchers examining the history of Australian scientific endeavour, particularly in the period prior to Federation.

The Society's library contains a fine collection of books and reports on Astronomy. This includes a long run of the reports of the Sydney Observatory, initially through H.C. Russell and reports of the private observatory at Windsor run by John Tebbutt, the 1870s transit of Venus, and publications from the British Astronomical Society and other sources. There are also more recent volumes dealing with the life of Copernicus and other early researchers.

It is hard to evaluate in monetary terms much of the Library's 19th century material, which by exchange or gift, emanated from various British colonies outside Australia. However its scientific and historical value can be assessed. While perhaps of less direct interest to Australian scholars there is now a wide web of international researchers involved in studying the epoch of colonialism and empire.

The spread of information of the Society's holdings of these topics, which might be regarded locally as somewhat esoteric, could very likely attract considerable interest among scholars from many countries. Among other items they contain Dutch East Indies – which is now Indonesia – Pacific Islands, Indian and African material of geological, botanical, meteorological, anthropological and ethnographic content. There is information on various Polar expeditions, and material related to the Tokyo Earthquake of 1923. Preparation of a full catalogue and listing on the Society's web pages could

likely see a dramatic rise in interest in the collection from outside Australia.

CONCLUSIONS

The Library of the Royal Society of Sydney has been in existence for at least 135 years. In total it consists of an estimated 45 000 volumes. Including, as it does, material from even earlier Australian colonial times, it encapsulates much of the history of science in New South Wales – and indeed of Australia – for more than 150 years. The history of Australian Science is now established in its own right as a significant discipline in studies of Australian History – see for instance the *Historical Records of Australian Science*, which began in 1966 as the *Historical Records of the Australian Academy of Science*. The first volume contains a seminal paper on the work of Lawrence Hargrave, which paper drew on the Royal Society's papers. Nevertheless the importance of science, and even of technology, to the development of Australia has, in the past, been underplayed in major histories of Australia, as is discussed in Dr Tyler's report.

The Library covers the widest range of scientific literature, from astronomy to zoology, but with major material on geology, botany, scientific and naturalist societies and catalogues of major exhibitions, the last named of which, in themselves, cover the widest range of scientific and 'practical' aspects of the developing colonies – and indeed the nation – particularly during the crucial period of the late 19th century. Material on individual scientists from various periods in the history of the Society is available to researchers, and has already proved an important source for some researchers in the history of Australian science (e.g. Branagan 1972; Inkster & Todd 1988; Gilbert 2001; Macleod unpubl.).

There is no doubt that the collection has considerable value in its own right, but, possibly more significantly, it also has important cultural and historical value, indicating the strength of cultural and scientific interest by a dedicated colonial society largely, in its earliest days, of men, and which has been preserved, and cultivated to varying degrees by the Society, often in

difficult economic and practical conditions over almost 150 years.

While many of the journal runs still held in Sydney are not unique to this library, some contain exquisite illustrations in a number of formats, including lithographs, woodcuts, and copper engravings, which deserve to be more widely known. Brief displays of these at the Society's meetings have evinced considerable admiration, and means of displaying them more widely must be investigated.

Listing of the books shows that over the years many volumes, which should be together, have been separated. The listing will enable the material to be grouped more satisfactorily. Of course, cataloguing should be carried out as a priority before the final list is placed on the Society's website.

COLLECTION LISTS AND RECOMMENDATIONS

The results of my investigation – limited by time and funding – of the Library of the Royal Society of New South Wales are encapsulated in Table 1 and the appendices.

Spreadsheet Data

There is, in spreadsheet form (held by the Royal Society), a fuller list of the books examined, indicating their titles, publication sources and dates, format, general subject content (scientific discipline) and condition (refer to Appendix 1). Perhaps more important is that an attempt has been made to assess the specific scientific and cultural value of each volume on a numerical scale. Naturally enough this assessment is very subjective, and depends to a considerable extent on my own background and specific areas of interest.

The value of a book depends on a number of factors. The interest of the subject to the reader is an important factor, as is the quality of the presentation, and the knowledge of the author. Other books have value because of their unique quality, including perhaps the place of the author in the history of his/her subject. Others have a monetary value because of the quality

of presentation, beauty of illustrations, or their rarity. It is difficult to give an exact evaluation of any book, so any such evaluation must be very subjective.

In my opinion the volumes in the collection of most overall value are those which shed light on aspects of the history of science in Australia, and which are likely to be held in few libraries. In this category I place the volumes of some of the smaller and often short-lived Colonial scientific societies (e.g. The Queensland Naturalists Society, The Geelong Field Naturalists & The Geological Society of Australasia 1880s–1907).

State of Preservation

Some important volumes are in urgent need of repair. These have been identified. Other less important volumes also need attention. In general it can be stated that the physical conditions in which the volumes are presently housed are far from ideal, either for their preservation or for their use. Some decisions need to be made urgently about these matters. An ideal solution, not just for the Library, but for the advancement of Science in New South Wales, would be the *generous return of Science House to the scientific community of the State*, so that it could be put to the purpose for which it was built.

Similar Collections

Other collections with which the (NSW) Royal Society's might be compared are those of the Royal Society of Victoria, Royal Society of South Australia and the Royal Geographical Society of Australia (South Australian Branch). These societies seem to have been more highly regarded within their own states, than has the Royal Society of New South Wales, in that some government funding, either real or in kind, has continued for them in recent years. The Royal Society of Victoria owns its building in central

Melbourne, and has additional funding through its parking facility which is used by the public. That Society is able to use its building for functions, scientific gatherings, and to house its library in excellent conditions.

Likewise the Royal Society of South Australia has its own rooms within the Library-Museum-Art Gallery complex of Adelaide, an ideal city situation for meetings and co-operation with other groups, and its library is readily available. So too the Geographical Society has its own library intact within the main Library of South Australia building.

General Comments

While I agree with almost all of the comments about the Library, and its history, as described by Dr Tyler, I do not consider that, for a collection of this significance, the volumes are adequately housed at the Society's present quarters. The collection has suffered from its more recent moves. Much of it was better housed when at its (first) site at Macquarie University (during the second, shorter period at Macquarie University it was largely packed in boxes)), when climatic conditions were more controlled, as the volumes were then contained within glass cases and the temperature was relatively stable.

These cases were too large to fit the present site at the University of Sydney and were sold to the Historic Houses Trust.

A minor amount of redistribution of books is required to bring together various volumes which have close relationships.

Dr Tyler's Recommendation 4, moving the books at 121 Darlington St to the Ground floor, would be a decided improvement on the present situation. However I would only regard this as a very temporary step, necessarily of quite limited duration.

I endorse the priorities listed in Dr Tyler's Report, and will not repeat them here.

APPENDIX 1

The following list shows volumes requiring repair. These fall into two categories: A – those requiring urgent and considerable attention and B – those requiring some remediation.

A – Requiring Urgent and Considerable Attention

- The Australian Critic* [Melbourne] T.G. Tucker & W.B. Spencer 1890 (Shelf 6-1)
- Itineraire kilometrique, voyage a pied en Nouvelle Caledonie* C.H. Lemire, 1877 (Shelf 6-4)
- Journal of the Elder Scientific Exploring Expedition 1891–2 (with maps)* (under the command of) D. Lindsay 1893 (Shelf 6-4)
- Descriptive Catalogue of the Specimens of Rocks of Victoria in the Industrial and Technological Museum* 1894 (Shelf 5-1)
- Historical Records of New South Wales 1783–1793* (vol. 1 pt 2) (Shelf 6-2)
- The History of New Holland from its First Discovery*, introduction by Rt Hon William Eden, John Stockdale publisher 1787 (Shelf 6-3)
- The Climate of NSW*, H.C. Russell 1874 (Shelf 6-4)
- Report on the Geology & Goldfields of Otago*, F. Hutton & G.H. Ulrich 1875 (Shelf 5-2)
- Duncan's Edinburgh Dispensary* A. Duncan 1830 (Shelf 5-3)
- Pharmacopoeia Universalis or Complete Encyclopedia of Materia Medica* 1872 (Shelf 5-3)
- Oeuvres completes de Chritiaan Huygens 1659–66* (vol. 16) Société hollandaise des Sciences 1929 (Shelf 5-6)
- Elements of Natural History* J. Blumenbach 1825 (Shelf 4-1)
- The Australian Naturalist* vols 1 & 2 1906-48 (Shelf 4-1)
- Supplement to the Pharmacopoeia: Treatise on Pharmacology* S.F. Gray 1836 (Shelf 4-3)
- Paris's *Pharmacologia* J.A. Paris 1832 (Shelf 4-3)
- Dissertation and Letters by Don Joseph Rodriguez, the Chevalier Delambre, Baron de Zack, Dr. Thomas Thomson, Dr. Olinthus Gregory and others, either to impugn or to defend the Trigonometrical Survey of England and Wales by Col. Mudge and Capt. Colby*, 1815 (4-4)
- An Outline of the Sciences of Heat and Electricity* Thomas Thomson 1839 (Shelf 4-4)
- On Sound*, J. Tyndall 1875 (Shelf 4-4)
- Niger Flora* H.D. Trotter et al. 1848 (Shelf 3-2)
- A Maori – English Lexicon being a Comprehensive Dictionary of the New Zealand Tongue ... (part 1 Maori-English)*, William Colenso, 1898 (2-1)
- Abstracts of papers communicated to the Royal Society of London 1937–40* (Shelf 2-2)
- Technics: The Journal of the Stawell Technical College and School of Mines* (six issues, 1892) (Shelf 2-3)
- Life and Scientific work of PG Tait*, C.G. Knott 1911 (Shelf 2-3)
- Spectrum Analysis*, H. Schellen 1872 (Shelf 2-3)
- Broken Hill Proprietary Reports (and Statements of Accounts)*, 1885–1911 (unbound volumes from 1896–1911) (Shelf 1-3)
- Geelong Naturalist*, Second Series complete from March 1904 – June 1913, also July 1922, Geelong Field Naturalists Club (established 1880) (Shelf 1-3)
- Contributions to the Natural History of Labuan and the adjacent coasts of Borneo*. [part 1, all published] James Motley & Lewis L. Dillwyn, 1855 (Shelf 1-3)
- An Act to consolidate the Statutes relating to the corporation of the City of Sydney*, NSW Act No. 35, 1902, NSW Legislative Assembly 1902 (Shelf 1-3)
- Sydney Magazine of Science and Art* 1858–1859 (Shelf 1-3)
- Geology of the Provinces of Canterbury and Westland, NZ*, J. von Haast 1879 (Shelf 1-4)
- Aeronautics* [supplement to *Knowledge and Illustrated Science News*] Issues 1–12, (January to November 1908 + loose sheets October–November 1913, and article (obituary) of Wilbur Wright) B. Baden-Powell & J.H. Ledebor, 1908 & 1913, (Shelf 1-5)
- Iconographia crinoideorum*, N.P. Angelin, 1878 (Shelf 1-5)
- Cyclopaedia: or an universal dictionary of Arts and Sciences*, J.E. Chambers, (all 4 vols) 1786 (Shelf 1-6)

B – Requiring Some Remediation

- History of New South Wales from the Records, {Governor Phillip 1783–1789}* 1889 (Shelf 6-1)
- Southern Science Record & Magazine of Natural History*, vols 1 & 2, 1880–85 (Shelf 6-3)
- Handbook of New Zealand*, 1st edn. James Hector, 1879 (Shelf 6-4)
- Catalogue of the Chilean Exhibition at the Philadelphia Centenary Exhibition 1876 (Shelf 6-4)
- Opuscula*, Georgius Agricola 1546 (Shelf 6-5)
- Asiatic Society of Bengal Centenary Review, Researches of the Society 1784–1883* (Shelf 6-5)
- Geology & Palaeontology of Queensland & New Guinea* 1892 R.L. Jack & R. Etheridge Jnr (Shelf 5-2)
- Essays* M.H. Klaproth 1797 (Shelf 5-3)
- Unpublished work on Seasonal Forecasting*, H.I. Jensen (Shelf 5-3)
- Manual of Medical Jurisprudence and State Medicine*, Michael Ryan 1836 (Shelf 5-4)
- Dr Leichhardt's Briefe an seine Angehörigen.*, G. Neumayer & O. Leichhardt, 1881 (Shelf 5-3)
- Textbook of Embryology, Man and Mammals*, O. Hertwig 1892 (Shelf 4-1)
- Royal Society of London, *Reports of Malaria, Mediterranean Fever and Sleeping Sickness Commissions 1900–10* (Shelf 4-1)
- Accum's System of Theoretical and Practical Chemistry*, by Frederick Accum (1807) (Shelf 4-3)
- Chemical Essays* S. Parkes 1823, vol. 2 only requiring repair (Shelf 4-3)
- Theory & Practice of Hydro-Mechanics*, Institute of Civil Engineering 1884–85 (Shelf 4-4)
- Practical Applications of Electricity*, Institute of Civil Engineering 1884 (Shelf 4-4)
- Aeronautical and other papers, L. Hargrave 1884–1909 (Shelf 4-5)
- Report on Designs and Tenders* submitted in connection with the proposed Bridge over Sydney Harbour to connect Sydney with North Sydney, Sydney Harbour Bridge Advisory Board (1903) (Shelf 4-5)
- Flora Australiensis: A Description of the Plants of the Australian Territory*, vol. 1. George Bentham, 1863 (Shelf 3-1)
- Botanical Magazine or Flower-Garden displayed*, (vol1 & 2 in one) W. Curtis 1787 (Shelf 3-3)
- Agriculture of Oberlantz*, L. Jacobi 1860 (Shelf 3-5)
- Marine Algae*, collected & mounted by the Rev James Yuill, 1854 (Shelf 3-6)
- Index perfectus as Caroli Linnaei*, F. von Mueller (Shelf 3-6)
- Australian Dictionary of Dates and Men of the Time*, H. Heaton 1879 (Shelf 2-1)
- Kamilaroi, Dippl and Turrubul Aboriginal Languages* (also other languages) W.M. Ridley, 1866, (Shelf 2-1)
- Environment: A Magazine of Science*, vols 1 to 3 (lacks issue no. 1) Science Teachers' Association (E.G. Booth), 1934–36 (Shelf 2-2)
- Record of the Royal Society of London 1912* (3rd edition) (Shelf 2-3)
- Biographical Memoirs of Fellows (Royal Society of London 1891–1966)*, N.H. Fairley 1966 (Shelf 2-3)
- BANZ Antarctic Research Expedition 1929–31: vol. 6 (2) *Isopoda*, H.M. Hale 1952 (Shelf 2-5)
- The Micrographic Dictionary* J.W. Griffith & A. Henfrey 1883 (Shelf 2-6)
- Description of the Star Camera at the Sydney Observatory* 1892 (Shelf 2-6)
- The Disaster of September 1st, 1923* as it affected Tokyo Imperial University and other places, 1923; together with *Reconstruction Album containing the final Report of the Tokyo Imperial University Library, 1923–29* (Shelf 2-6).
- Sydney University Review*, Nov. 1881- July '83 [issues nos 1, 2, 4 & 5] (Shelf 1-3)
- Les premiers Nouvelles concernant L'éruption du Krakatau en 1883*, M. Dietrich, 1884 (Shelf 1-3)
- Catalogue of Books on Natural Science* in the Radcliffe Library to 1872, 1877 (Shelf 1-4)
- List of Birds, Rockingham Bay*, Northeast Queensland, E.P. Ramsay 1875 (Shelf 1-4)
- Electric Movement in Air and Water with Theoretical Inferences*, Lord Armstrong 1897 (Shelf 1-5)
- Maps of Land Subdivisions of NSW, NSW Dept of Lands (Shelf 1-6)

APPENDIX 2

Liversidge Collection

These cover the subjects of chemistry, mainly inorganic, mineralogy, and geology (1875–1904), see for instance six titles at shelf 4-2, and 31 similar reprints bound individually at Shelf 2-1.

Proposed Chemical Laboratory, Sydney University, A. Liversidge, 1888 (Shelf 4-5)

Minerals of New South Wales, A. Liversidge (1888) (Shelf 5-1)

Palaeontology Course of Demonstrations, (handwritten notes, Royal School of Mines, London 1870) (Shelf 5-1)

Notes of a Course of Lectures on Mining by W. Warrington Smyth (handwritten notes, the Royal School of Mines, London 1869-1870) (Shelf 5-1)

Two bound volumes: *Scientific Tracts* vol. 1 (various reprints) & *Tracts Scientific* vol/ 1, both from the 1820s, probably owned by A. Liversidge

Significant Volumes Listed According to Scientific Discipline

Items listed in Table 1 have been omitted from this list.

Chemistry

Accum's System of Theoretical and Practical Chemistry by Frederick Accum (1807) (Shelf 4-3)

Biology

Natural History of the Mammalia, Natural History of the Marsupiatia, and Natural History of the Rodentia by G.R. Waterhouse, 1846 & 1848 (Shelf 4-2)

Animal Chemistry, Physiology and Pathology of Man by Simon Franz (ed. G.E. Day), 1846 (Shelf 4-3)

Index perfectus ad Caroli linnaei species Plantarum nempe eorum Prima Editionem, (Anno 1753) collatore Ferdinando de Mueller, Baron F. von Mueller, 1880 (Shelf 3-6)

Fragmenta Phytographiae Australiae, vols. 1–11 [missing vol. 7?], Baron F. von Mueller, 1858–1881, (Shelf 3-1)

Flora Australiensis: A Description of the Plants of the Australian Territory, vols. 1–7. George Bentham, 1863–1878 [note: assisted by F. von Mueller] (Shelf 3-1)

Handbook of the New Zealand Flora, J.D. Hooker, 1867 (Shelf 1-3)

The Birds of Eastern North America, Charles B. Cory 1899 [Well Illustrated] (Shelf 4-2) (Shelf 2-1)

Prodromus Systematis Naturalis (Regni Vegetalis), De Candolle 1824–49 (Shelf 3-5)

Physics

Précis Élémentaire de Physique Expérimentale (second edition, two volumes, 1821) by J-B. Biot (Shelf 1-2)

Geography and Related Areas

A Complete System of Geography, being a description of the known world, Emanuel Bowen (Geographer to his Majesty), 2 vols. 1747 (Shelf 2-6)

Lippincott's Gazetteer of the World: A Complete pronouncing Gazetteer or Geographical Dictionary of the World, J.B. Lippincott, 1880 (Shelf 1-4)

Cyclopaedia: or an Universal Dictionary of Arts and Sciences, vols. 1–4, 1786 (1–6)

Cosmos, Sketch of a Physical Description of the Universe . . . Alexander Humboldt. There are two English translations of the first and second volumes (first published in German in 1845 and 1847), one in two volumes transl. by Otte (1849) and in four volumes transl. by Edward Sabine (1847) (Shelf 4-4)

True Theory of the Earth and the Philosophy of the Predicted End by ?'Research' (anon, Scottish) 1869 (Shelf 5-1)

Elements of Natural History, J.F. Blumenbach 1825 (Shelf 4-1)

Technology

Operative Mechanic & British Machinist, being a practical display of the Manufactories and Mechanical Arts (2nd edn) by John Nicholson (Civil Engineer), 1825 (Shelf 4-4)

Australia Commonwealth: Information, conditions and particulars for guidance in preparation of competitive designs for the Federal Capital city of the Commonwealth of Australia (Shelf 6-1)

The Australian Flora in Applied Art: The Waratah, R.T. Baker 1915 (Shelf 2-3)

Wine making in hot climates, L. Ross 1900 (Shelf 1-5)

Aeronautics

Aeronautical Society of Great Britain Annual Reports, 1866–1893 (2-6)

Aeronautics [supplement to *Knowledge and Illustrated Science News*] Issues 1–12, (January to November 1908 + loose sheets October–November 1913, and article (obituary) of Wilbur Wright) B. Baden-Powell & J.H. Ledebor, 1908 & 1913, (Shelf 1-5)

Astronomy

The Achromatic Telescope and its various mountings, especially the Equatorial ..., William Simms, 1852 (Shelf 4-5)

Meteorological Observations, Windsor, NSW (1863–1915), together with *Astronomical Memoirs* (1853–1907), John Tebbutt (several volumes & dates to 1915) (Shelf 4-5)

The Astronomical Register: A medium of communication for amateur observers and all others interested in the Science of Astronomy (vols. 1-24) bound in two volumes (1–12 & 13–24), 1863–1886, (Shelf 1-2)

Geology

Transactions of the Geological Society of Australasia, parts 1-4 (1886–1890 + List of members 1887) Robert Litton, ed. (Shelf 5-1)

The Southern Goldfields, W.B. Clarke 1860 (Shelf 5-1)

Remarks on the Sedimentary Formations of New South Wales, 1878 (Shelf 5-2)

Geological Observations in South Australia, J.E. (Tenison) Woods, 1862 (Shelf 5-1) Note also Woods's bound papers 1876–1889, (Shelf 4-5)

Elements of Chemical and Physical Geology, [Karl] Gustav Bischof (trans Benjamin H. Paul), 1853, 1855, 1859. First published (in

German) 1846–47 it is regarded as founding the science of geochemistry (Sarjeant, 1980). (Shelf 5-2)

Report on the Geology and Goldfields of Otago, F. Hutton and G.H. Ulrich (1875) (Shelf 5-2)

Geology of Queensland (text) and Geological Map of Queensland (six sheets), J.R.L. Jack & R. Etheridge Jnr, (1892) (Shelf 5-2)

Geology of Sydney and the Blue Mountains, J. Milne Curran, (1898 ?First Edition), (Shelf 5-2)

Systematic Account of the Geology of Tasmania, Robert Johnston 1888 (Shelf 5-6)

Materialien zur Geologie von Turkestan (3 vols, two in Russian, one German, 1880, 1884, 1890), Romanowski, G. (Shelf 5-6)

Conversations on Geology, Granville Penn 1828 (Shelf 5-2)

British Petrography with special reference to the igneous rocks, J.J. Harris Teall, 1888. First part issued February 1886, completed March 1888 (Shelf 2-4)

The Eruption of Krakatoa and subsequent phenomena: Report of the Krakatoa Committee of the Royal Society, ed. G.J. Symons, 1888 (Shelf 2-5)

Les premiers Nouvelles concernant L'éruption du Krakatau en 1883, M. Dietrich, 1884 (Shelf 1-3)

Exhibition Catalogues

Official Catalogue of the Natural and Industrial Products of New South Wales forwarded to the International Exhibition of 1876 at Philadelphia 1876 (contains the first Australian work of T.W. Edgeworth David, later a President of the Society) (Shelf 5-1)

Official Record of the Intercolonial Exhibition of Australasia, 1866-67 [J.G. Knight, Secretary] (Shelf 1-4)

Exploration, Expeditions

Dissertation and Letters by Don Joseph Rodriguez, the Chevalier Delambre, Baron de Zack, Dr. Thomas Thomson, Dr. Olinthus Gregory and others, either to impugn or to defend the Trigonometrical Survey of England and Wales by Col. Mudge and Capt. Colby, 1815 (Shelf 4-4)

- Challenger Expedition: *Briefe von Willemoes-Suhm* 1877 (Shelf 5-3)
- Dr Leichhardt's Briefe an seine Angehörigen*, G. Neumayer & O. Leichhardt, 1881 (Shelf 5-3)
- The History of New Holland from its first discovery* (introduction by The Hon. William Eden) [printed for John Stockdale] 1787 (Shelf 6-3)
- Voyages of the Adventure and Beagle, 1826-1836*, King, P.P. & Fitzroy, R., 2 vols & appendix (with charts) 1839 (Shelf 6-4)
- Voyage of H.M.S. Fly*, 2 vols J.B. Jukes, 1847. (Shelf 6-4)
- Journal of the Elder Scientific Exploring Expedition, 1891-2* (with maps) (under the command of) D. Lindsay, 1893 (Shelf 6-4)
- Horn Expedition* (3 vols) W. Baldwin Spencer (ed.), 1896. (Shelf 6-4)
- Journal of the Horn Expedition*, 2 vols includes printed letters, and Report of the Physical Geography of Central Australia, Maps & Plans, Charles Winnecke, 1897. (Shelf 6-4)
- Victoria Late Australia Felix - Port Phillip District*, William Westgarth, 1853 (Shelf 6-4)
- Report of the 1873 Expedition of the Colorado of the West and its tributaries*, Prof. J.W. Powell, under the direction of the Smithsonian Institution (pamphlet, 36 pp.), 1874. (Shelf 6-4)
- "Aurora" Relief Expedition, 20 December 1916 to 9 February 1917, J.K. Davis, 1917 (Shelf 2-3)
- Exploration Internationale des Régions Polaires* 1882-3 & 1883-84
- Report of the Natural History Results of the Pamir Boundary Commission* (with a list of the plants by J.F. Dultice and a notice of the rock specimens by T.H. Holland), A.W. Alcock, 1890 (Shelf 6-5)
- Last Cruise of the "Wanderer"*, John Webster (1877), (Shelf 1-5)
- Australien (und) Ozeanien*, W. Geisler, 1930 [also contains considerable Ethnography] (Shelf 1-4)
- Report of a Reconnaissance of the Black Hills of Dakota ...* [Engineering Dept, US Army], W. Ludlow, 1875 (Shelf 1-5)
- Reconnaissance from Carroll, Montana Territory, to Yellowstone National Park 1874*, W. Ludlow, 1875. (Shelf 1-5)
- Contributions to the Natural History of Labuan and the adjacent coasts of Borneo* [part 1, all published] James Motley & Lewis L. Dillwyn, 1855 (Shelf 1-3)

Biography & History

- Tadataka Ino, the Japanese Land-Surveyor*, Ryokichi Otani (Trans K. Sugimura) 1932 (Shelf 5-3)
- The Life of the Honorable Henry Cavendish*, including abstracts from his writings, George Wilson 1854 (Shelf 5-3)
- Memorials, scientific and literary of Andrew Crosse the electrician*, Cornelia Crosse 1857 (Shelf 5-3)

Ethnography etc

- The Ancient Stone Implements, Weapons and Ornaments of Great Britain*, John Evans 1872 (Shelf 5-3)
- A Maori - English Lexicon being a Comprehensive Dictionary of the New Zealand Tongue ...* (part 1 Maori-English), William Colenso, 1898 (Shelf 2-1)
- An Account of the Polynesian Race, its origin and migrations*, 3 vols, (one is second edition 1890), A. Fornander, 1880, 1885, 1890 (Shelf 2-1)
- Myths and Songs of the South Pacific*, W. Wyatt Gill 1876 (Shelf 2-1)
- Historical Sketches of Savage life in Polynesia with illustrative clan songs*, [lyrics only], W. Wyatt Gill 1880 (Shelf 2-1)
- At Home in Fiji*, C.F. Gordon Cumming, 1882 [Liversidge had an association with Cumming, collecting hot spring water in Fiji for analysis] (Shelf 2-1)
- New Hebrides Linguistics (Three New Hebrides Languages)*, The Rev. D. McDonald, 1889 (Shelf 2-1)
- Supplement to Thesaurus Craniorum: Catalogue of the Skulls of the Various Races of Man in the Collection of Joseph Barnard Davis*, 1875 (Shelf 2-3)
- Ethnological Studies among the North-West-Central Queensland Aborigines*, W.E. Roth 1897 (Shelf 2-1)

Report of Edo-speaking Peoples, N.W. Thomas, 1910 (Shelf 2-1)

Institutions

Commemorative Exercises of the 50th Anniversary of the Franklin Institute 1824-74, Franklin Institute 1874 (5-3)

Reports & Transactions of the Natural History Society of Queensland, 1892-94 (Shelf 6-1)

Final Report (9 months to 30/4/1884) South Australian Institute, 1884 (Shelf 6-1)

History of the Royal Society of London, Sprat 1734 (Shelf 6-1)

History of the Royal Society of London, 2 vols, C.R. Weld, 1848 (Shelf 6-1)

Charter & Statutes of the Royal Irish Academy, 1837 (Shelf 2-3)

Natural History Journals etc.

The Intellectual Observer: Review of Natural History, Microscopic Research and Recreative Science (vols 1-12, 1862-1868) (Shelf 5-4)

The Quarterly Journal of Science 1864-1870. Then named *The Quarterly Journal of Science New Series* 1871-1878. Then named *Journal of Science & Annals of Biology* 1879-1885. These contain many fine illustrations. Edited J. Samuelson & W. Crookes to 1870, then W. Crookes alone (Shelf 6-3)

Southern Science Record & Magazine of Natural History, (new series), possibly incomplete 1880-82 & 1885. J. Wing (publisher, Melbourne) (Shelf 6-3)

Environment: A Magazine of Science, vols 1 to 3 (lacks issue no. 1) Science Teachers' Association (E.G. Booth), 1934-36 (Shelf 2-2)

Technics: The Journal of the Stawell Technical College and School of Mines (six issues, 1892) (Shelf 2-3)

Geelong Naturalist, Second Series complete from March 1904 - June 1913, also July 1922, Geelong Field Naturalists Club (established 1880) (Shelf 1-3)

Sydney Magazine of Science and Art, 2 vols in one, 1858-59, [two copies, one rebound, contents of other copy perhaps in better condition], (1-3)

Sydney University Review, Nov. 1881 - July '83 [issues nos 1, 2, 4 & 5] (1-3)

The Naturalist: A Popular Monthly Magazine, illustrative of the Animal, Vegetable and Mineral Kingdoms, vols 1-8, bound in four volumes, Beverley R. Morris 1851-58. (Shelf 1-2)

Medical

Manual of Medical Jurisprudence and State Medicine, Michael Ryan 1836 (Shelf 5-4)

The Medical Assistant or Jamaica Practice of Physic etc, Thomas Dancer 1819 (third edition) (Shelf 2-4)

Traité des applications de l'Électricité Thérapeutique Médicale et Chirurgicale, A. Becquerel, 1857 (Shelf 2-3)

The Lancet vol. 2, 1837 Presentation to the Medical Society of New South Wales (Shelf 2-5)

Duncan's Edinburgh Dispensary, A. Duncan 1830, (Shelf 5-3)

Palaeontology

Pithecanthropus Erectus, Eine menschenähnliche Uebergangsform aus Java, E. Dubois 1894 (Shelf 5-6)

Fossil Remains of the extinct Mammals of Australia (text and plates) Richard Owen, 1877 (Shelf 5-6)

Fossiles Palaeozoiques de la Nouvelle Galles du Sud (Australia), Text & Plates, & Atlas L.G. De Koninck 1876-77 (Shelf 5-6)

Memoirs on the Extinct Wingless Birds of New Zealand with an appendix (2 vols, including plates), Richard Owen 1879 (Shelf 2-5)

Faune du Calcaire Carbonifere de la Belgique, Text and Plates, 9 vols, L. de Koninck, 1878-1885 (Shelf 2-6)

Miscellaneous

Broken Hill Proprietary Reports (and Statements of Accounts), 1885-1911 (two bound volumes 1885 - 1896), and set of individual reports unbound, 1896-1911 (Shelf 1-3)

Philosophical Transactions of the Royal Society of London (from vol 1) [in storage at Prestons]

Maps of Land Divisions in 1887 (Shelf 1-6)

Facsimile of the Minutes of the Philosophical Society of Australasia 1821-22 (Shelf 1-6)

APPENDIX 3

Sample list of material in commercial storage at Prestons.

Cosmos. Revue Encycloped.- Hebdomadaire (Fortnightly) des Progres des Sciences. M. Br de Montfort Redigiée par M. L'Abbe Moigne, Tome Septieme Paris: A. Trambly 4 Juillet 1855 [4th year]. Illust; h'back paper on card, red leather spine & cnrs with gold titling, small Royal Soc logo on spine.

The Chemical Gazette or Journal of Practical Chemistry in all its applications to Pharmacy, Arts & Manufactures conducted by W. Francis PhD, FLS, FRAS, FCS, vol. XIII 1855; London: Taylor & Francis; red h'back, br leather spine & cnrs, rubbed; no logos.

The Journal of the Society of Arts and of the Institutions in Union, vol. XIII 1865; London: Bell & Daly; h'back green ornamental paper on card, br. leather spine & cnrs.

Notes and Queries: A medium of inter-communication for Literary men, Artists, Antiquarians, Genealogists etc (1 to 6) 1852. London: Geo Bell; yellow paper on card, br. leather spine & cnrs.

Proceedings of the Philosophical Society of Glasgow, vols XXIX – XXX; h'back 'earthquake' paper on card, black & br leather spine & cnrs, rubbed; small Roy Soc logo on spine, lge logo on cover.

The Popular Science Review: A quarterly miscellany of entertaining and instructive articles on scientific subjects, ed. By Henry Lawson M.D. 1872; London: Robert Hardwicked, P'dilly. vol. XI h'back purplish b'cloth, dk br, leather on spine & cnrs, some rubbing, illustr (papers include Henry Woodward, Prestwich, & plate relating British & French geology), Ganoid fish (*Ceratodus*) from Qld.

The Popular Science Review [same title as above], Jan–Dec 1877, now edited by W.S. Dallas FLS (Asst. Sec Geol Soc), New Series vol. 1 (vol. XVI of whole series); fleur-de-lys on spine. Printer Hardwicke & Bogue.

Tyneside Naturalists Field Club vols IV (1858–60) & V (1860–62); h'back mottled dk green & yellow paper on card, dk br leather spine & cnrs, elaborate fleur de lys on spine & title; Newcastle–upon-Tyne: F. & W. Dodsworth.

Memoirs of the Wernerian Society of Edinburgh, H'back 'earthquake' paper on card cover, br & black spine & cnrs, rubbed, vol. 1 spine edge loose, vol. 1 (for the three years 1808–10) with 15 engravings, folded plates, vol. 2 cover loose [?8 vols in all]; Edinburgh: ?Bell; Dr McKnight 'on the Highlands' publ. 1811; (on end paper £4.4 ?8 vols).

T. Huxley, 6 vols from different publishers, diff. Sizes, 5 bound. H'back black b'cloth, bl leather spine & cnrs, with small Roy Soc logo at top of spine, one small logo at base. Note Roy Soc decision to bind as group.

Sets of volumes of Reports of the: Geological Survey of Tasmania; Geological Survey of W.A.; Geological Survey of NSW (includes bound Records & Mineral Resources Series); Geological Survey of Victoria; Geological Survey of Queensland; Victorian Naturalists; Aust. Academy of Science; ANZAAS (1892 Hobart Report has loose cover);

W.A. [Astronomical] Observatory, Reports by W.E. Cooke from the 1890s.

University of Sydney Reprints from the various Scientific Departments, c. 1900; Australian Museum Reports to c. 1940; Geologists' Association (G.B.) journal.

Not seen but *The Philosophical Transactions of the Royal Society of London* from its beginning (Series began about 1650?) are stored with these volumes listed above.

APPENDIX 4

A small, but valuable collection of maps and other ‘flat’ items is held in the Society’s rooms. There are essentially three sources: the US Geological Survey mostly 19th century; the Dutch East Indies (now Indonesia) also mostly 19th century and a more recent collection from Romania, when under Communist rule, giving a comprehensive outline of Romanian folk life and culture.

Author	Title	Volume	Year
Stemler C.F.	Topographische en Geologische Beschrijving Sumatra’s Westkust	Atlas	1883
Becker, G.F.	Atlas to accompany a monograph . . . geology . . . The Quicksilver Deposits of the Pacific Slope		1887
Observatoire Royale de Belgique	Photometric Atlases, Records and Graphs		?
Royal Society of London	Signatures in the First Journal-Book and the Charter-Book of the Royal Society: Facsimile of signatures from 1660		1912
Hague, Arnold	Geology of the Yellowstone National Park to accompany Monograph 32	Atlas	1904
Accompanying atlas	Jaerboek van het Mijnqwezen	Atlas V34	1905
Accompanying atlas	Jaerboek van het Mijnqwezen	Atlas V37	1908
Verbeek, R.D.M. & Fennema, R.	Carte Geologique de Java et Madoura et Feuilles Annexes	Atlas	1896
van Hise, Bayley, Smyth	Marquette Iron-Bearing District of Michigan: atlas to accompany monograph 28	Atlas	1896
Becker, G.F.	Geology of the Comstock Lode	Atlas	1882
Dutton	Tertiary History of the Grand Canyon District	Atlas	1882
Spurr	Geology of the Aspen District, Colorado	Atlas	1898
Romanian Communist Party	Atlas of the Socialist Republic of Romania	Atlas V5	1979
Romanian Communist Party	Atlas of the Socialist Republic of Romania	Atlas V3	1976
Morgan Clements J	The Vermillion Iron-bearing District of Minnesota to accompany monograph 45	Atlas	1903
Dana, James D.	Atlas: Crustacea; The Wilkes US Exploring Expedition 1838–42	Atlas	1855

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Half-tone illustrations (photographs) should be included only when essential and should be presented on glossy paper.

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