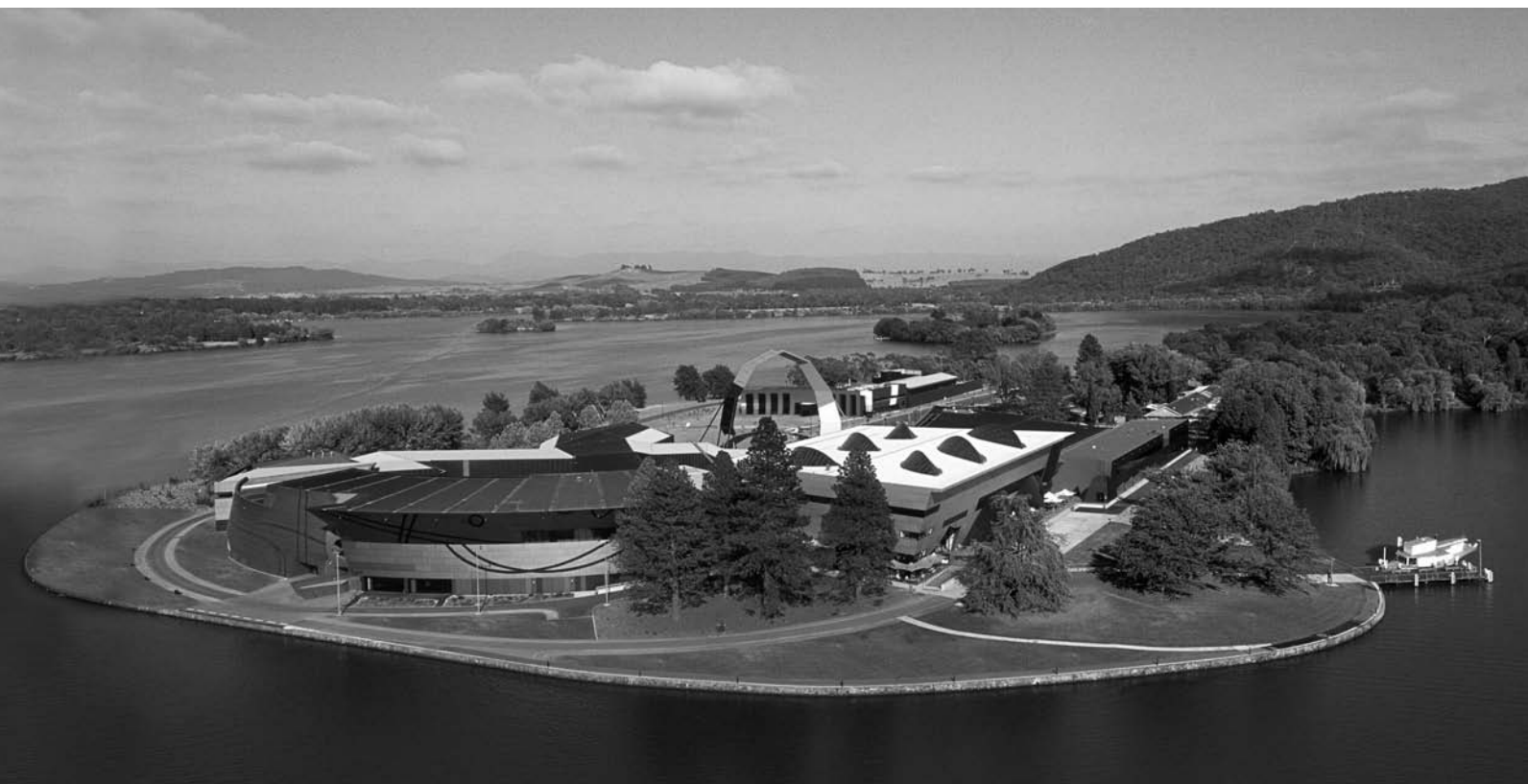


METAL 04



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The PS Enterprise on Lake Burley Griffin, Canberra, 2003.
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First prototype Holden motor vehicle, 1946. This restored vehicle was hand-built and tested by General Motors in Detroit. It was the model for the Holden 48-125 (popularly known as the 'FX') that officially rolled off the GM-H assembly line at Fishermen's Bend, Victoria, on 29 November 1948.

Silver tea urn, c1863. This tea urn was presented to Amelia Campbell in recognition of her 'heroic conduct' during an attack on her home near Eugowra in New South Wales. During the gun-battle her husband David shot and killed bushranger John O'Meally.

Armour worn by Joe Byrne, 1880. This armour was worn by Joe Byrne during the shoot-out between the Kelly Gang and police at Glenrowan in Victoria on 27-28 June 1880. It appears to have been made from plough mouldboards.

Contents

<i>Preface</i>	v		
<i>Introduction</i>	vii		
 Section 1: Preventive conservation			
Some recent trends in corrosion science and their application to conservation <i>I. Cole, T. Muster, D. Lau, W Ganther</i>	2	A local microscopic model for the formation of silver mirroring on black and white photographs <i>G. Di Pietro</i>	126
Monitoring of archaeological and experimental iron at Fiskerton, England <i>V. Fell, J. Williams</i>	17	The delamination of silversulphide layers <i>R. van Langh, H. Ankersmit, I. Joosten</i>	137
Saving archaeological iron using the Revolutionary Preservation System <i>C. Mathias, K. Ramsdale, D. Nixon</i>	28	Some news about ‘Black Spots’ <i>G. Eggert, M Weichert, H. Euler, B. Barbier</i>	142
Innovative conservation approaches for monitoring and protecting ancient and historic metals collections from the Mediterranean basin <i>V. Argyropoulos, E. Angelini, C. Degrigny</i>	43	Trees, bunches, cauliflowers – a closer look at sulphurous corrosion on copper alloys and minerals, (‘Black Spots’) <i>M. Weichert, G. Eggert, A. Mark Jones, H. Ankersmit</i>	149
Corrosion monitoring and the environmental impact of decommissioned naval vessels as artificial reefs <i>I. MacLeod, P. Morrison, V. Richards, N. West</i>	53	Analysis of some copper-alloy items from <i>HMAV Bounty</i> wrecked at Pitcairn Island in 1790 <i>A. Viduka, S. Ness</i>	160
Corrosion and cathodic protection of iron in seawater: a case study of the <i>James Matthews</i> (1841) <i>M. Heldtberg, I. MacLeod, V. Richards</i>	75	Objects from the ancient site of Qalat Rabah (Calatrava la Vieja): a case study on the characterization of Islamic gilded bronzes from Spain <i>J. Barrio, L. Campanella, M. Ferretti, A. Pardo, M. Retuerce</i>	173
<i>SS Great Britain</i> iron hull: modelling corrosion to define storage relative humidity <i>D. Watkinson, M. Lewis</i>	88	Electrochemical characterisation of patina protectiveness evolution on outdoor bronze sculptures <i>M. Crespo, G. Cicileo, B. Rosales</i>	185
 Section 2: Better knowledge of objects			
Solder on silver: historical usage and the problem of fretting <i>M. van Bellegem, H. Ankersmit, R. van Langh, W. Wei</i>	104	Corrosion rate study of cannon at the Prince of Wales’ fort <i>H. Croome</i>	195
Surface analysis of corroded silver coins from the wreck of the <i>San Pedro De Alcantara</i> (1786) <i>I. MacLeod, E. Schindelholz</i>	114	Analyses of Joe Byrne’s armour <i>D. Creagh, G. Thorowgood, M. James, D. Hallam</i>	207
 Section 3: Better understanding of treatments			
		Metallurgy of armour exhibited at the Palace Armoury Valletta, Malta <i>D. Vella, C. Degrigny, M. Grech, A. Williams</i>	215
		Plasma-reduction: Its potential for use in the conservation of metals <i>K. Schmidt-Ott</i>	235

A study of the analysis and removal of chloride in iron samples from the “ <i>Hunley</i> ” <i>M. Drews, P. de Vivies, N. González, P. Mardikian</i>	247	Laboratory and field tests on patinas and protective coating systems for outdoor bronze monuments <i>P. Letardi</i>	379
An approach to the conservation of deeply corroded archaeological silver: the <i>polos</i> from Crucinia <i>A. Olsoufieff, O. Colacicchi Alessandri, M. Ferretti</i>	261	An EIS method for assessing thin oil films used in museums <i>D. Hallam, D. Thurrowgood, V. Otieno-Alego, D. Creagh</i>	388
Atmospheric corrosion of historical organ pipes: influence of acetic and formic acid vapour and water leaching on lead <i>A. Niklasson, L-G. Johansson, J-E. Svensson</i>	273	Development and evaluation of removable protective coatings on bronze <i>T. Shedlosky, A. Huovinen, D. Webster, G. Bierwagen</i>	400
Conservation of organ pipes: protective treatments of lead exposed to acetic acid vapours <i>C. Chiavari, C. Martini, G. Poli, D. Prandstaller</i>	281	Section 4: Composite artefacts	
Overview of archaeological iron: the corrosion problem, key factors affecting treatment, and gaps in current knowledge <i>L. Selwyn</i>	294	Characterisation of metal threads in Renaissance tapestries <i>A-M. Hacke, C. Carr, A. Brown</i>	415
Corrosion layers on historic iron artefacts: Cathodic protection of iron artefacts during cleaning in acid solutions <i>I. de Groot, H. Ankersmit, R. van Langh, W. Wei</i>	307	Electrolytic stabilisation of a marine composite porthole and its framework <i>I. de Groot, C. Degrigny</i>	427
Electrochemical monitoring of marine iron artefacts during their storage / stabilisation in alkaline solutions <i>C. Degrigny, L. Spiteri</i>	315	Theophilus and the shrine of Vitus – a goldsmith’s technique in the mirror of ancient references <i>H. Grieb</i>	443
Study of corrosion potential measurements as a means to monitor the storage and stabilisation processes of archaeological copper artefacts <i>K. Leysens, A. Adriaens, E. Pantos, C. Degrigny</i>	332	Stabilization of a wrecked and corroded aluminium aircraft <i>G. Bailey</i>	453
Synergistic effects of corrosion inhibitors for copper and copper alloy archaeological artefacts <i>S. Golfomitsou, F. Merkel</i>	344	On again, off again – cathodic protection of a lead and ceramic water closet during desalination <i>J. Dickens, N. Smith, W. Gerritsen</i>	465
Performance of copper corrosion inhibitors in a museum environment – a comparative study using FTIR spectroscopy <i>W. Mohamed, N. Rateb, A. Shakour</i>	369	Antarctic observations: on metal Corrosion at three historic huts on Ross Island <i>P. Maxwell, A. Viduka</i>	484
		Analysis, conservation and restoration of the metal threads used in Latin American colonial saints’ robes <i>J. Thiele, S.O.S. G. Guarda, E. Croquevielle</i>	501
		Posters	
		Cremated: analysis of the metalwork from an Iron Age grave <i>V. Fell</i>	514

Preface

This publication presents papers given at the International Conference on Conservation of Metals, METALS 04, held in Canberra, Australia at the National Museum of Australia, October 4th to the 8th 2004. Organised by the National Museum of Australia, the conference brought together metals conservators from over 20 countries. The forty papers presented in these preprints illustrate the development of the conservation and restoration of metals from a variety of perspectives and regions and of 92 authors.

This volume continues in the philosophy of its predecessors METAL 95, METAL 98 and METAL 2001 to establish a clear channel for the communication about Metals and their conservation. Through this volume we have followed the working groups themes for the triennial period. The first section covers **Preventive Conservation** and explores those avenues we may take to reduce the rate of deterioration of objects in a wide range of differing environments.

The second section **Better Knowledge of Objects** highlights the need to understand an objects composition and deterioration processes in order to develop appropriate conservation treatments, or in order to extract information from an object that might otherwise be lost.

Better Understanding of Treatments deals with the necessity to understand the effects treatment have on objects in order to refine conservation and restoration techniques.

Finally, **Composite Artefacts** acknowledges that objects may not be made purely of metals, and that treatment of such objects is prone to encountering extra complications and compromises.

The publication of these preprints means a series of changes to previous triennials has been initiated and these changes need to be assessed prior to Metals 07.

Costs of printing the preprints made colour printing impractical. Updates and colour versions of figures and tables will be available on the WWW at <http://www.nma.gov.au> . Also costs made it impossible to publish all preprints in English, French and Spanish. However all abstracts will be published in these Proceedings, and on the WWW separately in English, French and Spanish.

These preprints have been made possible by exclusive use of electronic communication for all transactions with authors and the scientific committee. Pre-printing places limitations on the publication and refereeing processes that will lead to a change in the quality of the end product. As a community we need to assess if the experiment is successful and if the certainty of publication time is worth the effects of the change in process. The editors believe that the certainty in publication is worth the effort required for pre-printing the Proceedings. We also believe time lines can be considerably compressed through exclusive use of email and other electronic communication.

The editors would like to thank the scientific committee for their support and advice. In some cases we have had to make decisions about conflicting reports by differing referees; however, we have always tried to ensure that valuable information is published rather than muffled. The editors have not interfered with the technical content of the papers but some papers required alteration to the English. Some papers may still have linguistic peculiarities with English, and with formal layout.

We should note here that we observed that the very different aspects and approaches to conservation problems did appear to have a regional basis. Some techniques that are new information in Europe are standard practice in Australia and vice versa. We have enjoyed the challenge of the prepublication process and are sure this volume is a valuable addition to the metals conservation literature.

Networking, **I**nforming and **P**romoting

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The ICOM-CC Metal working group is one of the most significant working groups within ICOM-CC. The directory has more than 600 members. Two members out of three are conservators and the remainder are mainly conservation scientists. These professionals are spread over 53 countries, even though most of the members are European. In the past ten years the ICOM-CC Metal WG has been very active disseminating research performed in metal conservation. All professionals working in the field truly praise the triennial METALS conferences for the multidisciplinary of the speakers and the scientific quality of the proceedings.

These moments of exchange are brief however. Furthermore, the ICOM-CC is not the only professional organisation covering conservation issues. A lot of other interesting work is published in other professional documents and scientific journals that are not easily accessible to conservators.

Based on these facts, we decided a few years ago to set up new communication tools within the Metal WG that would be used to sustain a more permanent activity. Our efforts went in three specific directions: a better networking of the members, the creation of the BROMECC bulletin and the formation of sub-working groups.

The creation of the new ICOM-CC website (www.icom-cc.org) and the possibility for each working group to have its own homepage (for Metals: <http://icom-cc.icom.museum/WG/Metals/>) gave us the ideal support to distribute online all information relating to our different activities.

Networking – The Directory and the national correspondents

The updating of the directory was our first task. This directory can be consulted on the Metal homepage of the ICOM-CC website. This task was followed by the setting up of a national correspondent network. Initially, the task of each national correspondent was to promote the development of the BROMECC, then with time, they became essential members of the Metal working group. Today they continue gathering information on research performed in their country, but they have other tasks such as the updating of the directory of national members and the distribution of any information to the latter sent to them by the WG coordinators. Furthermore, they are often consulted about activities developed within the Metal WG.

The number of national correspondents has been increasing regularly since November 2002 when BROMECC 1 was first published (Figure 1). Some countries (France, Belgium) have more than one correspondent.

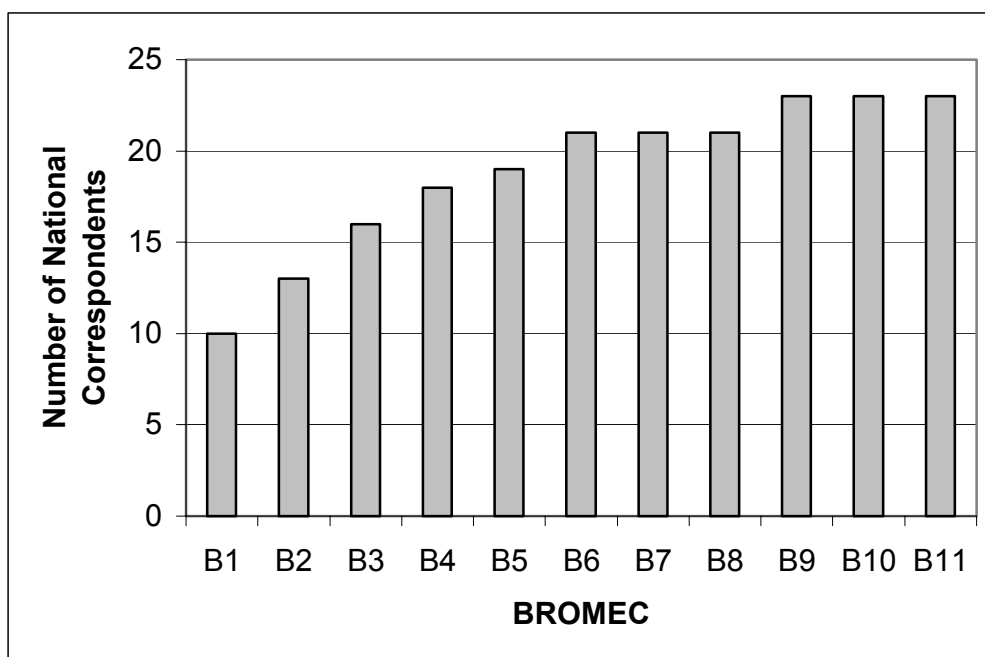


Figure 1 : Progression with time of the number of countries having national correspondents

Delegation of tasks is essential for the future of the working group and national correspondents play a major role in this area.

Informing - The BROMECC & Sub-working Groups

The BROMECC

Only a few members of the Metal working group have a global perspective of the research performed in the field and are continuously updated on current work (fundamental and applied), national and international teams working on the diagnosis of archaeological and historic metals, new tools to stabilise them and the effect of environmental parameters to assure their long-term conservation. Furthermore, it is difficult to appreciate the nature of the collaboration between the professionals involved (contract, common programmes, PhDs...) and the funding available.

The BROMECC (**B**ulletin of the **R**esearch **O**n **M**etal **C**onservation) was set up to fill this gap. The bulletin is published every three months in the form of abstracts that present past, current and future research projects in the field. Partnerships within projects are specified as well as the way the latter are funded. General information (websites, forthcoming conferences) related to metal conservation can be found at the end of each issue. The BROMECC is published in English (but half of the issues have been translated into French).

The number of abstracts varies according to each issue (Figure 2). They are more numerous during the northern hemisphere's academic year (November or February issues) than outside (May and August issues). All BROMECC issues can be consulted on the Metal homepage of the ICOM-CC website. Although there is, at present, no search tool, each abstract can easily be found under the section abstracts per topics (listing of abstracts).

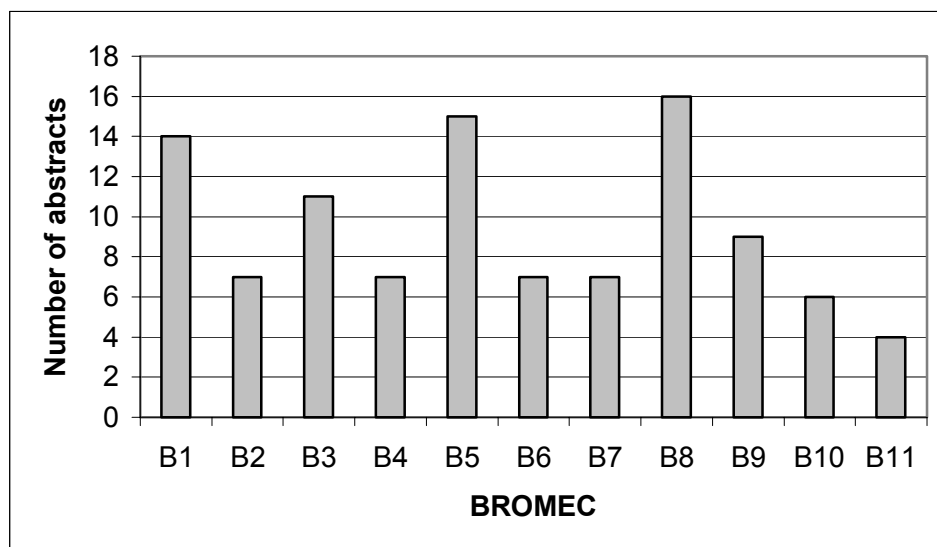


Figure 2: Distribution of the number of abstracts per issue

The Sub-working groups

These Sub-WG are voluntary initiatives from some members who wanted to develop a specific theme within the activities of the Metal WG. Sub-WG coordinators are specialists of the field and their task is to set up activities within their Sub-WG and report of their development to the other members of the Metal WG.

To date there are four Sub-WG:

- Archaeological Iron After Excavation (AIAE)
- Preventive Conservation of Metals in Museums (PCMM)
- Conservation of Ethnographic Metal Objects (ETNO)
- Use of Electrochemical Techniques In metal Conservation (ETHIC)

The different activities (News, Tasks) of the Sub-WG can be found on the Metal homepage of the ICOM-CC website. The triennial METAL conference in Canberra will be a unique occasion for the Metal WG members to discover what each Sub-WG is doing through the Sub-WG sessions.

Promoting - Into the New Millennium

To move from a system where communication was rather limited (through regular postal mails) to complete networking through the internet has advantages and drawbacks. One of the immediate effects has been the increase of 1/3 of the number of members in only a few months. Old and new members want to be regularly informed, but only on topics they are interested in and which are accessible to them.

It is difficult to appreciate the impact of our policy on the Metal members. Some are just fed with information. Others are more active and have contacted the authors of abstracts published in BROMECE issues to get further details on some research projects. It seems that most of the members appreciate the level of exchange of

information within our WG, even if there is a risk that the idea of one member might be taken by another.

Sustaining the activities of the Metal WG has a price. As time passes the workload of the coordination becomes difficult to manage. It is essential that more and more people get involved in the different tasks currently performed by a few volunteers. Already a new member has recently joined the editing team of BROMECC. More active national correspondents are needed too.

It is our hope that in the future the Metal WG continues to occupy its pro-active position within ICOM-CC. Many signs show that we are on the right track, but we absolutely need to consolidate the existing infrastructure and activities. At this point in time we count on your enthusiasm to help us help you.