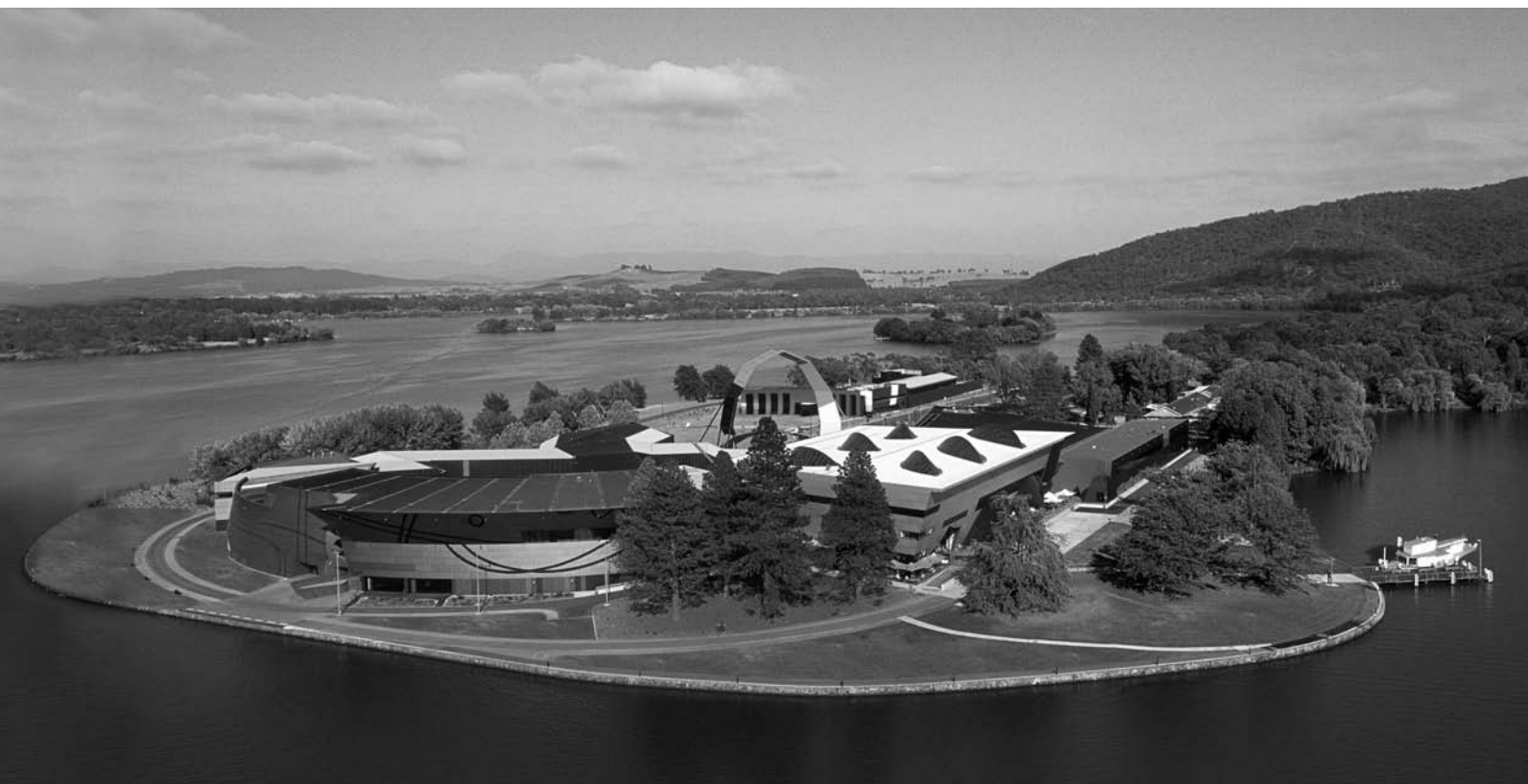


# METAL 04



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First published 2004 by  
National Museum of Australia  
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National Library of Australia cataloguing-in-publication data:

International Conference on Metals Conservation 2004 :  
Canberra, A.C.T.).

Metal 04 : proceedings of the International Conference on  
Metals Conservation.

ISBN 1 876944 33 1.

1. Metals - Preservation - Congresses. 2. Antiquities -  
Collection and preservation - Congresses. I. Ashton, John,  
1938- . II. Hallam, David, 1955- . III. National Museum  
of Australia. IV. Title.

669.028

Design & file preparation by Whale Graphics, Melbourne  
Produced by National Museum of Australia Press  
Printed by Cirils Digital, Canberra

**Front cover:**

Aerial view of the National Museum of Australia, Canberra.  
Photography: George Serras.

**Back cover:**

The PS Enterprise on Lake Burley Griffin, Canberra, 2003.  
National Museum of Australia; Photography: Dragi Markovic

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.

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## 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 4<sup>th</sup> to the 8<sup>th</sup> 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, Informing and Promoting

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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](http://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.

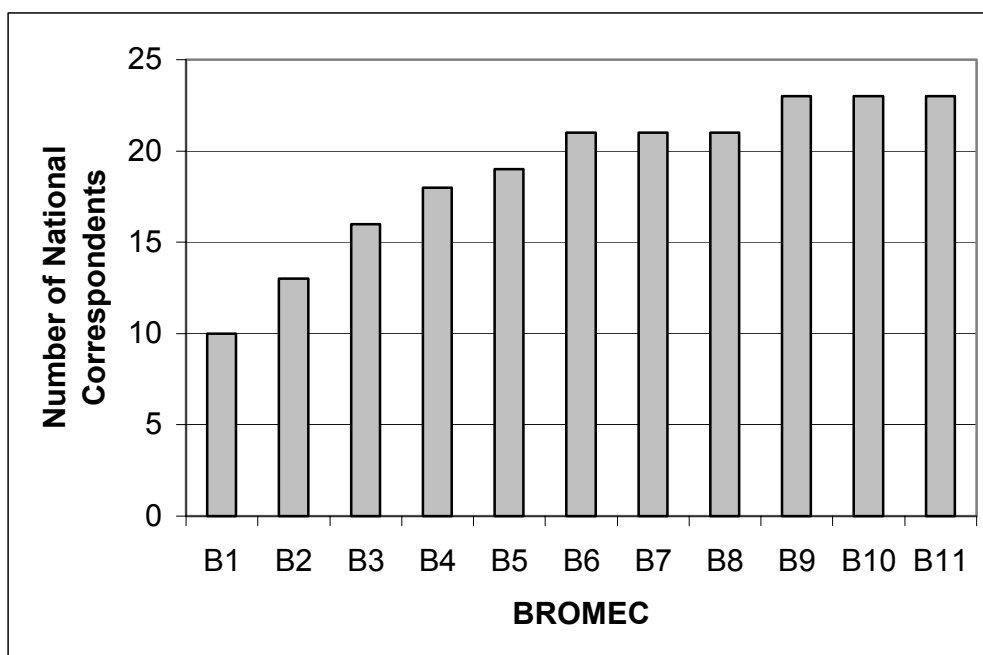


Figure 1 : Progression with time of the number of countries having national correspondents

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

## Informing - The BROMECE & Sub-working Groups

### The BROMECE

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 BROMECE (**B**ulletin of the **R**esearch **O**n **M**etal Conservation) 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 BROMECE 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 BROMECE 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).

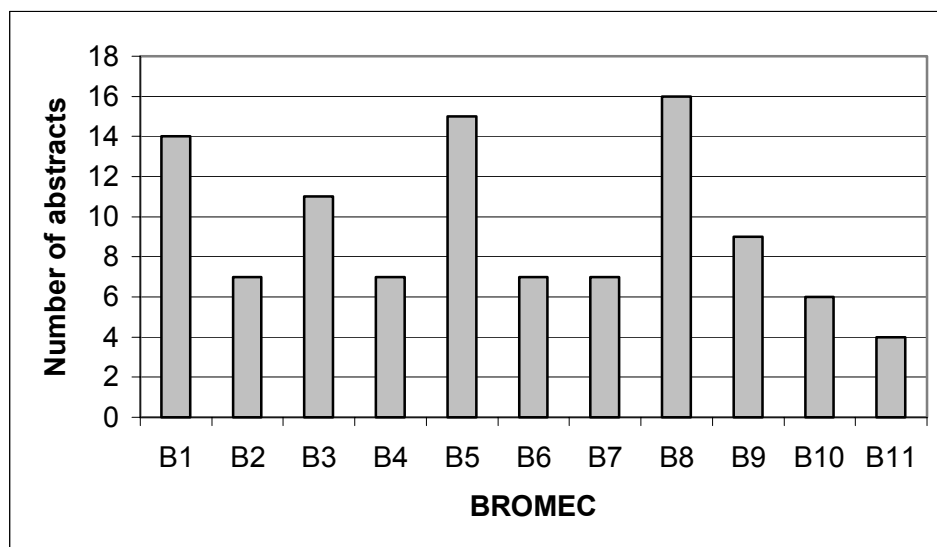


Figure 2: Distribution of the number of abstracts per issue

### 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.