



RAR DEBATE

The debate between GIPRI and the state agency ICANH

By GUILLERMO MUÑOZ

Preamble

Before going into any details of this debate, it is perhaps best to place some aspects of it into context, in order to clarify the issue. The present condition of rock art in Colombia is related, without a doubt, to the history of the country, and to its colonial (Spanish) tradition, which, during more than 500 years, neglected the study of many aspects of the conquered tribes. In spite of a developing republic, the country diminished the value of native cultures, especially indigenous ways of thinking, language, and pre-Columbian ways of artistic representation. This was all done under the guise of study and conservation. There still exist many zones and sites where expeditions engaged in some other research will eventually discover further sites of pictograms and petroglyphs, but will merely record them as a curiosities. In spite of the organisation of Colombian universities, and their departments of anthropology and archaeology, growth in the area of rock art study remains minimal. State-of-the-art Colombian rock art investigations are in most cases undertaken by people not associated with official institutions, and historically these people have been openly opposed to the cultural politics of governmental institutions.

During the past five years the ICANH (Colombian Institute of Anthropology and History) has been doing some very precarious work in the area of registering rock art and in the general area of rock art research. In the best of cases, without serious studies, this institution has associated rock art with heritage, and with it a government project to bring tourism to rock art sites, but without beginning serious parallel scientific studies. What normally happens is that the studies they do present are not only superficial, but recordings have been acquired with an invasive technique and no site was ever thoroughly documented. These surveys are presented as attachments to a bureaucratic justification that places rock art sites in danger. Easy access routes to the sites are published and the management of the rock art is placed in the hands of people (such as local mayors and municipal authorities) with even less expertise than these researchers possess, and without obtaining adequate funding for protection of the sites. Based on laws that they believe resolve all of their problems, these agencies have hastened the publication of sites without taking into consideration the complexity of site management. There is a tendency to advocate hurriedly the public visitation of all known sites,

to promote tourism and to leave this patrimony in the hands of local towns, to be funded by them.

These topics have been discussed in various ways and published by GIPRI (Grupo de Investigación de Arte Rupestre Indígena) in its bulletin *Rupestre* and the theme was presented by GIPRI (1981 to 2005) in various national and international presentations related to the history of investigation. Historically, the investigation of rock art in Colombia has been in the hands of various travellers, European professionals and Colombians that have since Colonial times published the presence of sites, essentially as footnotes to native history. There are few cases of governmental studies of this material, or studies conducted by universities. Up until the present time, even with national studies and publications of the theme of rock art research by GIPRI, not one university teaches the subject, and much less is any attention given by schools of archaeology, although there have been some advances. ICANH, as a government agency, eventually published some materials about rock art, including it as heritage to be protected, which featured photographs of chalked petroglyphs (*Preserving national patrimony*, p. 10).

The issue of chalking of petroglyphs

In the 19th century and during part of the 20th century, the use of various materials to highlight rock art images was not considered to be destructive. A considerable number of investigators used invasive procedures and published their work in various publications. Colombia was not alone with this problem and, until the 1980s, invasive methods without any preventative measures were used to record both pictogram and petroglyph rock art. GIPRI commenced its work in 1970 and during their early years used some of the procedures alluded to (application of chalk and latex) but, with the close help of and influence from the international rock art research community, gradually abandoned those procedures. Eventually, in 1996–1998, GIPRI created the standards and theoretic models to establish a basis for serious rock art study in Colombia (the *Methodological Model*, through a grant by the Minister of Culture). In addition to the descriptive, map-like field-study forms, the recording forms designed by GIPRI allowed for description of the motifs, the position of the motifs in relationship to the entire site, and an evaluation of the state of alteration. The following points define the development of the present dispute between GIPRI and the state agency responsible for rock art:

- (1) In the late 20th century a number of government publications (by ICANH, Colcultura and the Minister of Culture) have included photographs of chalked petroglyphs (*Revista Colombiana de Antropología, Preservación*

del Patrimonio Cultural Nacional-ICANH, Ministerio de Cultura, amongst others).

- (2) In the year 2000 ICANH published a map of Colombia indicating rock art sites, basically as a summary of previous investigations, where they included seven photographs of chalked petroglyphs (*Arte Rupestre en Colombia* — mapa documentación y composición Alvaro Botiva Contreras, ICANH, March 2000).
- (3) GIPRI denounced this work and sent several national and international letters, including some to the Colombian governmental authorities. Our colleague Matthias Strecker (the Secretary of SIARB, Bolivia) stated his view on this matter and was concerned about the vulnerability of the sites and the inappropriate use of chalk. ICANH responded that not everything that has been said about the detriment of using chalk is true, and that it does not necessarily damage sites. But, they did not comment on the vulnerability of the sites to tourism:

The controlled use of some materials used for the true and complete registration of archaeological artefacts does not threaten the destruction of these artefacts, but is designed to preserve the information leaving the least possible effect. While there are archaeologists who believe that chalk can damage the surface of certain rocks, they have not succeeded in proving that the effect of applying chalk to take photographs results in serious damage.
- (4) In 1999 ICANH signed a work agreement with the government of the state of Cundinamarca, Colombia, to register rock art, an activity that was completed in 120 days, according to them. In 2000 the GIPRI group denounced this publication also, which again used chalked imagery, and recommended that ICANH delete the photographs made using chalked petroglyphs from the final version of the publication *Rock art of Cundinamarca*. ICANH responded by arguing that GIPRI was not a legally registered entity and had no authority to make a demand of this nature. Archaeologist Alvaro Botiva wrote a lengthy letter to the director of GIPRI, in which he presented the debate as a personal matter, which it had never been. The result was that, fortunately, the chalked materials have been removed from the final edition of the book (November 2000 edition). Even though damage to the sites is now a reality, at least the responsible government agency was obliged to publish unchalked photographic materials (*Arte rupestre en Cundinamarca*: with the exception of the Nilo rock, page 156, rock No. 4, which remained a chalked image).
- (5) GIPRI published in its bulletin (*Rupestre: Arte Rupestre en Colombia* No. 4, p. 94) a critique of the theme in the Cundinamarca publication, showing that the institute is a national authority and should not publish techniques of vandalism, and should not promote tourism without first resolving a number of important problems and situations with the public, including adequate funding and reliable management of the sites.
- (6) In December 2004 GIPRI was invited to attend the National Congress of Archaeologists (Congreso Nacional de Arqueología), with the idea of establishing better future collaboration between ICANH and GIPRI.

Nevertheless, it was agreed in a meeting with the Director of Archaeology, in January 2005, that if any information was sent by ICANH to the mass media that continues to include chalked petroglyphs, or that one of their investigations damages a site, that GIPRI would again denounce the investigation.

- (7) Since that date and until the present time, ICANH and its members have continued to promote rock art materials that show the use of invasive methods. Thousands of copies of such materials have been distributed in various towns, schools, cultural centres and to local governments. Typically, after a talk about the legal aspects of heritage preservation, ICANH hands out inadequate literature that promotes the destruction of rock art sites.
- (8) In 2004 ICANH archaeologist Alvaro Botiva, the person in charge of rock art investigations, in a conference in the National Museum, showed a large number of chalked petroglyph panels from different states in the country. According to this archaeologist, the site had already been chalked by others when he arrived there! Nevertheless, we have data from local residents who say that Alvaro himself chalked the petroglyphs (at Sasaima, Viota, Nilo and Dolores sites).
- (9) In 2005 *Semana* magazine, a national, widely disseminated publication, published an article about archaeological vandalism (*The plague of the grave robbers*) that, ironically, included a photograph of a chalked petroglyph. What is certain from the article is that the author thought that people do not abide by the existing laws. The reality is that he does not appear to understand the complexity of the subject and the complexity of the social work that is involved in the administration of archaeological sites (see <http://semana2.terra.com.co/opencms/opencms/Semana/articulo2.html?id=88195>).
- (10) Since that time and up the present, ICANH has continued to present talks defending the national patrimony and, after explaining the legal aspects, handing out brochures showing chalked petroglyphs. Such is the implicit contradiction that this institution ends up promoting the chalking technique.

Conclusions

This discussion is not new, since it began with a denouncement made by GIPRI in 1999, but until today the authorities have not changed their way of thinking. They still ask about the legal status of GIPRI, but do not discuss the bad management practices of its own members and the release of inappropriate materials to the public.

There does not exist, at least as far as we know, a serious program of documentation and investigation, and much less a program to properly manage rock art sites in Colombia. The exception is the site of Facatativa, where ICANH is restoring some murals (after having abandoned the site, Tunja Rocks Park, and converting it into a recreational park of 'attractions'), but where anyone has access to the murals and where up until a few years ago, bonfires and BBQ fires were lit in front of rock art motifs. It is important to clarify that for years, ICANH gave management rights to CAR (Corporación Autónoma Regional, Regional Autonomous

Corporation) so that institution could build its recreational park there. This is not the only site that has been abandoned. For instance, we mention Bojaca, Sutatausa, Aipe, Sachica, Gameza, Suach, Bosa, Sibate and Suesca, which are examples of places severely affected, and, amongst others, show that little or nothing has been done to preserve these objects of national heritage.

Finally, it is important to emphasise that the centre of the problem does not relate to any personal dispute, but instead relates to the manner in which national institutes in charge of preserving national patrimony and culture continue to promote rock art. What is being criticised and presented for discussion here is that incomplete and inadequate documentation has no archaeological value, and is neither a database for cultural studies nor a basis for the management and administration of sites. To be conscious of this theme, and to study rigorously and protect the sites, are the only aspects that have stimulated GIPRI during its more than thirty years of experience in the documentation and investigation of Colombian rock art.

Note

Each and every one of the topics presented here is backed up by supporting documents. We have on file all relevant correspondence (that sent as well as received), publications and various other materials in order to show the inadequate management, the history of the debate and the irrationality of the Colombian government institutions. Instead of bringing the primary problem to the centre of the debate (which is destructive site management), our opponents seem only concerned about the legal status of GIPRI, and whether it has the right to criticise public management of rock art sites.

Professor Guillermo Muñoz
 Director of GIPRI
 IFRAO Member
 Carrera 54A 174-12
 Santafé de Bogotá, D.C.
 Colombia
 E-mail: gipri@coll.telecom.com.co
 RAR 22-727

On Colombian rock art

By MATTHIAS STRECKER

What Guillermo describes for Columbia is a common experience in most of the other Latin American countries: rock art research is not yet taken seriously, most archaeologists and national heritage institutions tend to favour projects dealing with other aspects, such as monumental architecture. Rock art studies have not yet been included in the curricula of universities and are left to private initiatives. As 'outsiders' of the archaeological mainstream, members of rock art research societies, such as GIPRI, CIARU (Uruguay) and SIARB rarely receive support by government institutions. We tend to evaluate the actions undertaken by these state institutions critically, being aware that they are much too influenced by politics, change of personnel etc.

Before commenting on the conflict existing between GIPRI and the Colombian National Institute of Anthropology and History (ICANH), I wish to mention briefly the position our society, SIARB, is in with regard to state institutions in Bolivia. While we found no co-operation by the national institute (DINAR, formerly INAR) for many years, our relationship has improved, possibly because of a weaker position of that institute which, over the last years, has suffered important cuts in its budget. It now welcomes private initiatives in favour of registering, recording and conserving heritage sites, such as rock art. We have signed an agreement with DINAR, which guarantees that both institutions support each other. We acknowledge the important position of DINAR as responsible agency and — although we are aware of many shortcomings in state policy with regard to our cultural heritage — we try to avoid open conflicts. There is not much that we profit from this close relationship, while we continually inform DINAR about our projects and research results. However, we consider it important to have the backing by DINAR, which occasionally assists us with letters supporting our work directed to regional, national or international organisations. It also gives us the necessary official authorisation in cases where SIARB undertakes conservation measures, which affects the status of a site (such as closing the access to the rock art or realising direct conservation work by a trained conservationist).

It is clear that the situation in Columbia is totally different. A serious conflict exists between GIPRI and ICANH, particularly between GIPRI and a former collaborator who now is associated with the state institution. In the two Colombian e-mail groups that deal with rock art (*Arte y Rupestre*, maintained by GIPRI, and *Rupestreweb*, directed by Diego Martínez) both groups frequently attack each other in a very aggressive tone.

GIPRI claims that ICANH has been doing some very precarious work in the area of registering rock art and in the general area of rock art research. I do not wish to contradict this statement as Guillermo Muñoz knows much better what is going on. GIPRI's long-term accomplishments in more than thirty years of rock art research in Colombia are still unrivalled, but there are some important contributions which have been undertaken fairly recently by ICANH.

Alvaro Botiva's publication on rock art in Cundinamarca (2000) is a landmark in regional rock art research. It consists of an introduction, map, and catalogue of rock art sites, very well illustrated with drawings and photographs. Among its numerous illustrations I find only two photos of chalked petroglyphs, as well as a number of rubbings, another potentially damaging recording technique. In the bibliography, the author refers to several publications by Guillermo Muñoz. In 2002 ICANH prepared a digital version of the book as CD.

In his review of this book, Guillermo Muñoz (2001) points out that the register of sites was achieved in just 120 days of fieldwork and therefore is limited. He denounces the practice of chalking and also demands a more detailed recording (but what about the splendid 'digital transcription' of a rock surface on pp. 210–211, which

apparently presents all the petroglyphs?). I do wish in Bolivia the state institutions showed the same interest in rock art research as the Colombian institute. Regarding chalking — which has also been practiced widely in other Latin American countries, such as Venezuela — it will take more time until it is abandoned. We have to remind of this issue whenever possible but should also consider other important aspects of rock art investigation in a broad view.

ICANH initiated an education campaign on rock art, publishing a map and text on rock art in Colombia (Botiva C. and España A. 2000). It unfortunately includes six photos of chalked petroglyphs, otherwise it undoubtedly is a very positive step of informing and educating the public, expanded in an excellent educational guidebook on rock art in general and in Cundinamarca (Martínez C. and Botiva C. 2002). It deals specifically with vandalism and conservation of rock art, uses very clear and didactic symbols to teach basic visitors' etiquette at rock art sites, and includes a magnificent poster that is an effective teaching aid for schools and does not have any photos of chalked-out petroglyphs. An unfortunate flaw is that GIPRI has been left out on purpose and is not mentioned, for example, in the bibliography of the guidebook. Diego Martínez and ICANH should acknowledge that systematic recording methods of rock art in Colombia were introduced by GIPRI (Muñoz 1999) and that these methods are admired by many researchers worldwide.

Apparently, ICANH has learned something about the negative effect of chalking. It has been advised to this end by myself (I provided them with SIARB publications) and by Diego Martínez C. who included in his web-page Ruprestreweb an article by Robert G. Bednarik on the subject. It is unfortunate that in spite of this, Alvaro Botiva presented photos of chalked-out petroglyphs in a public lecture in 2004, as Guillermo reports.

Guillermo claims that ICANH wishes to make all sites available for tourism. At least he is right that the policy by the state institution to publish the exact location of sites (such as in Botiva 2000) is dangerous and may lead to an increase of vandalism.

He also states that ICANH is not taking into account the complexity of site management. He is referring to an extremely difficult process which would have to involve professional archaeologists, rock art investigators, national or state institutions, municipalities and local people, and finally site stewards trained in the administration of rock art, with a management plan defining the issues and policy for a number of years. So far, very few rock art sites in South America have been planned for tourism in a systematic way. Site administration is non-existing in most cases. Notable exceptions can be found, for example, in Argentina and Bolivia (Strecker and Pilles 2005). It will probably take some time until Colombia is able to achieve a well-managed archaeological park with rock art. A conservation treatment of rock paintings in the archaeological park at Facatativa by ICANH (Botiva C. et al. 2003) should form part of a coherent plan to manage this park properly.

Summing up my comments, I note that both GIPRI and ICANH are biased and tend not to acknowledge the considerable achievements in rock art research and/or education that the other has undertaken. If they worked together instead of being rivals or opponents, they would be able to achieve so much more in rock art research, recording, conservation and public education programs.

Matthias Strecker
Secretary and Editor
Sociedad de Investigación del Arte Rupestre de Bolivia
IFRAO Member
Casilla 3091
La Paz
Bolivia
E-mail: siarb@accelerate.com
RAR 22-728

Comment on Muñoz' statement

By B. K. SWARTZ, Jr

The Guillermo Muñoz statement on the status of rock art in the nation of Colombia reveals the conflicts and competing interests of those involved in rock art, not only in the nation of Colombia, but surely elsewhere throughout the world. How can these conflicts be resolved? Who decides who is right? For anyone who values rock art as a resource I maintain the critical issue must be conservation. It must be remembered that rock art is an exposed, vulnerable and a non-renewable resource. A panel that has survived for thousands of years can, in a brief moment, be obliterated. Large numbers can be located and systematically defaced with little effort.

One may ask the question then, why should rock art be valued as a resource? If it disappeared, would there be a significant loss? Natural or cultural material remains can be very significant. Charles Darwin would probably have never conceived the concept of evolution if he had not observed and collected fossils during his exploratory voyage on the *Beagle*. Collecting and interpreting data makes it possible to better understand the world.

In regard to the issue of chalking rock art surfaces the American Committee to Advance the Study of Petroglyphs and Pictographs Inc., formed in 1979 (a charter member of IFRAO), proposed a set of minimum standards for the recording of rock art. It has been issued in various publications in various languages including English, French, Spanish, Italian and Afrikaans from 1980 on. The version that is most widely disseminated, though slightly copy edited from the official release, is published in *Current Anthropology*, Vol. 22, No. 1, pp. 94–95 (1981). The section that deals with chalking (and related intrusive procedures) is as follows:

In deciding which techniques are to be applied in any particular case, the goal should be optimal data recording and minimal resource destruction. Methods requiring surface pressure, application, or insertion, such as painting (alu-

minium powder, tempera etc.), tracing, rubbing, moulding, or grid-anchoring, cannot be universally condoned and should not be attempted on friable surface markings. These approaches break down the basic rock structure, and some also contaminate or alter surfaces in such a way as to distort potential trace-element studies. Direct transfer records demand storage space that may not be available. *Chalking should never be done* [emphasis mine], and water spraying, especially of pictographs, should not be done except when there is no doubt that destruction is imminent. Varied photographic techniques are stressed, since they document and do not require physical contact. Careful photographic work and draftsmanship are probably sufficient for basic recording, but metric data are included because they are easy to gather and may provide useful comparative information.

Professor B. K. Swartz, Jr
IFRAO Representative
American Committee to Advance the Study of Petroglyphs and Pictographs (ACASPP)
Department of Anthropology
Ball State University
Muncie, IN 47306
U.S.A.
E-mail: 01bkswartz@bsu.edu
RAR 22-729

Rock art debate in Colombia

By ROY QUEREJAZU LEWIS

I have received the information written by Guillermo Muñoz (Director of GIPRI) who is a good friend of mine, and whom I have come to know in several rock art congresses. Based on this evidence I am absolutely sure that his intentions are for the benefit of rock art conservation in Colombia. On the other hand, I am informed that the version of a senior representative of ICANH will be published as part of this *RAR Debate*. It will be interesting to know about his position.

Considering the nature of the debate (which is not new in South America) I am convinced that the essence of the problem is not who is right about the situation, but instead, how to find a suitable solution to the problem.

While going through the report written by Guillermo Muñoz I have read several times phrases like 'GIPRI denounced', or 'GIPRI would again denounce'. It made me feel as if I was reading a police report, and not the preoccupation of a South American rock art institution. Rock art organisations are not police organisations, and their endeavours towards rock art conservation should imply strategies directed to create consciousness about the fragile nature of rock art or about certain non-advisable research and tourism practices. For example, the report written by Muñoz does not mention the fact that chalking petroglyphs damages their potential for future dating analysis. This would have been sufficient as an argument against chalking.

It is in this sense (with complete respect for Guillermo) that I consider that GIPRI should change its strategy and

should adopt an educational policy, regarding both government archaeological and rock art employees and the public in general. What is missing is: approximation to people that have something to do with rock art; appropriation by these people of the problem (the problem is theirs as well); and in consequence, education.

Educational courses should be organised in which cultural authorities and people dedicated to rock art research and tourism should participate. Why not organise seminars with rock art experts from abroad? I am sure that a friendly and educational approach would render better results than a denouncement policy. What is needed in our developing countries is to create value-added projects with the participation of the communities in order to achieve better results in conservation, economic incomes, tourism and research.

I am sure that the institutions (private and governmental) in Colombia will have the maturity and wisdom to adopt adequate solutions to the problems raised by Muñoz.

Professor Roy Querejazu Lewis
President AEARC
IFRAO Member
Casilla 4243
Cochabamba
Bolivia
E-mail: aearc@hotmail.com
RAR 22-730

Response to Muñoz

By DIEGO MARTINEZ CELIS

The imminent destruction of several rock art sites in Colombia has evidenced huge gaps in the use of this patrimony by its potentially most aggressive factor of alteration: the community of rock art researchers (Bednarik 1990/91).

There has never existed a continuous tradition of research in Colombia. Rock art as a topic is not studied in university academic programs and it has only been dealt with every now and then during the last fifty years by less than a dozen researchers (Pérez de Barradas, Cabrera, Silva Celis, Becerra, Urbina, Muñoz-GIPRI, Botiva-ICANH, Marriner, Arguello, Martínez etc.). Therefore, the background of these researchers in rock art is based on their own empirical experience, and only during the last ten years have they begun to connect with the international academic tradition.

Invasive rock art recording techniques such as chalking were used from the middle of the 20th century (Martínez 1997), being commonly mentioned all around the South American continent, even until the late 1990s. This is the reason why most of the bibliography and documentary material of these researchers contain registers of chalked petroglyphs.

From this perspective on, the accusation stated by GIPRI against ICANH is just a late declaration that there were inadequate recording techniques that have already been

broadly recognised and improved by the current generation of researchers and, therefore, they have not been used in investigations at present performed by ICANH.

I belonged to the GIPRI group from 1994 to 2000 and since 2001 I have worked as an independent researcher and consultant for ICANH. My experience in rock art research is empirical (Martínez 1993, 1996), but I have participated in some international conferences, keeping a dynamic communication with the international community through the moderation of a discussion e-group (composed by more than 400 researchers from Latin America) and a web-page specialising in the promulgation of investigations in the region (*Rupestreweb*). Knowing closely about the documentation practices of the GIPRI and ICANH, I can affirm that the accusations made by GIPRI are clearly slanted for it has been GIPRI itself, led by Guillermo Muñoz, which for more than thirty years has been exercising invasive rock art recording techniques that have actually caused permanent harm to hundreds of rock art sites in the central region of Colombia (found among these is the use of chalk on petroglyphs, the main argument of his disapproval).

One of the main reasons that encouraged me to leave GIPRI was the reiteration of research policies and procedures aimed just at gathering recording data, ignoring the consequences of these practices on the preservation of these sites. GIPRI's accusations are inaccurate and they are just aimed at bringing ICANH into disrepute, an institution currently exercising an important role in investigating and managing Colombian rock art. From 2000 ICANH began a pioneer project with the objective of promoting the valuation and preservation of rock art. Under the title 'Rock art in Cundinamarca, cultural patrimony of the nation', a campaign including didactic material (a book [Botiva 2000], a handbook and a folding map [Martinez and Botiva 2002], as well as a CD-ROM), and some pedagogical workshops all around the department and other regions of the country are under development. This campaign is emphatic on prohibiting as much as possible every contact with the rocks and the rock art motifs, and it has received excellent comments from the researching community in Latin America. With the help of some independent researchers, ICANH is producing records of new rock art stations (Sáchica, Sutatusa, Agua de Dios, etc, etc.) and it is also restoring the rock paintings of the archaeological park of Facativá, among many other activities that Muñoz omits in his communication.

Preservation of archaeological and cultural patrimony of the country is a responsibility constitutionally compelling not only to governmental entities but also to every Colombian citizen. An accusation as the one stated by GIPRI cannot accuse ICANH to be solely responsible of the current state of abandonment of rock art. Researchers and groups such as GIPRI have contributed to the destruction of sites and a clever and constructive attitude, as well as a constant and healthy critical revision of our proceedings will finally result in the preservation of rock art for future generations.

Diego Martinez Celis

E-mail: rupestreweb@yahoo.com

RAR 22-731

Response of the Director of ICANH

By EMIRO JOSÉ DÍAZ LEAL

The objective of the above communication is to clarify an affirmation by Guillermo Muñoz, representative of GIPRI. In general terms, the Instituto Colombiano de Antropología e Historia (ICANH) considers precarious the supposed debate that Muñoz is advertising, as the text in reference insists on a long and irresponsible effort to cause the investigators of ICANH and their work to lose prestige.

ICANH is a scientific and technical public entity with administrative autonomy, carrying out anthropological, archaeological and historical investigations, with a view to the development, protection, preservation, conservation and diffusion of the cultural patrimony and the memories of our country. Its experience is longer than seventy years of existence.

The Institute is committed to four main functions: a rigorous and multidisciplinary investigation; a diffusion of results from researches, its own as well as external researches; preservation of archaeological patrimony and the cultural memory of the country; and the permanent assistance to public institutions with topics related to its areas of interest. ICANH is at present a mandatory reference in topics such as social anthropology, archaeology and colonial history. Together with the Ministry of Culture and the Archivo General de la Nación (General File of the Nation), it constitutes the cultural sector of the Colombian state.

The first issue I would like to refer to is related to the spreading — to a general public — of the importance and the protection of the archaeological patrimony of the nation, specifically rock art. The tasks assumed by ICANH, together with the Gobernación de Cundinamarca, are not aimed to promote massive tourism at all. On the other hand, the goal of the book, the CD ROM, the handbook or manual (its two editions), the folding maps, as well as the thirty-five workshops about 'Rock art in Cundinamarca, cultural patrimony of the nation' has been to inform people about the importance of the archaeological patrimony, its identity, its history and about the responsibility of the new generations to preserve it, as well as to let them know, from first-hand information, about this heritage. This material has been freely distributed to adults, but especially to adolescents and children.

Rock art in many sites of our territory is in danger. In this respect, ICANH's strategy differs from the peculiar plan of GIPRI, which supposes that hiding information about the location of archaeological sites (in this case those containing samples of rock art) helps their preservation. History and experience confirm the opposite. In most of the cases, people living in rural areas have themselves taken the archaeologists to these places, encouraged by a curiosity about the contents in them. ICANH's strategy has longer-term objectives, though they require a longer and more difficult path. We cannot do much for an archaeological site if the local population is not conscious of its current importance in history. This is the point where socialisation of notions and knowledge related to these traces between old and new generations is relevant, and

considered by ICANH as the best investment to make. It is also significant to mention the satisfactory experiences obtained from workshops organised in different municipalities of Cundinamarca. These have shown, as a result, a transcendental change of attitude by the community and the authorities to protect a patrimony they feel is their own, far from being an abstraction of some investigators and enthusiasts. None of the workshops carried out has promoted the use of invasive techniques, nor have they acted against rules established in the current regulations about archaeological patrimony, which regulate every type of direct intervention on those sites that demand an archaeological licence (Decree 833, 2002). Not only is the accusation that ICANH distributes literature promoting destruction of rock art sites false, it also ignores the international recognition the project has acquired.

With respect to the circumstantial use, in the past, of photographic material in which the use of chalk on petro-glyphs is evidenced (as well as some other destructive techniques), Muñoz forgets to mention — probably because he is not informed about it — that participants of workshops receive an explanation about the consequences of this type of intervention to which the graffiti, among others, belong. Its use, obviously, could have expressed a wrong message, but not contrary to the one received by the general audience of Muñoz' articles published in magazines about restoration (advertised in the lessons he teaches in different centres of higher education), and pictures where he is sitting, satisfactorily, on a rock with petroglyphs previously delimited using a technique currently under revision (Magazine *Cambio* 16, No. 57, 11–18 July 1994).

Muñoz' statements against the work of ICANH, its investigators, and its tasks under performance — notwithstanding the budget difficulties to manage the high incidence of archaeological sites in the country — are unaffordable. ICANH is not concerned with Muñoz' professional status or the institutional status of GIPRI. As a governmental institution, we are worried about the distortion produced by sensationalist, partial and subjective statements, publicly judging the hard work of functionaries ethically and professionally committed to preserving the archaeological patrimony of Colombia. This showing-off attitude obstructs and delays any possibility to collectively carry out projects for preserving Colombian archaeological patrimony.

Emiro José Díaz Leal
 Director of ICANH
 Instituto Colombiano de Antropología e Historia
 Colombia
 RAR 22-732

The roles of GIPRI and ICANH

By ROBERT G. BEDNARIK

The issues raised by Muñoz are of importance, especially the underlying malaise exposed by GIPRI's dispute with Colombia's public agency of archaeology. That

country is certainly not the only one where a competent rock art organisation finds itself in confrontation with a state agency. State instrumentalities of any kind, the world over, find 'interference' from non-governmental organisations (NGOs) annoying and would prefer if their work were not scrutinised by anyone not beholden to them. To some extent their ability of silencing dissent depends on how robust the particular democracy is. Portugal provides an interesting example for comparison. When the ability of that country's public archaeology to reject dissent over its abysmal performance in rock art protection was tested over the last decade, it resulted in the reprimand of an intellectually, morally and financially corrupt structure of public archaeology (Bednarik 2004). Portugal, apparently, has a healthy democracy, where public agencies are subjected to effective public scrutiny. Here, the rock art NGO of Colombia reports its progress in rendering the public archaeology of that country accountable.

Public archaeology is the political arm of an entity that is itself inherently a political discipline (Trigger 1984). Whether it is to decide how the victims in some mass grave met their deaths, or whether a temple or a mosque occupied some site first, or how to manage a site that in reality belongs to some ethnic minority that views the state as its oppressor, the political dimension always looms large in archaeology. Public archaeology, obviously, is a tool of the state, and most archaeology tends to deal with the defeated, the colonised, the vanquished — the victims of a state which, uninevitably, represents the *winners* of history. So archaeology, in many cases, is engaged in the state's appropriation of the cultural property of the *losers* of history. This, I sense, is what Muñoz refers to when he writes of the diminishment of indigenous values through 'study and conservation'.

In Colombia, the descendants of the owners of the rock art presumably still exist. Perhaps the state's archaeologists see themselves as anointed to study the country's rock art. When the country's rock art specialists point out their deficiencies, they respond defensively. As in all such cases that have come to my attention worldwide, the technocracy concerned desires unfettered control over a heritage resource it does not even have moral sovereignty over, in many parts of the world. Instead of managing this heritage on behalf of its primary owners (the indigenes) and secondary owner (humanity as a whole), it craves control, and it might even use the resource rather like a hostage. Around the globe we have seen examples where the state's heritage agencies have used their control over heritage sites to facilitate their destruction (consider present example of Dampier, Australia; Bednarik 2002; Vinnicombe 2002), or to exhort the academic discipline, the indigenes or the public to accept its power through interpretation and authentication. For instance in the cited Portuguese example, the state's archaeologists tried to render the survival of a corpus of petroglyphs contingent upon the acceptance of its Pleistocene age (Gonçalves 1998). In the end the Portuguese state's habit of clandestine destruction of rock art sites was resolved when the archaeological establishment was taken to task by IFRAO, which apparently led to reforms.

In order to understand the underlying malaise, it is necessary to consider how the technocracies of a state operate. They regard independent NGOs as interlopers, whose interference challenges their power and, in those cases where the NGOs possess superior competence, might successfully erode a technocratic oligarchy. The state's paid consultants are not permitted to express public criticisms, being essentially paid servants of the public. Therein lie both the problem and the solution. Public servants are answerable to the public in democracies, and the role of NGOs is to judge their work on behalf of the public, thus facilitating their accountability. This is where the nuances of democracy come into play, which are largely determined by the effectiveness of the media. In Portugal we found the media to be most expedient, whereas in some other democracies, such as Australia, media monopolies are more politically servile and the potentials of NGOs tend to be correspondingly stifled.

GIPRI has developed one of the world's best rock art recording standards, and it has the undeniable mandate and duty to take Colombia's state archaeologists to task if that should be required to protect rock art. The world community of rock art researchers relies on this organisation for the preservation of the region's rock art in pristine condition, without chemical contamination of any kind. In this time and age there is no justification for defending public archaeologists who use, condone or publicise physical enhancement methods. The IFRAO Code of Ethics (Clause 4[1]) is perfectly clear on the subject of physically interfering with rock art for the purpose of inferior recording work (remembering that all rock art recording work is inferior to such standards as those set in Chauvet or Cussac Caves, France). If the methods of the archaeologists of ICANH are too antiquated to include proper modern recording techniques (see, e.g., papers by Chandler et al. and Trinks et al., this issue), they must leave this work to others better equipped for the task. *Publication of site locations, publication of physically enhanced imagery and precipitate tourism developments are detrimental to rock art*, and I find it hard to accept that Colombia's state archaeologists would oppose these principles. The rate of destruction of rock art worldwide is such that we lack the luxury of exercising restraint or patience with servants of the public who facilitate the destruction of rock art. GIPRI has two main strategies of recourse available: expose the matter to the public through the media, and call on the support of the international community of rock art researchers.

I recommend also that the two opposing sides discontinue the unconstructive form of dialogue we have witnessed for some time. ICANH has to accept, as a matter of principle, that a competent NGO such as GIPRI has the role of monitoring the work of state archaeologists, a role that would only be rejected in a totalitarian state — which I trust Colombia is not. GIPRI has the right and the duty to be critical of the performance of ICANH.

Robert G. Bednarik
Convener of IFRAO
P.O. Box 216

Caulfield South, VIC 3162
Australia

E-mail: auraweb@hotmail.com
RAR 22-733

REPLY

Responsibilities in the rock art study and conservation in Colombia

By GUILLERMO MUÑOZ

The current debate may lead us to better understand some of the difficulties encountered in the scientific study and conservation of rock art sites in Colombia, and also, some day it might help us to think up new solutions for theoretic or practical conflicts that might occur between investigative groups when governmental politics or official cultural organisations have to be confronted. Two distinct interpretations of patrimony, culture, investigation, management and conservation of sites are involved in this debate, each with different backgrounds of knowledge and interests in rock art.

It is necessary to give some details when talking about this theme in Colombia. Some Colombian rock art sites were described during the beginning of the Republican period in the 19th century due to a specific governmental interest in strengthening patriotic feelings (1850) after independence. I do not refer to unknown sites (Mongua, Gámeza, Pandi, Facatativa and Aipe) written about just a few years ago, but much to the contrary, these are cultural artefacts that were portrayed artistically 150 years ago by the Chorographic Commission (watercolours, text and maps of Manuel Ancizar and Col. Agustín Codazzi), that included, for the first time, indigenous monuments, and were used to censure colonial politics. It is lamentable that today there are no detailed registers of those first finds. It is impossible to understand how those sites could have been abandoned or allowed to deteriorate, in spite of official information that really did not want to portray what was actually going on at the sites. This exceptional period of study during the mid 19th century was virtually forgotten by subsequent governments.

When one now asks the government about their management of the old and newly found rock art zones in each of the Colombian departments (Archaeological Park of Facatativa-Cundinamarca, National Park of Chiribiquete-Caqueta), they say that there are laws in place, that there is legal control of all the sites, and they say that they have developed some ways to divulge information. It is not sufficient to just divulge information gathered during a few months, and make a rule that is supposed to care for national patrimony and inspire the community to be responsible, without first understanding what will be the government's responsibility, that of the states, and that of its cultural organisations! The rules of the game have been inverted. It is impossible to imagine that the

government is trying to make the public and the towns responsible for site management (without funding), and by doing so, evade the various stages of organisation and investment that should be implemented and co-ordinated by authorities in the governmental cultural organisations. Even more serious, in this case, is that the government did not do a detailed investigation of the various zones visited, and that they did promote the massive presence of locals and tourists, published access information, and made all the sites open to the public without giving the consequences of their actions a second thought.

What would be reasonable is that pertinent governmental organisations first consider what is important, as a first step, then later determine coherent political policies, explicit actions and financing planned to protect rock art zones and organise activities to administer them in co-ordination with the local community. What is fundamental is that they understand that their actions and responsibilities should essentially be limited to the vigilance and administration of the rock art zones which should be viewed as cultural spaces, and that they help today's investigators and those in the future, who desire to document and interpret cultural and intellectual representations found at the sites.

Detailed descriptions, systematic studies, extensive organisation of data bases, mapping, selection and organisation of high-quality graphic and photographic materials, and the organisation and search for various explanations made by professionals in different fields, permit the rock art sites to be seen in a scientific light. It is inappropriate to disseminate basic site information without following these steps!

ICANH appears to be more interested in its prestige as an institution than to seriously consider what is necessary to organise the protection of rock art sites. It does not perceive the urgency to push and support serious groups interested in investigating rock art. It seems to be more interested in informing an auditorium of people about this debate, and its right to interpret the national constitution, rather than making sure that sites are not destroyed forever, or that they deteriorate not to the point of no return. It is more interested in publishing information hurriedly and evading its obligations than in determining the possibility to recognise its shortcomings and understand the complexity of each of its actions, which are circulated internationally to investigative groups.

It is important to inform everyone that Colombian governmental institutions, and along with them cultural organisations, initiated their documentation activities and study of rock art only a few years ago, which shows a shortcoming that they try to hide. Hiding the facts is the problem here; it is the centre of this discussion. The project seems to be to make people believe that they are protecting rock art patrimony. But, what really is the issue here are the sites and with them, the detailed study of rock art, and not the prestige of an institution. The existence of studies is feigned, as well as continuity of the studies, and the theme is presented so widely that it is impossible to

discriminate the wheat from the chaff. Works referred to by ICANH through their various publications and public presentations were based on very few weeks of fieldwork. A good portion of those materials were recorded and made public as a result of hurried visits during 120 days (1999), as political help to an administration that needed to show that it was doing something in this area (Botiva Contreras 2000). It has been very difficult to persuade ICANH about the necessity to refine their ways of documentation, to have an open discussion about its activities, and about the way they work. This state institution simply is interested in knowing about the existence of a site, and then it takes some photographs of the expedition, and never makes a detailed site registry.

Finally, it is essential to clarify some assertions about rock art documentation in Colombia. In reality, there have been very few investigators who have dedicated much time to documental studies, and even fewer who have had an interest to do scientific studies in this area. When one cites all the authors who have referred to rock art in an indiscriminate manner, the reader is made to believe that there were extensive expeditions, rigorous fieldwork, and many years of study with state and cultural organisation backing. That is simply not true. To present rock art investigations in this way distorts the way one looks at the development and the way one sees what the GIPRI group has accomplished since 1970, with its various phases and stages of growth in the area of documentation and registration. It has generated a tradition in the area of documentation and conservation, and has also made various contributions in the areas of meaning and function. After many years of accumulated experience, GIPRI was surprised when the government organisations did not even consider it interesting to think about various possibilities, and respect a specialised group that could have advised the government about its activities and improve its ideas. It is not difficult to recognise that governmental organisations have authority, experience and scientific knowledge in other areas, for example, in various archaeological studies, but in the study of rock art is not exactly the same.

Guillermo Muñoz
RAR 22-734

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Comment on
SCIENTIFIC STUDIES OF SAUDI ARABIAN ROCK ART
by Robert G. Bednarik and Majeed Kahn, *RAR* 22: 49?1.

Some notes on Saudi Arabian petroglyphs

By GEORGES E. LOMBRY

I have read with great interest, and indeed with pleasure, the article entitled 'Scientific studies of Saudi Arabian rock art'. Though I am not a scientist, strictly speaking, I completely agree with the conclusions about the chronology proposed by its authors, for the rock art sites recorded by the 1952 Philby-Ryckmans-Lippens mission (Fig. 1), and also with the opinion that the dating made up by E. Anati may well be fanciful. As mentioned in the paper, he could not travel to Arabia, but studied the rock art only from his desk, which may account for his spatial view of things.

For instance, the Couchites spoken of in the Bible actually existed in Africa, in the Kingdom of Koush (mid-second millennium B.C.), but identifying them as 'Oval Headed People' in the high plateaus of the Arabian Peninsula is a matter of mere speculation. There are melanodermic populations of Nilotic origin (tall stature) along the coastal strip of Saudi Tihama, but we have to refrain from 'romantic constructions' of this kind. They are incompatible with a scientific approach to the rock art and its makers. Yet, the researcher can so easily be driven by his enthusiasm to identify with the authors of such works in order to perceive their motivation better, and thus, he may sometimes be wrong.



Figure 1. J. Ryckmans, G. Ryckmans, H. Philby and P. Lippens in 1952.

Concerning the anthropomorphous 'long-haired females', I refer to my ethno-archaeological note (Lombry 1988) regarding the steatopygous deity Hamumah, worshipped until a recent period by the initiated Qahtans. She is indeed the pre-Islamic goddess, Al-Lat or Alia.

Notice that the radiocarbon analysis of the pottery shards buried at the foot of the stele I describe (Lombry 1988: Fig. 1) provides a dating close to the Hegira (7th century A.D.), which roughly corresponds to the destruction of the Himyarite city of Jerash (contemporary with Ukhdoud) and of the small temple, which used to overhang a volcanic cone. Given its location (it was erected with a big rock taken out of the ruins of the outside wall), it is more recent than the destruction of the temple. The anthropomorphous figures of 'long-haired females' occurring at Jabals Kawkab and Qara may well belong to the same period or be more recent.

Concerning the zoomorphic rock art sites of Umm Lwaa: despite the discovery in the vicinity of artefacts of Palaeolithic tradition (which provide of course no dating for the rock art), they could be contemporary with the Jabal Makhroug site (North Yemen), dated to 6500 BP according to M. Garcia (1991), given the presence of Bubalus on both sites.

One question intrigues me greatly, concerning the representation of meanders, which might characterise the synergistic rituals of the hunting clans of the Upper Palaeolithic era. Hence my question: might they correspond to one of the first stages of the Neolithic or could they be Palaeolithic?

After these brief comments, I congratulate R. G. Bednarik and M. Khan for succeeding in this first scientific synthesis on the rock art of Arabia, the only one worthwhile presently. Majeed Khan is a great and experienced man in the field; he has presented a relative chronology, which seems to be confirmed now and which is, in my opinion, true to reality.

I would like to highly encourage Bednarik and Khan to visit, if possible, all the sites I have located in Saudi Arabia in order to study them in the same rigorous way. The sites seem to me to be easily reachable and access involves not much logistical effort, just a good 4WD vehicle, a refrigerator, and some good local Bedouin guides. The only — and real — danger when one reaches the Rub' al-Khali desert is encountering those 'two-legged-wolves', as the Yam plunderers from Yemen are nicknamed; hence the need to be armed. They usually follow old forgotten desert paths.

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Georges F. Lombry
 Tiennie aux Pierres, 94
 B-5100 WEPION
 Belgium
 RAR 22-735

REPLY

Reply to Lombry

By ROBERT G. BEDNARIK and MAJEED KHAN

We thank Lombry for his kind comments on our preliminary report of the ongoing project to initiate a scientific basis for Saudi Arabian rock art research. As he is one of the very few rock art scholars who have worked in that country, his support for our approach and first results is particularly appreciated. He adds several welcome pieces of information, and we respond briefly to his comments.

Lombry is right to be cautious in seeing chronological links between finds such as Palaeolithic stone tools or ceramic fragments at rock art sites. Saudi Arabia, like much of the Middle East, is a region of ancient cultural roots representing untold millennia of intensive human activities. What many rock art sites have in common with many archaeological sites is that they both tend to occur in what have been called 'focal sites' within their landscapes. These may be caves or shelters, water holes, or simply sites where tree shade or some unknown resource was once plentiful. Many archaeologists have a subconscious habit of seeing connections between different forms of evidence if their common factor is that they occur at the same site. The probability of such diverse forms of evidence being contemporary is in fact inversely related to the strength of the former 'focal' status of the site. For instance, if it was a favoured occupation site, for whatever reasons, most debris are probably unrelated unless there is strong contextual evidence to the contrary.

Meandering petroglyphs are a common feature in rock art traditions: the oldest example known is from the Acheulian of India, the most recent one of us knows of has been executed in his presence in 1968 in the Pilbara of Western Australia. The approximate age of the design Lombry mentions can perhaps be estimated, but it is certainly not related to the formal characteristics of the motif. Many details of the motif would be required which traditionally archaeologists have typically not recorded, including rock type, repatination, nature of patina, exposure, weathering, technological factors and certain morphological aspects.

We are very grateful to Lombry for his cordial invitation to join him at some future time, in visiting sites he has rediscovered. If our project schedule should render such collaboration possible we would certainly take him up on this generous offer.

Robert G. Bednarik and Professor Majeed Khan
 RAR 22-736



BRIEF REPORTS

First direct dating of Saharan rock art

By ROBERT G. BEDNARIK

The first 'direct dates' from Saharan rock art have just been reported, and they are also the first results apparently extracted from molecularly specific substances. This is therefore a doubly important development in rock art age estimation. It has been presented in the current issue of *Sahara*, a journal that may not be accessible to many rock art researchers, therefore the main points of these results are summarised here for *RAR* readers and some pertinent commentary is added.

These important results have been presented by Rosanna Ponti from the Archaeological Department of Rome, and Massimo Sinibaldi from the Institute of Chromatography, CNR, Rome (Ponti and Sinibaldi 2005). Their work has been in collaboration with Fabrizio Mori, University of Rome, whose expeditions between 1990 and 1996 collected the five samples concerned, all of them from Tadrart Acacus in Libya. Aware of my objections to bulk-sampling paint residues for carbon isotope analyses (Bednarik 1996 and elsewhere), Ponti and Sinibaldi attempted to separate the substances they were trying to date in Mori's paint samples. Their results are the first of this kind in the world.

Ponti and Sinibaldi processed five samples, one each from the sites Lancusi, Ta-Fozzigiart, A-Fozzigiart, Ta-Fozzigiart II and T-in-Thora. The AMS measurements of the first three were carried out at Geochron Laboratories, U.S.A., those of the last two at the Department of Physical Sciences, University 'Federico II' of Naples. Where their analytical work differed from previous attempts to estimate the ages of rock art paint residues is in their sample preparation work. Mindful of my concerns that both the oxygen-plasma and laser-based extraction methods are unable to distinguish between different sources of ^{14}C , Ponti and Sinibaldi identified protein-based components which they assumed to be a component of the binder used in the Lancusi sample. The Lancusi sample

showed a relatively high content of proteinaceous material with different solubility in acidic hot water. The resulting less water-soluble fraction showed that its amino-acid content racemized ten fold more than the more water-soluble fraction. The first fraction was hydrolyzed in concentrated hydrochloric acid and the resulting dried organic material was submitted to AMS dating (Ponti and Sinibaldi 2005: 163).

The water-soluble fractions of the samples from Ta-Fozzigiart and A-Fozzigiart contained a small amount of proteinaceous matter, whereas the non-soluble fraction consisted of a substance prevalently constituted of monoterpenes. It was this matter that was extracted and analysed by

AMS. The sample from Ta-Fozzigiart II revealed a high content of heavy hydrocarbons, perhaps the preserved lipophilic part of the binder. Ponti and Sinibaldi acknowledge that the use of organic solvents in the cleaning procedures of the last three samples may be detrimental for accurate age estimates, but contend that the use of small volumes of high-purity solvents 'can limit the negative effects on the radiocarbon measurement, as [they] demonstrate by submitting the used extraction procedures in oxalate samples collected close to examined paintings' (op. cit.).

The five carbon isotope results obtained by this project range from 6145 ± 70 to 4040 ± 200 years BP. The samples from Ta-Fozzigiart, Ta-Fozzigiart II and T-in-Thora are thought to refer to the 'round head' phase, and these range from about 5360 to 4040 years BP. This distinctive art phase is considered to be one of the earliest surviving traditions in the Sahara, and contemporary with the 'bubaline school' of petroglyphs.

The chronology of Saharan rock art has been the subject of extensive debates for a long time, commencing in the mid-19th century. Mori (1974) has in the past mooted the possibility that the early phases date from the Late Pleistocene, but has recently compressed his chronology to place the 'round head' tradition from about 10 000 to 8000 years BP (Mori 1998: 183). At the other end of the scale, Muzzolini (1990) has long argued that all Saharan rock art is considerably more recent, and that none appears to predate 6000 BP by much. If these very preliminary age estimates by Ponti and Sinibaldi were any guide, Muzzolini's prediction would be met precisely. He had placed the 'round heads' roughly between 6000 and 3000 years BP, fully confirmed by these initial direct results.

The Sahara appears to be yet another rock art region where predictions of the age of the art have been mostly too high. Only in the previous issue of *RAR* (May 2005), I have with Professor M. Khan presented substantial evidence that the age of the known rock art of Saudi Arabia has been exaggerated. This, too, was the first effort of 'direct dating' of components of a major rock art corpus.

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More on Acheulian beads

By ROBERT G. BEDNARIK

'[The archaeologists] employed against me a weapon more potent than objections, than criticism, than satire or even persecution — the weapon of disdain. They did not discuss my facts, they did not even take the trouble to deny them. They disregarded them.'

Jacques Boucher de Crèvecœur de Perthes (1788–1868)

The first reports of Lower Palaeolithic beads, as I have pointed out without having examined the specimens (Bednarik 1998, 2001, 2003: 99), coincide with the first reports of Palaeolithic stone tools (e.g. Boucher de Perthes 1847–64), which already made mention of the occurrence of centrally perforated fossils together with Lower Palaeolithic 'handaxes' near Abbeville in France. Prestwich, in his famous validation of Boucher de Perthes' and Rigollot's stone tools, notes:

Dr. Rigollot also mentions the occurrence in the gravel of round pieces of hard chalk, pierced through with a hole, which he considers were used as beads. The author found several, and recognized in them a small fossil sponge, the *Coscinopora globularis*, D'Orb., from the chalk, but does not feel quite satisfied about their artificial dressing. Some specimens do certainly appear as though the hole had been enlarged and completed (Prestwich 1859: 52).

Boucher de Perthes' 'randomly picked up collection of worthless pebbles' was accepted by a hostile discipline after geologist Prestwich demonstrated the inability of archaeologists to cope with a new idea, but his and Rigollot's Acheulian beads were subsequently forgotten and remained almost totally ignored for the following one and a half centuries. Late in the 19th century, Smith (1894: 272–6) excavated about 200 identical items from an Acheulian site at Bedford, England. He described these as being of the same species and showing identical artificial enlargement of the natural orifice. Smith was certain that his specimens were used as beads, but as he made no mention of the French finds it seems that by that time they had been forgotten. Keeley (1980: 164) examined some of the English sample briefly and confirmed that there is no doubt that their perforations were modified.

Intrigued by these vague and unconnected reports I traced the existence of 325 museum specimens, labelled as *Coscinopora globularis*, all collected before the early 20th century, and in October 2003 travelled to Europe to subject them to detailed microscopic study. Recently I submitted my findings to a Cambridge archaeology journal, which rejected them. The reason was that I had not conducted adequate replication work to justify my findings. It appears that the pain of a new idea remains as unbearable as it was in the 1840s and 1850s, and Boucher de Perthes' above-cited concern remains as valid today: the Cambridge school still prefers to disregard evidence contradicting its archaeological dogma.

Fortunately other schools of archaeology around the world are more interested in finding out about the human

past, so I submitted my report to one of them (Bednarik 2005). Having presented detailed work with Pleistocene beads in this journal before, it seems appropriate to briefly present the main findings of this project as an appendix or belated footnote to my 1997 paper in *RAR*.

In studying the Acheulian bead-like fossils from several sites in England and France it soon became apparent to me that they had been incorrectly identified until now, and that this has significant consequences concerning the cognition of the hominids that collected these objects. The genus *Coscinopora* is a lychnisc hexactinellid sponge, for instance *Coscinopora infundibuliformis* GOLDFUSS 1833 is funnel or cup shaped, with a distinctive stem. It belongs to the order Lychniskida of the class Hyalospongia, whereas I found that all of the beads are of the species *Porosphaera globularis* PHILLIPS 1829, a Cretaceous sponge. *Porosphaera* is of the Pharetronida, one of the two orders of the Calcispongia, therefore the species are not even closely related. However, even *Porosphaera globularis* is only rarely of truly globular shape, its specimens are of considerable morphological diversity. They range from a more or less spherical shape to that of a flat, polygonal pad. Notably globular specimens are uncommon, accounting for only about a quarter of all such fossils. They occur in sizes from much less than 1 mm to about 50 mm, but in collections the spherical forms and specimens above 5 mm diameter are greatly over-represented, evidently because they were easier to find.

An outstanding feature of *Porosphaera globularis* is that some specimens possess cylindrical tunnels that enter to various depths, ranging from mere slight indentations to complete penetration. These tunnels are usually fairly central, and there are occasional specimens with more than one such tunnel. However, only about 14% of collected specimens have these features, whose origin remains unknown. It is most probable that they were bored by parasites, Serpulidae or gastropods capable of tunnelling into the sponges' hard structure. Only in about a fifth of those specimens that have this feature does the tunnel penetrate fully, or to within 3 mm of the other side. Yet all of the Acheulian specimens, from both England and northern France, were of a narrow range of sizes (mostly 10–18 mm), they were all of sub-spherical shape, and their tunnels were all fully through. These characteristics would be found in only about 0.1% or 0.2% of a random natural sample, which in itself demands that the sample was deliberately collected by an intelligent organism. I cannot think of any factor of natural selection that could account for such accumulations as those from Acheulian deposits.

The other factors demonstrating their use as beads are the evidence of flaking and percussion or pressure damage that occurs at the partially or fully closed end of the fossil's tunnel; the indication of reaming out of this opening in some cases; and most particularly the wear facets frequently found on these chert fossils. The opening up of the closed end of the tunnel, evidenced by impact and reaming, is a form of damage entirely limited to the small tunnel ends, the ends where the tunnel has not quite broken through (Fig. 1). The form in which this damage occurs cannot reasonably be



Figure 1. Close-up view of artificial and reamed out orifice on one of the Bedford Acheulian beads.

attributed to any natural process, it is distinctly anthropic and intentional. In some cases as many as six or seven impact flake scars can be discerned, indicating the difficulties in removing the remaining wall at tunnels that stopped 1–3 mm from the surface opposite the tunnel entry.

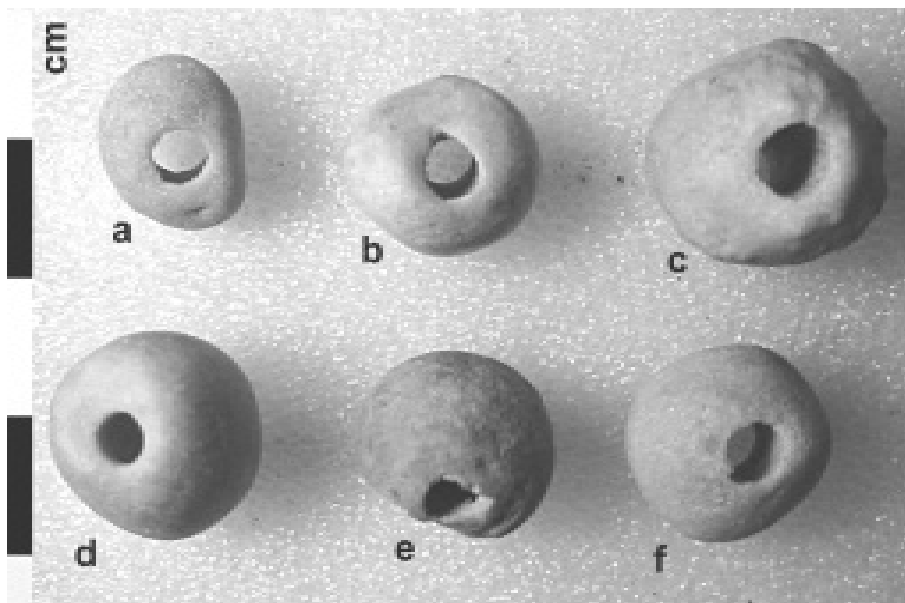


Figure 2. Some of the 325 Acheulian beads examined, with wear facets visible.

Even more important are the distinctive wear facets around the openings of the tunnels (Fig. 2). They range from minor to very extensive, in some cases covering much of the entire side surface of a specimen. They are non-uniform, their morphology dependent upon not only the specimen's own shape, but also that of the neighbouring bead rubbing against it, and the area of contact as well as preferential pressure as occurs in beads arranged as a necklace. The wear facets range from flat-angled to quite steep recesses of conical shape, and their extent is always distinctly delineated. Unless discoloured by the sediment, the *P. glob.* specimens are of the same buff colour as the weathering rind or cortex on sedimentary silica (which is indeed what they consist of). The wear facets, however, are always of a notably lighter colour, and significantly they never bear any taphonomic markings as found on the rest of the surfaces of these fossil casts. It is evident that all worn specimens were worn only in two areas: next to, and surrounding the two tunnel openings. Only one type of abrasive wear can account for such consistently typical wear patterning: the stones must have been arranged with their tunnels permanently aligned to be worn in this way. Such consistent wear patterns cannot be explained as natural phenomena, the beads can only have been subjected to this wear through hominid intervention. These specimens were worn like stone beads because that is how they were used.

The enlargement of the orifice on one side of each bead was rendered necessary by the fact that the *P. glob.* fossils' central tunnel, roughly cylindrical for most of its length, tends to be closed or almost sealed off at one end. To open or enlarge it would be easy with a metal pin, but would have been very difficult with Lower Palaeolithic stone tools. Therefore many specimens bear distinctive flaking and impact damage around

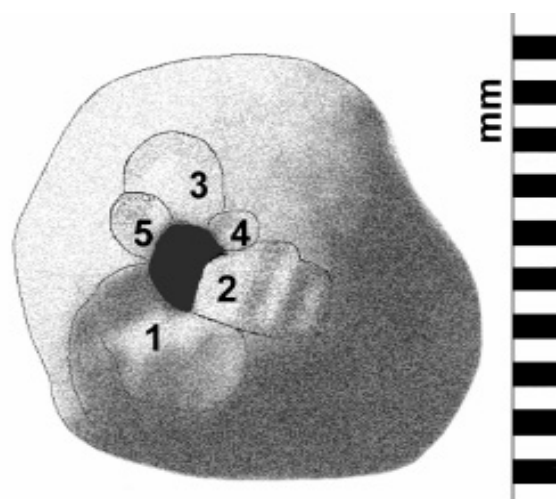


Figure 3. Artificially broken through tunnel on *Coscinopora globularis* bead, showing five flake scars. Biddenham quarry, Bedford, England.

the enlarged opening (Fig. 3). In beads subsequently subjected to heavy wear the resulting wear facet would have erased all traces of this flaking around the orifice. Therefore this feature is only present in unworn or slightly worn specimens.

There is only one rational explanation for the presence of *P. glob.* specimens of only one shape, one size range and one stage of tunnel development in Acheulian deposits in France and England: deliberate collection by humans. There is only one rational explanation for the form of flaking many specimens show, and there is only one rational explanation for the extensive wear facets many possess. Each of these three factors suffices by itself to justify the identification of these specimens as beads. These factors have been presented as testable, falsifiable propositions, i.e. in a scientific format. I ask archaeologists who wish to question my findings to use the same approach, not dogmatic denouncements as they have characterised this discipline since the time of Boucher de Perthes.

Taphonomic logic shows conclusively that most archaeological pronouncements about the Lower Palaeolithic period (and I use this term only to conform with established practice, without endorsing it) must be expected to be false. I regard 'received archaeological knowledge' as so corrupted and problem-riddled that the onus is on the discipline to falsify any scientific proposition about this early period. The above evidence (for comprehensive details see Bednarik 2005) suggests that Boucher de Perthes was, once again, right, and I request once again, with due respect, that Pleistocene archaeologists address two issues in their discipline: the lack of knowledge about available published evidence, and the practice of censoring the dissemination of data when it conflicts with the dominant dogma of orthodox archaeological beliefs.

Robert G. Bednarik
Editor, *RAR*

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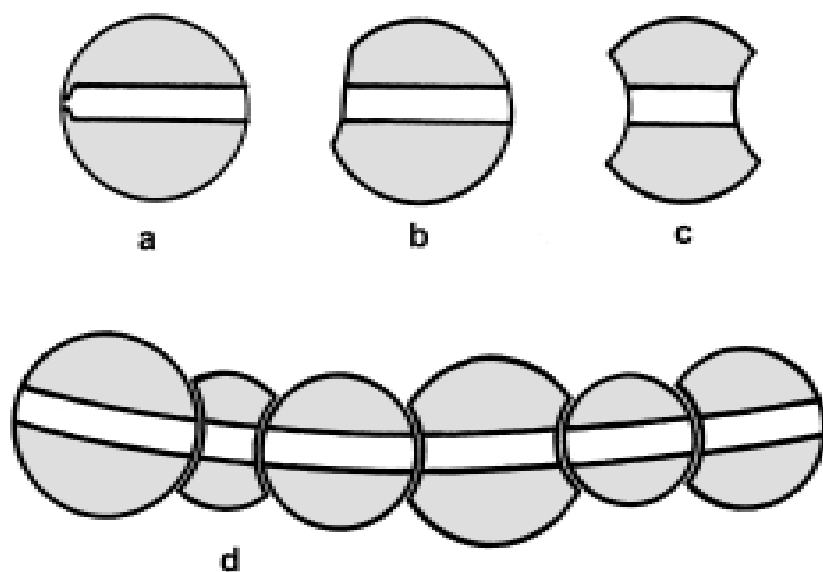


Figure 4.

Schematic depiction of the wear found on Porosphaera globularis specimens, all shown in section: (a) is the natural, unmodified object with the tunnel closed or almost closed at one end; (b) shows the flaking on the left to remove the obstruction; (c) is the effect of very long-term use wear as a bead, probably over many years and after rubbing against various other, fresher beads; and (d) illustrates the effects of wear on beads used for varying durations assembled on the string of a necklace. Note how older beads are deeply worn, their semi-conical wear facets accommodating the adjacent bead in each case.



RAR REVIEW

The rock-art of eastern North America: capturing images and insight, edited by CAROL DIAZ-GRANADOS AND JAMES R. DUNCAN. 2004. University of Alabama Press, Tuscaloosa, 426 pages. Softcover ISBN 0-8173-5096-9; Hardcover ISBN 0-8173-1394-X.

Carol Diaz-Granados' and James Duncan's book is the second, and more complete, synthesis of rock art scholarship for this region of North America (cf. Faulkner 1996). This new volume offers all the expected features of a scholarly work. I particularly like that the 'List of Contributors' includes biographical information and also mentions other publications by the same author. Lamentably, all of the images are in black and white, detracting from an otherwise excellent publication.

The editors present twenty essays from a wide variety of scholars, all but two of which focus primarily on rock art in the eastern United States. As the editors put it, '[T]his collection of papers may be viewed as eclectic by some, but, on the other hand, it is a fine and diverse representation of both the eastern region and topics in eastern rock-art research' (Diaz-Granados and Duncan xxviii). In the Table of Contents, the editors divide the papers into different sections, including *Ethnography*, *Patterning of sites and motifs*, *Gender*, and *Dating methods*. A section on *Dendroglyphs* highlights the well-researched work by Dr Fred E. Coy, Jr., one of the people to whom the volume is dedicated.

All of the papers were presented at professional conferences, the editors are careful to point out, but it becomes clear that many were presented at conferences held by the Eastern States Rock Art Research Association, since virtually every author represented is a member of that august organisation. As such, they reflect the high standards, but sometimes also the technical jargon, of conference papers. Joan Vastokas, author of 'The Peterborough petroglyphs: Native or Norse?', and Daniel Arsenault, who wrote 'Analyzing and dating the Nisula Site, Québec', are the only non-U.S. contributors. It is so refreshing to see a Canadian presence; more would be welcome.

The editors define the purpose of their volume in the preface: *The Rock-Art of Eastern North America* was assembled to reach out to the professional community, to archaeologists, both those who do rock-art research and those who choose to look the other way. This volume was written also with the general public in mind — actually anyone interested in rock-art — for the purpose of offering information on the expanse, depth, and urgency of rock-art research in eastern North America (Diaz-Granados and Duncan, xxi-xxii).

I disagree that this volume is accessible to the general public, as some of the papers are highly technical in nature.

I also felt that the editors set a confrontational tone when they write:

Petroglyphs and pictographs are within the very same realm of archaeology as material culture with its tangible artifacts. It is imperative that mainstream archaeology incorporate rock-art — particularly eastern rock-art — in order to bring about that 'fuller picture of the past' toward which all archaeological work strives ... Many professionals

have blamed a lack of dating methods as justification for ignoring rock-art. This is no longer a viable excuse, because both rock-art research and dating methods have advanced to an acceptably credible level (Diaz-Granados and Duncan, xxix).

Two papers in the volume address dating issues, using geology or accelerator mass spectrometry.

The editors end their introduction by offering the synopses of the included papers. While most descriptions are helpful, some — I felt — were perhaps too succinct. It is always difficult to strike that balance, how to give the reader enough information to spark interest without being overwhelming. Several of the chapters are site reports while others are updates or new interpretations of sites reported before, such as Joan Vastokas' response to recent publications attributing the Peterborough petroglyphs to Norse artists.

Two rather provocative papers caught my attention: Jack Steinbring's 'Elemental forms of rock-art and the peopling of the Americas' and Kevin Callahan's 'Pica, geophagy, and rock-art in the eastern United States'. Both chapters discuss the ubiquity of cupules, but from rather different perspectives. Steinbring addresses the controversy surrounding the origins of people in the Western Hemisphere, linking the practice of making cupules to the spread of peoples around the globe. This is a scholarly topic seeded with land mines, and he gleefully steps on virtually every one. Clearly his is a paper intended to provoke discussion. Callahan's contribution also considers cupules, but from the perspective of ethnographic evidence. He cites examples from the world over on how people grind rock surfaces to obtain a powder used for medicinal purposes. I found his arguments to be precise and provocative.

Lori Stanley's paper, 'Ratcliffe Sacred Rock and the Seven Sacred Stones, Iowa', was, I felt, precisely the calibre of work for which all rock art scholars should strive. Reading more like a detective novel than an academic paper, she reconstructs the recent history of her subject site, and then incorporates what she has learned in consultation with the Winnebago people, who believe the Seven Stones are part of a religious legacy. Her self-critical arguments were carefully constructed, but left room for new evidence.

One issue I had with the text was the editorial choice for using 'rock-art' as a hyphenated term, presumably following the suggestions of Paul Taçon and Christopher Chippendale, to distinguish the subject 'from the Western artistic programme, which is closely tied to a market economy' (David 2002: 10, note 5). As an art historian, I can say that much of the art created in Western history was outside of a 'market economy'. Defining art in this simplistic manner is naïve at best. But this is an argument I have with the discipline of archaeology, not with Carol Diaz-Granados or James Duncan.

This 'inaugural volume', as the editors describe it, is an excellent addition to the literature in that it brings together important work done by scholars in a geographic region under-represented in the scholarly literature. I hope that the editors' use of the term 'inaugural' means there are more to follow. In their own words: 'We are optimistic that with the publication of this volume, *The rock-art of eastern North America*, a new initiative

will be set in motion' (Diaz-Granados and Duncan, xxix).

Professor Denise Smith

Atlanta, U.S.A.

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Dark sparklers: Yidumduma's Aboriginal astronomy, northern Australia 2003, by HUGH CAIRNS and called for by Bill Yidumduma Harney. Original paintings and commentaries by Bill Yidumduma Harney and Samantha Wortelhock. 2003. Self published by Hugh Cairns, Sydney, 226 pages, colour and monochrome illustrations, softcover.

This book is a unique assemblage of philosophy, astronomy, ethnography and ethnomythology, ethnoastronomy and cultural history. By this I mean this book is unique in that it is not written by a trained anthropologist or linguist, but by a layperson extraordinary, who has gone to great lengths to bring together three strands of information at once. The mythology, the astronomy and the language (directly from Bill Yidumduma Harney) is present in a three-fold manner — as is charted in an appendix: practical importance, metaphorical description and ceremonial focus (195).

Treading through the background context of Dreamtime mythology, one wonders how relevant all this is and how to comprehend its importance, but Hugh Cairns provides a summary at the end of each chapter that reinforces our understanding of what we have just read. From these building blocks, we can establish a foundation from which to grasp the relationship between songs, stories, myths and constellations all woven together in a fantastic way.

The first chapter introduces Bill Yidumduma Harney, Jr., a man born of an Aboriginal mother and white father, Bill Harney senior. It tells how Bill was raised by his mother with traditional teachings of the 'law' and creation myths of the Wardaman. It describes the Wardaman people, all of Bill's relatives and the cultural traditions associated with the land, totems, ancestors and ancestral spirit human relatives. The sacred sites of his mother's Dreaming have successfully been reclaimed in 2001 under the 1974–76 legislation through the Daly River Claim.

In the second chapter, Hugh describes the ancestral dreamings and the totemic world. Of these are the important myths of the Wardaman known as 'song-paths'. Bill Yidumduma Harney says:

I grew up with the song. We sit down and know exactly what name is our places where we're going. We sing and we happy. We sing like we know where we stay at a house. We sing like we know exactly where all these places. We name them: the routes to travel, right to the end of the songs (16).

To me, this is what binds together myth, rock paintings and country. All three elements are present and equally important when trying to understand these sites. The third chapter gives in detail Bill Yidumduma Harney's retelling of the Wardaman Creation Story Law. 'This creation story is central to the expression of his thinking'. What happens in the creation story on earth is reflected in the sky. Bill coined the phrase, 'landscape sky-mapping for the cosmoscape' (31). And again, Bill reiterates the importance of song:

Everything is put together with a song, made up some other songs, big Creation songs, regenerate bush tucker and everything they made. Everything had a song. Rainbow too. Everywhere they made a big Creation song, on the way from the west right across the middle, all into the songs, and we still use the Creation song today, perform it. When we sing, make all his Creation spiritual. You've got to sing the song at the same time, otherwise some spiritual eat your body up, eat you and destroy you. That's what it's about — ceremony — big group is singing because in the song, the painting, the rock painters both live together, and that's why we sing the Creation song (31).

In the Creation Story, the earth, the under-earth and the sky Creators including the Creation Dog, the Lightning Children are moving through the landscape. But when the Little Boy split the Dog's Ear, everything changed. It is a moment of great magnitude, not fully explained in Hugh's rendition, but may still lie hidden in the metaphors. 'A moment when the Dog sang out and made everything change in this country' (38). This moment of transformation puts everything into motion, on earth as well as in the sky.



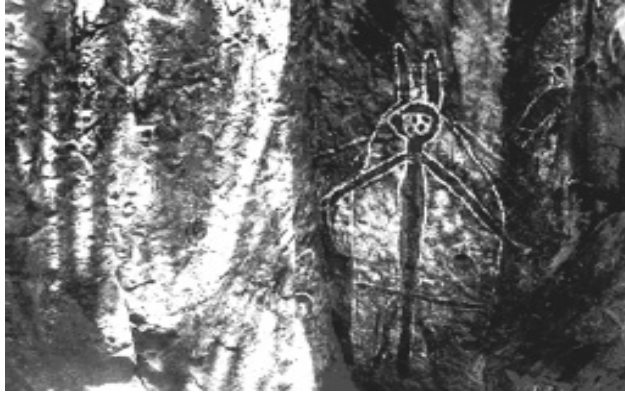
Two rayed Lightning Spirituals (photo by Carol Patterson 2002).

In the fourth chapter, Hugh writes that these paintings represent the

two rayed Lightning Spirituals: Lightning Brothers Yagabila and Jagabila to Bill Yidumduma Harney and Gornbul Hawks elsewhere. They are standing guard with ritual implements in their head-dresses, and are custodians of a living tradition. They relate to the Pointers of the Southern Cross, and guard its ceremonial places (49).

Hugh Cairns explains in a circular manner how the creation stories are mythical descriptions of the landscape, that are songs sung that produce internal maps for human navigators. The stars are charted in the same fashion, cosmic stories filled with details that create landscapes navigable by not connecting the dots, but by observing the voids, the dark spaces that become shapes representing mythic animals, the creators of the landscape. These Creators or 'Spirituals' have their own songlines that produce internal maps of the night skies for human navigators.

Bill Yidumduma Harney points out the rockshelters with images of their sky world. The story of the Milky Way can be found at Morrorm Dreaming with the three white lines representing the Milky Way across. 'Old Dardi is the base and the Milky Way type across. He comes down like a little frog, and picks up people. Nardi lady comes down from the sky, taking the people up'.



The main Ngard-ya panel with Dungkung (a splayed frog form on the left, Nardi with Morrorm spiritual web and transportation threads, and their Lightning Child with rayed head-dress on the right. (Photo by C. Patterson 2000.)

And so, throughout the consecutive chapters, the night sky unfolds with mythic story equivalents to each constellation. Hugh skilfully describes the next few months of May through August in Chapter 5. The black shape of Emu rises in the east followed by Earth-Mother Frog-Lady's dark shape, Sky Boss and, by August, the Rainbow Serpent's head appears. Bill exclaims:

Everything becomes a star in the night. Called Milijurn. Everything! Human become a star called Milijurn! You see them early, maybe later in the night. If you sleep, you wake up. Whole bunch of them, all the little ones! Old Lady! Watchdog! They come down from sky to ground. ... You see all the stars all dancing (59).

Hugh writes that the moon is major Law for behaviour and relationships, has important rock art and ceremonial sites, and is important for travelling (63). Bill says that people would travel at night following the stars and using the moonlight to project 'a shadow of yourself to give you a direction'.

The moon was part of the Creation people walking around with the rest of them. Called Jabilang first, one of the children, then Gandawag. Later on when he died and his shadow went up to the sky like everybody else's to become a star, he became a moon. Big moon called Gandawag, he was more close than the sun, gives the clear complexion, bigger! The people can see he becomes a big moon. Later, because he done a wrong thing, broken the law — mother business — they make Bulyan and Barragbarrag go down with the boning tool. Moon down there on leave, got the message from bunch of grasshopper he done the wrong thing. He was given this cheeky yam by Grasshopper, at it, got sick and died. Well, they felt sorry, they all cried because he didn't know he'd done the wrong thing, and the shadow of the moon went up in the sky, away from all the stars. When they became a star, he became a moon. Two of em. Gandawag is female, it's a good Full Moon. Half Moon is a male (63).

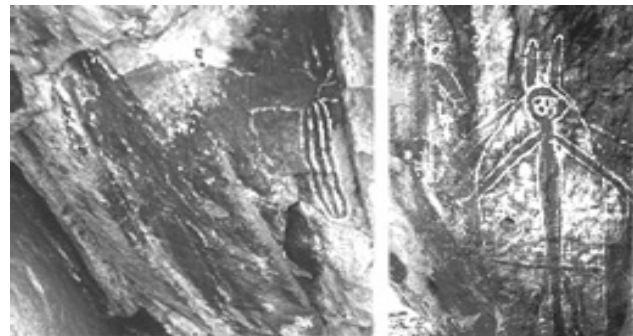
The Wardaman calendar relates to the seasons, the night sky with the stars, planets, moon and sun revolving around the sky related to through stories and songs. The astronomy is described through two night songlines in Chapter 6. Hugh Cairns illustrates these stories with sky maps and graphic illustrations along with

what he calls 'Gestalt figures' suggesting unconscious meanings. Dark shapes form the Cosmic Emu as it rises from below the horizon and becomes a vast black constellation two hours after sundown.



Full Moon and Half Moon together (Harney, personal conversation, 2000).

The calendar progresses thought the year bring forth the creation spirituals as they traverse the sky, Dungkung Frog Lady Merrerrebena and Sky Boss Nardi. The first songline after sunset April to July incorporates Leo, Ursa Major, Corona Borealis, Cygnus and Aquila constellations that find their equivalents in Mordborronggo Creation Dog, Wujunggu Fire, Jegban, Clever Skills, Arts Birds, Warrbarri, Law Meetings, Special Places, Barrabarrag Diver Duck, Bulyan Wedge-Tail Eagle. This is the north and north-east portion of the sky.



The first songline Leader Creation Dog Mordborronggo (left) carries the Bag of Songs given to him by Nardi, the Sky Boss (right) to be traded across the sky (photo by C. Patterson 1999).

The first songline begins with Creation Dog, at the beginning of the year. He has a Dilly Bag of Songs given to him by Nardi, the Sky Boss, who is positioned in the Southern Cross area. Creation Dog crosses the sky eastwards with the songs in his bag on his way to the star Dubhe in Ursa Major (99).

The second songline covers the east and south portion of the sky with its constellations and creation spirituals that together carry out the law and initiation. Hugh Cairns' graphic reproductions of the star charts are interpreted another way by Samantha Worelhock with paintings of the spiritual animals traversing the sky. She writes: 'My understanding is that the validity of, of instance, Creation Dog as star, songline totem, rock painting, or person dressed ceremonially as Creation Dog, is one and the same (96).

At this point, I am half way through the book and a bit overwhelmed. I have only grasped the first songline of the beginning of the New Year. But Hugh circles around and picks me up with a simple chart listing the constellations/stars and their equivalent Dreamings on page 115. So, I press on. Chapter 8 continues with the second phase of the first songline. It entails the mysteries, arts and guardians of the Law on the way to Scorpius – Crux, its celestial interface, and each constellation with its Dreaming equivalent.

Chapter 9 through Chapter 11 describe the second songline, and how the two songlines cross the star fields with stories that underscore the 'spiritual mind' and 'linguistic exuberance' (190), employed by Hugh Cairns, as he interprets Bill Yidumduma Harney's life experience with the Law, story and song and all of creation.

Working with Bill Yidumduma Harney myself as a research assistant with Julie Drew in 1999, and visiting him again in 2000, I became accustomed to Bill's way of speaking. Now his words, captured by Hugh in their unedited form, come singing through. In my mind, I am able to fill in Bill's gestures and visualise the backdrop of painted images in rockshelters where he told us these stories. I am grateful for Hugh's persistence and skill in recording these stories in the same form as I was told. Bill took us to these sites and sang the songs that I captured on audiotapes. Though the songs are not possible to reproduce orally within the pages of this book, they are acknowledged throughout the text.

Dark sparklers went international as a planetarium show this year. *Aboriginal skies: a multi-media public show*, was shown on 23 April 2005 at the Fiske Planetarium in Boulder, Colorado. Mr Paul Taylor and astronomy professor John Stocke explored the star knowledge of Wardaman people through the traditions, songs and stories of Bill Yidumduma Harney. Hugh Cairns of Merrimbla, Australia, was in attendance.



Bill Yidumduma Harney, 2000 (photo by Carol Patterson).

I highly recommend this book for the dedicated scholar who has visited many of these rock art sites with Bill Yidumduma Harney. Seeing the sites is only a fraction of the experience. Learning the names and songs of each 'Spiritual' adds depth and beauty to each site. But connecting these 'Dreamings' with the stars and constellations adds another dimension to the experience that Hugh has brought to the reader, through his determination and passion about this subject. I must acknowledge Julie Drew, who also worked with Hugh in the beginning and gave support and information that helped with this publication.

Dr Carol Patterson
Montrose, Colorado, USA

RAR 22-740

RECENT ROCK ART JOURNALS

International Newsletter of Rock Art. Newsletter of the Association pour Rayonnement de l'Art Pariétal Européen (ARAPE). Edited by JEAN CLOTTES. Bilingual newsletter (French and English). Recent issues include these research articles:

Number 42 (2005):

CLOTTES, J., J. COURTIN and L. VANRELL: Prehistoric images and medicines under the sea.

RIPOLL, S., V. BALDELLOU, F. MUÑOZ and P. AYUSO: La Fuente del Trucho (Asque-Colungo, Huesca, Spain).

LASHERAS, J. A. et al.: Cueva de Cualventi (Oreña, Alfoz de Lloredo, Cantabria): a new Palaeolithic art site in Cantabrian Spain.

SHARPE, K.: 2004 Rock Art Society of India Congress, the 10th Congress of the International Federation of Rock Art Organizations.

BEDNARIK, R. G.: Church Hole: a controversial site.

RIPOLL, S., F. MUÑOZ, P. PETTITT and P. BAHN: Reflections on a supposed controversy.

COULSON, D. V.: Kofi Annan calls for leaders to save Africa's rock art.

MAZEL, A.: Virtual access to the Beckensall Northumberland Rock Art Archive.

CLOTTES, J. and J.-M. GENESTE: Chauvet Cave: results of the multidisciplinary studies.

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Almogaren. Journal of the Institutum Canarium. Edited by HANS-JOACHIM ULBRICH. Recent issues include the following papers:

Volume 35 (2004):

PICHLER, W.: Die Felsbilder Fuerteventuras (I).

MONTELONGO FRANQUIZ, A. and M. FALERO LEMES: Tacitas y cúpulas en la isla de Lanzarote.

RODRIGUE, A., L. BOUFFI and M. AMARIR: La station Rupestre de Wazzouzount (Région de Taghijjt, Maroc).

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La Pintura. Newsletter of the American Rock Art Research Association (ARARA). Edited by KEN HEDGES. Recent issues include these research articles:

Volume 29, Numbers 1–4 (2002–2003):

STRECKER, M.: Preservation of rock art in Bolivia.

BOWYER, W. J.: On defining prehistoric 'art'.

Volume 30, Numbers 1–4 (2003–2004):

MARYMOR, L.: Rock art conservation at Canyon Trail Park, El Cerrito, California (San Francisco Bay Area).

COY, F. E.: Garrick Mallery the man.

BRODY, J. J.: Petroglyph National Monument still in peril.

Volume 31, Numbers 1–4 (2003–2004):

DORN, R. I.: Why testify for the defense?

WOODY, A.: Reply to Dorn.

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Sahara. International journal of pre-History and History of the Sahara, with a strong emphasis on the region's rock art. Edited by P. D. CALATI, G. NEGRO, A. RAVENNA and R. SIMONIS. The most recent issue includes these articles:

Volume 16 (2005):

- JESSE, F.: Rock art in Lower Wadi Howar, northwest Sudan.
 RAHMANI, N. and D. LUBELL: 'Dessine-moi une autruche': La gravure de Kef Zoura D et la représentation de l'autruche au Maghreb.
 FARRUJIA DE LA ROSA, A. and S. GARCÍA MARÍN: The Canary Islands and the Sahara: reviewing an archaeological problem.
 GABRIEL, B., R. BRADLEY, P. WOLF, N. ABDEL HAFIZ and M. FAROUG ALI: Nazca Lines in the Sudan? Gravel features at the Fourth Nile Cataract.
 SOLEILHAVOUP, F.: Images 'Têtes rondes' dans l'art Rupestre saharien: la piste animiste.
 MENARDI NOGUERA, A. et al.: New rock art sites in the south-western sector of Jebel Uweinat (Libya).
 NEGRO, G., V. DE MICHELE and B. PIACENZA: The lost ochre quarries of King Cheops and Djedefre in the Great Sand Sea (Western Desert of Egypt).
 GAUTHIER, Y. and D. LIONNET: Abris peints du plateau de Tadjelahn et leur relation avec des peintures de l'Immidir.
 CAMPBELL, A.: The cave above Wadi el-Obeiyd (Farafra, Egypt).
 FOUILLEUX, B.: Contribution à la clarification du problème des Faux du Tassili.
 MAESTRUCCI, F. and G. GIANNELLI: I fantasmi di Afozzigiar (Tadrart Acacus).
 ACHRATI, A. and M. K. BOUKRETA: Tears that never dry: the weeping animals of the Saharan rock art.
 PONTI, R. and M. SINIALDI: Direct dating of painted rock art in the Libyan Sahara.
 ZBORAY, A.: New rock art finds in Wadi Wahesh (Jebel Uweinat).
 FRANCAVIGLIA, V. M.: Le coppelle dell'area di El-Geili (Sudan): rapporto preliminare.
 PICHLER, W. and G. NEGRO: The Libyco-Berber inscriptions in the Selima Oasis.
 VAN HOEK, M.: The 'sitting' zoomorph in Saharan rock art.
 BELKADI, A. F.: Le Tassili n-Ajjer à Lascaux?

RECENT BOOKS OF INTEREST

Prehistoric art. The mythical birth of humanity, by JEAN-PIERRE MOHEN. 2002. Pierre Terrail, Paris, 207 pages, profusely illustrated by colour plates, softcover, ISBN 2-87939-233-0.

Cederberg rock paintings, by JOHN PARKINGTON, with photographs by NEIL RUSCH. 2003. Creda Communications, Cape Town, 127 pages, 126 plates, mostly in colour, softcover, ISBN 0-620-31113-4.

The prehistoric rock Art of Morocco. A study of its extension, environment and meaning, by SUSAN SEARIGHT. 2004. BAR International Series No. 1310, Oxford, 246 pages, photos and line drawings.

Rock art research (in Chinese), edited by CHEN ZHAO FU. 2004. Beijing, 146 pages, illustrated throughout, including in colour, softcover.

Rock art in Africa: mythology and legend, by JEAN-LOÏC LE QUELLEC, translated by Paul Bahn. 2004. Éditions Flammarion, Paris, 212 pages, 81 plates, mostly in colour, bibliography, hardcover, US\$65.00, ISBN 9-782080-304445.

Tolgojn khadny zurag Aral (Petroglyphs of Aral Tolgoi, Mongolia), by D. TSEVEENDORJ, B. D. KUBAREV and E. JACOBSON. 2005. Institute of Archaeology, Mongolian Academy of Sciences, Ulaanbaatar, 204 pages, illustrated. With contributions in English, Mongolian, and Russian.

Shadows of a northern past. Rock carvings of Bohuslän and Östfold, by JOHN COLES. 2005. Oxbow Books, Oxford, 221 pages, 263 monochrome illustrations, 16 colour plates, hardcover, ISBN 1-84217-181-X.

Aesthetics and rock art, edited by THOMAS HEYD and JOHN CLEGG. 2005. Ashgate, Aldershot, U.K., 344 pages, 106 monochrome plates and drawings, bibliography index, hardcover, £55.00, ISBN 0-7546-3924-X.

Peintures et gravures d'avant les phasaons: du Sahara au Nil, by JEAN-LOÏC LE QUELLEC, PAULINE DE FLERS and PHILIPPE DE FLERS. 2005. Librairie Arthème Fayard/ Éditions Soleb, 382 pages, several hundred colour plates, bibliography, 36 × 28 cm, hardcover, €100.00, ISBN 2-213-62488-7.

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Iconografía del Formativo Tardío del norte de Chile. Propuesta de definición e interpretación basada en imágenes textiles y otros medios, by HELENA HORTA T. 2004. *Estudios Atacameños*, Volume 27, pp. 45–76.

Dawn of a millennium: the ascent of Indian rock art research, by ROBERT G. BEDNARIK. 2004. In P. Chenna Reddy (ed.), *Brahma Sri. Researches in archaeology, history and culture in the new millennium* (Dr P. V. Parabrahma Sastry Felicitation Volume), pp. 3–11. Sharada Publishing House, Delhi.

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Biographic rock art on State Island, New York, by EDWARD J. LENIK. 2005. *ESRARA Newsletter*, Volume 10, Number 2–3, pp. 3–4.

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Hands across time: exploring the rock art of Borneo, by LUC-HENRI FAGE. 2005. *National Geographic*, Volume 208, Number 2 (August), pp. 32-43.

Decoding the hands, by JEAN-MICHEL CHAZINE. 2005. *National Geographic*, Volume 208, Number 2 (August), pp. 44-45.

New impetus in the study of the Indian Lower Palaeolithic, by ROBERT G. BEDNARIK. 2005. In A. Satyanarayanan and P. Chenna Reddy (eds), *Recent trends in historical studies, Festschrift*

to Professor Ravula Soma Reddy. S. K. Pathak Research India Press, New Delhi.

Naskal'nye tboreniya (Petroglyphic creations) by ARSEN FARADZHEV. 2005. In A. Zhuravlev (ed.), *Kamen'. Mnogoli-kaya planeta (Stone. Many-sided planet)*, pp. 256-267. Bookhouse, Moscow.

Kak zarozhdalos' iskusstvo? Nachala bespoleznoy deyatel'nosti (How did art arise? The origins of useless activity) by ARSEN FARADZHEV. 2005. In A. Zhuravlev (ed.), *Tainy civilizatsii. Nevedomoe i neveroyatnoe (The secrets of civilisation. Unknown and unbelievable)*, pp. 114-127. Bookhouse, Moscow.

V sotrudnichestve s prirodoy. Tvorcheskoe soznanie v kamen-nom veke (In co-operation with nature. Creative consciousness in the Stone Age) by ARSEN FARADZHEV. 2005. *Liceiskoe i gimnazicheskoe obrazovanie (Science-Publicistic Magazine)* No. 4, pp. 9-14.

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All back issues of *RAR* remain in stock, beginning with Volume 5(2), November 1988. The early issues have been out of print for sixteen years but will be republished on CD. Back issues can be ordered singly, or the whole series 1988 to 2004 can be ordered for \$A310.00 (about US\$230.00), postage paid to anywhere.

The entire set of the *AURA Newsletter*, 1983 to 2004, is available and can be purchased for \$A60.00, postage paid to anywhere.

New members

We have had the pleasure of welcoming the following new members of AURA recently:

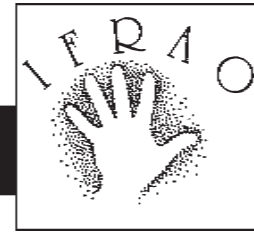
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 Dr George Dimitriadis, Hellenic Rock Art Centre, Philip-
 pi, Greece
 Dr Abdelkhalek Lemjidi, Marrakech, Morocco
 David Coulson, The Trust for African Rock Art, Nairobi,
 Kenya
 D. Hipólito Collado Giraldo, Asociación Cultural 'Colec-
 tivo Barbaón', Cáceres, Spain
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IFRAO Report No. 35



IFRAO's progress

In its history of seventeen years, the International Federation of Rock Art Organisations (IFRAO) has emerged as the main force in world rock art research, acting as the cohesive medium of the discipline it was conceived as in 1988. Practically all democratic rock art organisations of the world are now affiliated with IFRAO, contributing to the processes of unification, co-operation and developing the field. Especially in the area of rock art protection and preservation, IFRAO has been spectacularly successful. For instance, through its influence, contact recording methods — which have in the past caused untold damage to rock art — have been almost entirely eradicated worldwide. IFRAO has attended to numerous cases of potential rock art destruction, in all continents, and in some cases has even successfully opposed governments to protect rock art.

These successes have been so paramount that it is easy to overlook the many other achievements of IFRAO. Foremost of all is the progress made in standardising the discipline. The Federation has been active in introducing uniform standards of *ethics* (its universal Code of Ethics was presented and approved in 2000 in Alice Springs, Australia; see *RAR* 17: 167–9), standards of *terminology* (the *IFRAO Glossary* formulated from 1997 to 2001, has been translated into several major languages in 2002), and standards of *methodology*. The benchmark for methodological minimum standards was set in 2001 with the publication of *Rock art science: the scientific study of palaeoart* by IFRAO-Brepols. Specific standards set, or to be set, concern quality grading of recordings, a geomorphic cartography standard, standardisation of weathering data, colour calibration and reconstitution, and digitised petroglyph topography. Dating methodology is not sufficiently developed for standardisation, and the same may be said for conservation methodology, which remains in development. Specific methodologies currently undergoing attempts to reach standard procedures are those of nanostratigraphy, colour management systems and morphometric analysis of grooves. Of particular importance has been IFRAO's establishment of a uniform colour standard in 1994, with the IFRAO Standard Scale, of which some 70 000 copies have now been distributed worldwide. It is to be expected that further streamlining of the scientific effectiveness of the discipline will be achieved in several more areas in future years. Within the relatively short period of about ten years, the field of rock art studies has devel-

oped from a random collection of hundreds of individual methodologies and jargons into a proper scientific discipline with uniform standards and methods. I regard this as a main achievement of the Federation, and one that will have the greatest consequences in the long term.

Another important development in the area of rock art preservation has been my recent establishment of the Rock Art Protection Fund, an international fund that will underwrite costs of campaigns of saving or preserving rock art, anywhere in the world. The RAPF is incorporated in Australia, where it is registered as a charity. It should lend considerable weight to IFRAO's policy of campaigning in favour of effective rock art protection.

However, the perhaps most obvious effect of IFRAO has been that of bringing both individual researchers and whole rock art organisations together much closer. This is particularly evident from the many international rock art congresses IFRAO has held, of which the recent tenth IFRAO congress in Agra was the latest addition. The very latest development in IFRAO's endeavours to promote rock art protection worldwide is outlined in the following reports.

Robert G. Bednarik

Convener of IFRAO

RAR 22-741

L'Art Rupestre: conservation, mise en valeur et communication

Les Eyzies, France, 5 to 9 September 2005

A recent international conference held under the aegis of Unesco addressed the conservation, enhancement and communication of rock art in a global perspective. Attended by invited representatives from fifteen countries, this important event took place in the 'world capital of pre-History', the small town of Les Eyzies in the heart of the French Dordogne. It was held at the impressive Musée National de Préhistoire, located right under the prominent cliff with the historical stone statue of Neanderthal man, and made of the same yellow limestone.

The Museum, represented by its Director, Jean-Jacques Cleyet-Merle, and by other staff co-hosted the conference, organised its program and logistics, and it intends to publish its proceedings in due course. Unesco was represented by

Francis Childe and Suzanne Ogge from the Division du Patrimoine Culturel, and by Jean-Pierre Mohen, the Director of the Centre de Recherche et de Restauration des Musées de France. The event was also attended by the elite of French rock art studies, scholars such as Jean Clottes, Jean-Michel Geneste, Norbert Aujoulat, Jean Philippe Rigaud and Jean-Loïc Le Quellec (two of who are IFRAO Representatives). The majority of the foreign delegates also represented IFRAO member organisations, so this was the first time that IFRAO met Unesco collectively. This was undeniably reflected in the outcome of this auspicious occasion.

The conference consisted of three parts. First, there were the customary presentations of papers, occupying the initial two days. The third day began with specific, theme-based presentations leading to a workshop-style debate in the afternoon. This was a preparation for the fourth day, when delegates were given the task of designing a document of recommendations for Unesco. These were intended to address specifically the strategy of establishing inventories of rock art, techniques of conservation and presentation, documentation techniques, issues of emergencies and priorities, and partnerships between private and public entities. The purpose of the endeavour was to produce guidelines for Unesco in formulating recommendations to Member States concerning the protection of rock art. Finally, the third part of the conference, the last day, consisted of site visits of some of the classical rock art sites in the Les Eyzies region.

The proceedings began with opening addresses by Childe, Mohen, Clottes and Cleyet-Merle. These were followed by paper presentations for the rest of the first day. Nobuhiro Yoshida (Japan) drew comparisons between Hawaiian, European and Japanese rock features. Norbert Aujoulat presented a summary of the last ten years of cave art research in France. Arsen Faradzhev (Russia) showed portable material from a site in the U.S.A., followed by Valérie Feruglio (France) presenting a petroglyph site in Armenia. Kalyan K. Chakravarty (India) addressed the topics of ethnography and science in Indian rock art studies, and Angelo Fossati (Italy) presented new research in Valcamonica. The day's proceedings were rounded off by Jean-Michel Chazine (France) who gave an overview of recent rock art finds in eastern Borneo (Kalimantan, Indonesia).

Each evening the conference participants shared communal dinners in different venues, the first in La Château-briand, then at Crô-Magnon, Le Font de Gaume, La Taulade à Sireuil — names sounding familiar to prehistorians. On the evening of the Thursday we were all invited to the Château d'Aubas, a castle some distance from Les Eyzies. Its owner, Monsieur Claude Douce, invited the entire conference to his home, serving us the most expensive wines I have ever seen. What a treat!

The second day of the proceedings began with a fascinating talk by Jean-Michel Geneste, outlining the conservation strategies in Lascaux, Chauvet and Cussac caves. Arsen Faradzhev then presented a paper together with a Russian biologist, on the lichen flora of the Zalavrga site in Karelia. Jean-Philippe Rigaud from France gave a detailed description of the decorated cave Gua Kain Hitam

in Sarawak (western Borneo, Malaysia) and the problems of its conservation. Siberia was represented by Yakov Sher, who offered a summary of the petroglyphs along the Yenisey River, affected by hydroelectricity dams. The first of two South African contributions was given by John Parkington, addressing the conservation, management and research in the Clanwilliam area of the western Cape. He was followed by Malika Hachid from the opposite end of Africa (Algeria), presenting a project of direct dating and creation of a museum of rock art in her country. Anne-Marie Pessis and Niède Guidon provided an apposite summary of their long-term project of studying, preserving and presenting the rock art of the Serra da Capivara National Park in southern Piauí, Brazil. A second presentation by K. K. Chakravarty described a sustainable strategy for rock art research and conservation in India. The documentation and preservation of Mongolian rock art sites was the subject of a paper by American researcher Esther Jacobson-Tepfer. The co-organiser of the event, Jean-Jacques Cleyet-Merle, then presented his summary of the several Vézère valley sites that have been inscribed on the World Heritage List. Maria Isabel Hernandez Llosas (Argentina) followed with a discussion of archaeological enquiry, political responsibility and community involvement in the process of protecting and presenting rock art. A similar concern for the interface between protection and presentation of rock art, a central theme of the conference, was expressed in the paper by Anne-Sophie Hygen (Norway). The day's presentations were concluded by Stan Beckensall (United Kingdom), who identified recommendations for priority action from the perspective of his experience.

These proceedings continued on the morning of the third day, beginning with an overview of rock art in the United States of America by David S. Whitley, with special reference to the Carrizo Plain National Monument. Jean-Loïc Le Quellec (France) presented the issues raised by oil exploration and rock art protection in Libya, and a more acute problem of the same category was presented by Robert G. Bednarik (Australia), with the clash between petrochemical industries and the rock art of Dampier Archipelago. A second perspective from South Africa was offered by Geoffrey Blundell, focusing on the development of the Rock Art Centre in Johannesburg. The morning's proceedings were completed with presentations by Manuel Gonzalez Morales (Spain) and Chen Zhao Fu (China), rounding off the global coverage.

The afternoon began with detailed instructions by Jean-Pierre Mohen concerning the main purpose of the conference: the formulation by the delegates of recommendations for Unesco. The delegates were to form five thematic discussion groups. Four of them were to discuss general themes: the discovery of rock art; responsibilities and prevention; inventories, documentation and international co-operation; and protection, conservation and public access. The fifth group was to discuss the cultural impact of this heritage and the role of Unesco. The rest of the day was taken up by preliminary discussions leading up to the proceedings of the subsequent day.

The fourth day of the conference was dedicated to its main purpose. Suzanne Ogge from the Division of Cultural Patrimony of Unesco moderated the complex process of determining the required recommendations. After a great deal of discussion we formed the five thematic groups, each delegate deciding which theme he or she preferred to contribute to. I had been chosen to lead the last group with Dr Mohen, which interestingly comprised the Australasian representatives (Japan, China, India, Australia), and we formulated eight key recommendations for Unesco. Among them we listed the establishment of a register of the most endangered rock art sites, and the need to encourage international development agencies to include rock art protection as a precondition for potential development assistance.

In all, the five groups nominated about thirty recommendations, which were then the subject of some consolidation, review and discussion. The latter continued on the following day and even on the train back to Paris. However, the fifth and last day of the conference was primarily dedicated to the field trip. The following sites were visited: Font de Gaume, Combarelles, Le Poisson and several other shelters nearby, Cap Blanc and the Lascaux facsimile.

Obviously this conference marks a new phase in the involvement of Unesco with rock art, and in that sense alone it was an important event for the discipline. There are clear indications from Unesco that world rock art is to be afforded more attention in future, that the submission of rock art properties to the World Heritage List is to be encouraged, and that the protection of rock art is to become a major concern for Unesco. It was particularly pleasing for me to see that the Dampier Rock Art Precinct, the most seriously threatened major rock art site in the world, thus became the gadfly — the provocation for taking decisive action to prevent future senseless destruction of rock art.

Robert G. Bednarik

RAR 22-742

Summary report to Unesco

In this summary report I shall address two issues: the state of rock art research, conservation and management in Australia; and some thoughts on these same topics from a global perspective.

In terms of its rock art, Australia is a privileged continent. Not only do the researchers of this country have the best access to the traditional ethnographic significance or meaning of its rock art, it also has been blessed with an unusually large corpus of surviving rock art. The reason for this wealth is not, as often assumed, that most Australian rock art is comparatively recent. Rather, it is the result of the predominantly semi-arid country's excellent preservation conditions, the absence of any historical iconoclast tradition, and the relatively low population density in most of Australia.

As a reflection of the great size of the rock art corpus in Australia, a universal inventory of Australian rock art

remains elusive, but there are numerous local inventories in existence. If we made adequate allowance for the incomplete coverage of site surveys we could attempt a rough estimate of the overall task ahead. Experienced field workers have made various estimates, for instance it has been suggested that there might be about 50 000 sites in Queensland, and similar numbers could pertain to the Northern Territory and the northern half of Western Australia. As a minimal benchmark it seems widely agreed that the country's total number of sites must be well in excess of 100 000, and an estimate of perhaps 200 000 sites may be realistic. Many if these still have to be found, and large concentrations remain most inadequately surveyed. Some of these sites comprise tens of thousands of motifs, but the average number of motifs may be more in the order of 500 or 1000 motifs per site. In short, the total number of rock art images in Australia is certainly in the tens of millions.

It follows that the creation of a full inventory of Australian rock art will take many more years, and we are still in the stage of having to expect major new discoveries. Nevertheless, it can safely be concluded that the largest concentrations are those of, from the west, the Pilbara, the Kimberley, Arnhem Land and Cape York Peninsula. The largest single site complex, which is also the largest rock art complex in the world, is that of the Dampier Archipelago, located in the Pilbara. It has been partially surveyed and is thought to comprise over a million petroglyphs.

It follows from these observations that documentation of Australian rock art remains substantially incomplete. Among the minute percentage that has seen any level of recording, levels of documentation vary greatly. In my estimate, three to four million motifs have been photographed to a reasonable archival standard, but a much smaller number, a few tens of thousands, has been well recorded. Most of these reasonably comprehensive records refer to isolated situations, often to the efforts of specific individuals or agencies, and in some cases to the work of consultants working for corporate entities. So these records are scattered over many holdings and there is not much uniformity of standards among them.

Despite the large size of the body of Australian rock art, its conservation is in comparison to the rest of the world in relatively good shape. The great majority of sites are quite remote and of limited access to visitation, and they most often occur on private land. Positive publicity campaigns have prompted many landowners to be quite protective of sites. Only a small number of rock art places have been 'sacrificed' to the public, and these are often well developed for visitation. Access paths have been built, raised walkways and viewing platforms erected, there are 'psychological barriers' as well as physical ones, and good interpretation material and visitor books are widely employed at unsupervised sites. As a result of subtle public education measures, the incidence of site vandalism has been reduced to the point where it may become a thing of the past.

Active conservation work conducted in Australia has included graffiti removal, stabilisation of deteriorating rock supports, widespread installation of artificial drip-lines and other changes to site hydrology, modification of micro-climate, removal of fire hazards in the vicinity of rock

art, suppression of dust from visitors or from nearby road traffic, and the installation of various types of barriers, e.g. to keep out animals. Some limestone cave sites have had to be locked because of the fragility of their rock art, and a few heavily visited rockshelters have been protected by metal grilles or cages.

Some of the conservation work is conducted at the behest of the rock art's traditional owners, the local Aboriginal communities, often with the assistance of relevant state agencies. Limited state funding has been available for such work since the mid-1980s, i.e. since the Australian Rock Art Research Association (AURA) began lobbying for such support. That organisation has been instrumental in galvanising researchers into a discipline, and in raising public awareness about rock art through the media and various public agencies, at both state and federal levels. Perhaps the most important lesson we have learnt in rock art site management is that positive public perception is the key issue in site protection.

Unfortunately, in one state, Western Australia, current legislative protection of rock art remains entirely inadequate, and the principal rock art vandal there is the state itself. This emergency state has become especially acute at the huge Dampier petroglyph site complex, where massive industrial development has already destroyed well over 100 000 petroglyphs since 1964. The rest of this substantial monument is being subjected to gradual deterioration from acid rain caused by a petrochemical complex that could easily be located anywhere else in the State. AURA and the International Federation of Rock Art Organisations (IFRAO) are engaged in a long-term campaign to have several planned new hydrocarbon-processing plants located at alternative sites. This is the only serious case of intentional large-scale destruction of rock art in Australia's history, and IFRAO and AURA solicit the support of the global discipline for their campaign.

Rock art research is very well served in Australia, with well-established traditions. AURA is the largest rock art organisation in the world, producing the discipline's major refereed academic journal, as well as two newsletters and a series of monographs on rock art. Apart from survey work, the country's researchers have focused primarily on two areas of research: analytical studies, especially on the dating of rock art; and ethnographic studies involving the traditional owners of all Australian rock art. Most of the analytical rock art dating methods currently in use worldwide were initially developed in Australia, and the country continues to be a leader in the field of estimating rock art antiquity. Other research interests being pursued by Australian scholars are conservation or preservation techniques, advanced methods of recording and a variety of specialised analytical approaches. A distinctive feature of Australian rock art research is its multidisciplinary orientation, with specialists in documentation, conservation, ethnography, anthropology, archaeology, cognitive studies, semiotics, geochemistry, geology, art history, geography and other disciplines all collaborating with the traditional owners of the rock art. Such a complex discipline is not the preserve of any particular type of institution, but is a collaborative

effort of institutional and private partnerships overseen essentially by the common forum of AURA. These practices do not preclude the possibility that this productive system of partnerships could not be expanded further, and in the future various new players may emerge in the field, including corporate interests.

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Now I turn to international issues — as an Australian rock art researcher who regularly works abroad, and who has conducted extensive fieldwork in all continents except Antarctica.

Efforts to preserve rock art vary greatly around the globe, ranging from the truly exemplary treatment of the outstanding Chauvet Cave in France, arguably the best-protected rock art site in the world, to numerous regions where rock art enjoys no protection whatsoever. While we do have the superb site protection systems of countries such as Saudi Arabia, in many other countries the relevant authorities are simply not aware of their international obligations in respect of the rock art heritage. Examples IFRAO has addressed in the past have occurred in, among other countries, Portugal, Peru, Santo Domingo, Canada, Namibia and India. IFRAO has found that many, even most of the preservation problems due to inappropriate development were the result of local lack of information or awareness. There needs to be a much stronger public promotion of the principle that all rock art is part of the common human heritage, and that it is ultimately the property of humanity as a whole. Nation states merely manage this resource on behalf of us all. Allowing its destruction contravenes international law, and the *Unesco Declaration concerning the Intentional Destruction of Cultural Heritage* could be reinforced (especially Article VI) or better promoted among those who are effectively managing rock art in the various Member States of Unesco. It is clear from my experience that most of the officials theoretically responsible for the protection of rock art around the world — who might be attached to forestry departments, cultural management offices, heritage or land management departments of various types — simply have limited awareness of what their responsibilities concerning the immovable cultural heritage entail. This is not necessarily a condition endemic to developing or badly governed countries; it can be just as profound in developed countries. The example of Portugal could be cited, or the fact that the vandalistic treatment of petroglyph sites in Scandinavia (e.g. by painting them) is still being continued in some regions.

It is also apparent that in those parts of the world that possess particularly famous archaeological tourist attractions (e.g. Egypt, India, Mexico, the Andean countries), rock art tends to be more neglected than in other, comparable countries. Again, awareness programs would seem to be the answer. Another issue is that there has traditionally been a reluctance in most Moslem countries to recognise the importance of rock art, essentially because of religious bias, but this, fortunately, is now being overcome by Saudi Arabia taking a strong lead in rock art preservation, and protection is also improving in Morocco, Algeria and Libya. It is to be hoped that other Islamic countries will follow these examples in the coming years.

The global inventorying of rock art is not only important for research or site management, but also for protection: it is impossible to effectively protect a resource that remains unrecorded. IFRAO has been very successful in eradicating damaging recording practices that were still widely used by researchers up to the 1990s in several major rock art regions. It has also facilitated the development of modern recording techniques and digitised processing and manipulation of data by introducing an international standard scale for rock art recording. Moreover, IFRAO has been quite effective in the implementation of improved research standards in most parts of the world, and in a scientifically standardised terminology for the discipline, by creating a rock art glossary and translating it into several of the major languages.

But perhaps the most spectacular success of IFRAO has been its role as the world's foremost advocate for the protection and preservation of rock art. In this work, IFRAO has found itself opposed by many interest groups, ranging from local administrations, developers and industrial corporations to national governments. All of these confrontations have resulted in better appreciation of the need to take care of rock art, and most of them have brought about the preservation of rock art that would otherwise have faced certain destruction.

However, the most intensive such confrontation in the history of rock art studies is currently taking place in Western Australia, where the state government has been engaged in the gradual destruction of the world's largest concentration of petroglyphs, the Dampier Rock Art Precinct. Since 1964, between 20% and 25% of this magnificent monument has been lost to unnecessary development, through appalling planning and severe state vandalism. Although some significant concessions have been made over the past three years, the destruction of rock art and megalithic stone arrangements is continuing at Dampier, and the campaign is in desperate need of international promotion. The state government of Western Australia is the world's worst cultural vandal, exceeding in its fervour the former Taliban regime of Afghanistan. The reason is that the producers of the Dampier rock art, the Yaburarra tribe, were the victims of police-perpetrated genocide, when they were extinguished in a series of incredible massacres taking three months, commencing 17 February 1868. No compensation has ever been made to the Aborigines, nor have any of the murderers faced a court. Today this historical incident is such an acute embarrassment to the state government of Western Australia that it is keen to see the cultural patrimony of the Yaburarra eradicated as well.

This example shows that there is often more at stake than just cultural values. Rock art is frequently the work of those who were dispossessed, destroyed or defeated — history's 'losers'. It is contingent upon civilised society of the present century to ensure that the destructive powers of the 'winners' are limited. If we fail in this, we have no right to consider ours a civilised society.

Robert G. Bednarik

Convener and Editor of IFRAO

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International Cupule Conference 2007

The Cochabamba Rock Art Research Association (AEARC) invites cupule experts from all over the world to the International Cupule Conference, to be held in Cochabamba (Bolivia, South America) from 17 July to 23 July 2007. Cupules are one of the most common forms of rock art and have so far received very little attention. They are found in most countries and belong to different cultural periods.

The International Cupule Conference will take place in the city of Cochabamba, situated in a beautiful valley in central Bolivia. This region presents a huge variety of cupule sites, which vary in their antiquity, symbolism and function. Three days of the conference will be dedicated to the different symposia and the remaining four days to the excursions to cupule areas. Cupule experts are invited to present papers in the following symposia:

- 1) Cupules and their antiquity (dating).
- 2) Possible symbolism of cupules.
- 3) Possible function of cupules.
- 4) The re-use of cupules (ethnographic research).
- 5) Different types of cupules and their combination with other types of rock art.
- 6) Natural cupules (non-anthropoc).
- 7) Replication work with cupules.
- 8) The taphonomy of cupules.
- 9) Cupules and rock gongs (lithophones).
- 10) Cupules and their lithologies (the importance of understanding the relationship between cupules and the rock types they are found on).
- 11) Different types of cupules in Bolivia.

The ten first symposia will be for the international experts that will participate. English will be the main language. All papers will be of an international scientific standard. The last symposium (on cupules in Bolivia) will be reserved for AEARC's and other Bolivian researchers and will have an introductory purpose for the excursions. Spanish will be the language with simultaneous translation into English.

The participation fee for the international experts will be \$US100 (one hundred U.S. Dollars), which can be paid during the first day of the conference. Papers, not exceeding 20 pages, should be sent before 31st March 2007. Any enquiries can be addressed to:

Prof. Roy Querejazu Lewis, President – AEARC

E-mail: aearc@hotmail.com

Postal address: AEARC, Casilla 4243, Cochabamba, Bolivia, South America