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Jean CLOTTE

PLEISTOCENE ART OF THE WORLD

Short articles



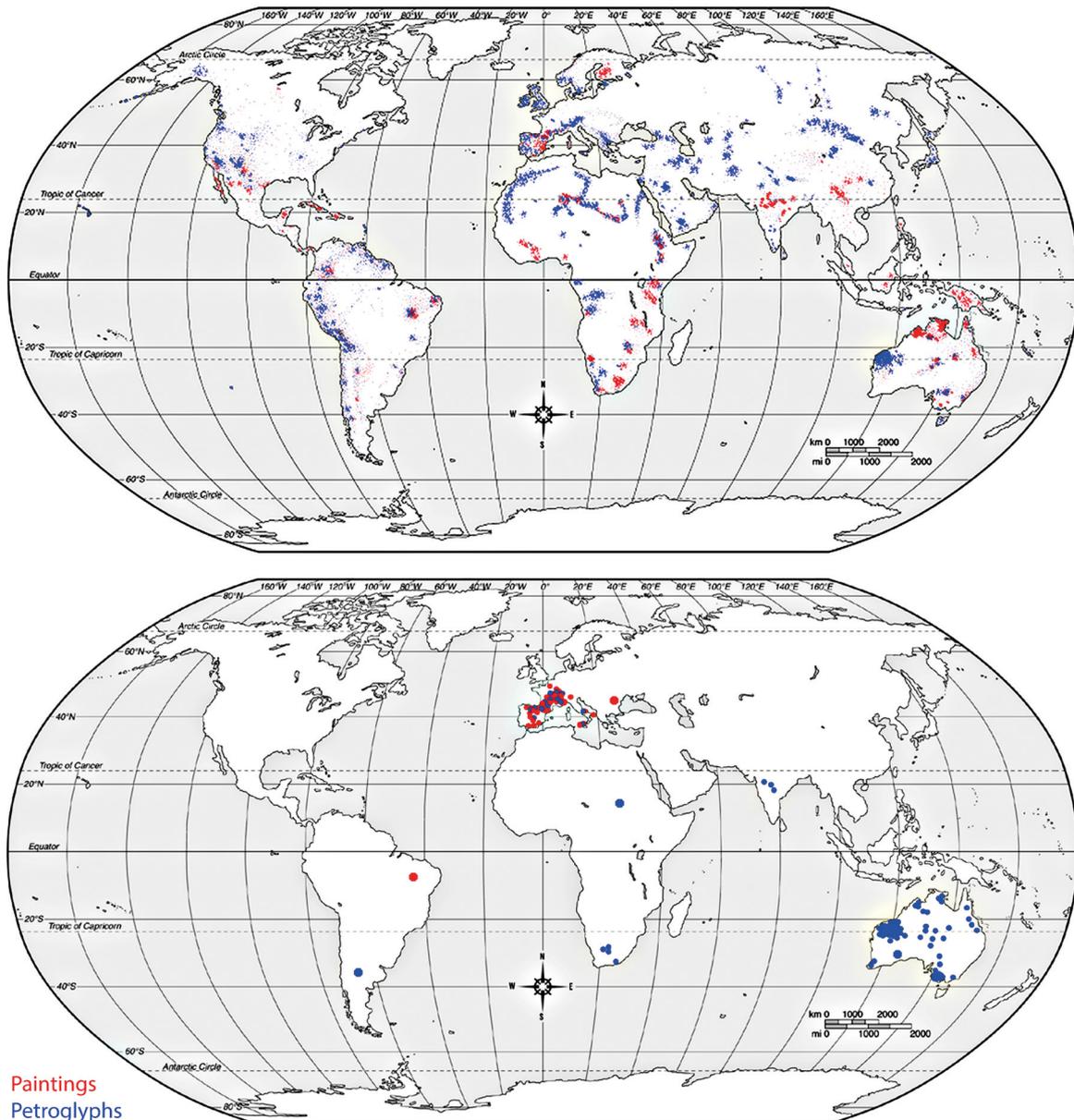
## DATING AND TAPHONOMY OF PLEISTOCENE ROCK ART

**Robert G. BEDNARIK**

It has been estimated that the world's surviving rock art can safely be postulated to be in excess of 50 million motifs, and quite possibly even more than 100 million. These are, however, unevenly distributed around the globe. Most of the world's major corpora occur in arid or semi-arid regions that are not assumed to have supported high population densities. Preferential survival of rock art in deserts is attributable not only to their low rainfall and high ambient pH regimes, but also to the lower exposure to anthropic deterioration. The taphonomy of rock art determines the composition of the surviving corpus of world rock art. Present distribution or apparent changes in rock art "styles" over time are not necessarily functions of economic, environmental, cultural, social or even religious factors. Thus direct correlation between "quantifiable" archaeological "data" and rock art poses problems, and the lack of reliable dating for nearly all rock art in the world only aggravates these.

Taphonomy, a major encumbrance in statistics of rock art, deals with the logical underpinning of the idea that the quantified characteristics of a record of past events or systems are not an accurate reflection of what would have been a record of the live system or observed event. Without the use of taphonomic logic and concepts such as taphonomic lag-time or taphonomic threshold, very limited scientific understanding of rock art is attainable. Most rock art can be assumed to have been lost over time, with the proportional loss index increasing linearly with time. Thus the cultural significance of extant statistics is subordinate to their taphonomic significance. Perceived trends in the ways rock art presents itself to our subjective perception and cognition are often presented as evolutionary, chronological (by circular argument) or empiricist evidence. In addition to geomorphological biases, many other factors can also greatly distort the statistical characteristics of rock art. Among them are location, recorder's bias, historical responses to alien iconographies, or indeed any process that contributes to the degradation of the art. Lithology, site morphology, micro- and macro-climate, site biology and a host of other taphonomic factors have all contributed to selective survival and to alterations of both the appearance and statistical characteristics of the surviving corpora. Any interpretation using variables such as distribution, location, style or technique is doomed to failure unless informed by taphonomic logic.

The most debilitating aspect of rock art taphonomy, whatever the physical, biological or chemical processes responsible for it may be, is that it distorts evidence systematically rather than randomly. It selects the most deterioration-resistant forms for survival so that its truncation of the record is highly discriminate. The forms of rock art that can survive longest are paintings and engravings in deep limestone caves with their stable speleoclimate; and at open sites deeply executed petroglyphs on the most weathering-resistant rock types, preferably occurring in favourable climatic settings. It is at once obvious that all rock art credibly attributed to the Pleistocene falls into these two categories.



Known rock art occurrences (top) compared with tentative distribution of Pleistocene rock art (bottom).

The issue of Pleistocene rock art is rendered even more complex by our continuing inability of securing reliable dating of most rock art. With few exceptions, rock art age estimations so far presented are generally experimental, ranging from the credible to the fictitious. In particular, the attribution of rock art to the Pleistocene, on whatever basis, remains in many cases most tenuous. Therefore the present perception of what is or is not Pleistocene rock art, globally, is also greatly distorted by false datings, often based on stylistic perceptions and similar subjective variables. Finally, there is the issue of relative regional research efforts, which has also contributed significantly to distortions concerning this topic. Nearly all publications on Pleistocene rock art deal exclusively with western Europe's Upper Palaeolithic traditions, yet most of this phenomenon is located outside of Europe. In Australia alone there is far more rock art of such antiquity, and all of it is Mode 3 ("Middle Palaeolithic") rather than Mode 4 production.

Thus the Pleistocene rock art of the world has remained largely ignored so far. It offers Lower Palaeolithic examples from India and possibly Africa, and a massive corpus of Mode 3 petroglyphs from Australia and elsewhere. By comparison, the Mode 4 traditions of south-western Europe are not of great importance because they are only a small piece in the overall puzzle. Most parts of this great puzzle have not yet been found or properly considered. The global distribution of Pleistocene rock art remains therefore unknown. However, we are not entirely without relevant information, and if we tried to depict the known or reasonably assumed world distribution of Pleistocene rock art we could create such a map (figure). This is empirically based, but we need to remember that there are severe limitations involved. It does, however, help to gain a more balanced view of the subject, and it certainly helps in re-focusing our endeavours in this field. Most certainly, a map of the global Pleistocene rock art will look very different in a hundred years from now, but this is a first step to securing it.





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