

## PARIETAL FINGER MARKINGS IN AUSTRALIA

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While Australian rock art is located in open air sites and rock shelters, in recent years a number of deep caves have been reported which contain markings, usually on travertine surfaces. Panels of *Montmilch* finger lines were discovered at Koonalda Cave in 1957, at which time it was suggested that the lines could be remnants of "solution tubes", erosion fluting of surfaces (presumably *Rillenkarren*), or even sharpening grooves for bone tools. The first sites of "unexplained markings" described in any detail were Kintore and Cutta Cutta Caves. Concentrations of incised, sub-parallel lines occurring in groups of three to five were observed by Walsh (1964) in both caves. Although the scratches appear to be animal claw marks, some are out of reach to animals. This can also be observed in several other Australian caves. In Princess Margaret Rose Cave, a cave which was not accessible to prehistoric man, similar animal marks extend to 5.5 m. above the present concavation floor. A survey of the markings in Orchestra Shell Cave seems to indicate that they were not done by human fingers either (Hallam, 1971, p. 100; cf. also Mulvaney 1975, p. 279).

Despite Koonalda Cave's outstanding wealth of parallel finger lines, no detailed study has been made of them so far, in any of the publications on this outstanding site (Gallus, 1968a, 1968b, 1971, 1977; Sharpe C.E. & Sharpe K.J., 1976, Edwards & Maynard, 1969; Maynard & Edwards, 1971). Orchestra Shell Cave has a small series of roof markings heavily encrusted with travertine growth. The results are significant modifications to the section of the finger lines that brought forth Hallam's (1971) view on the use of some engraving implement. Hallam also mentions the nearby Ross's Cave, and the well-preserved polydigital fluting on its ceiling. Further, several small panels of both finger lines and incisions were discovered in 1977 in a cave near Buchan, in the area of the continent's southeastern tip.

Australian studies have been conducted in isolation, each writer describing phenomena he had never encountered before. No attempt was made to use geological observations for explaining modification processes or assisting in dating the travertine medium. My own investigation involves field evaluation, analyses of styles and sequences, dating attempts, considerations of relating both human and animal marks to other contents or aspects of the sites (including their configurations), and speculations concerning certain aspects of animal behaviour, as well as studies of the processes that affect cutaneous travertine formations over long timespans.

In the course of this study two further caves with *Montmilch* finger lines were discovered in the vicinity of each other near Mount Gambier (South Australia): Malangine and Koongine Caves. The sites are of particular archaeological significance because of the occurrence of several generations of petroglyphs (in addition to animal markings) which can be distinguished by strati-

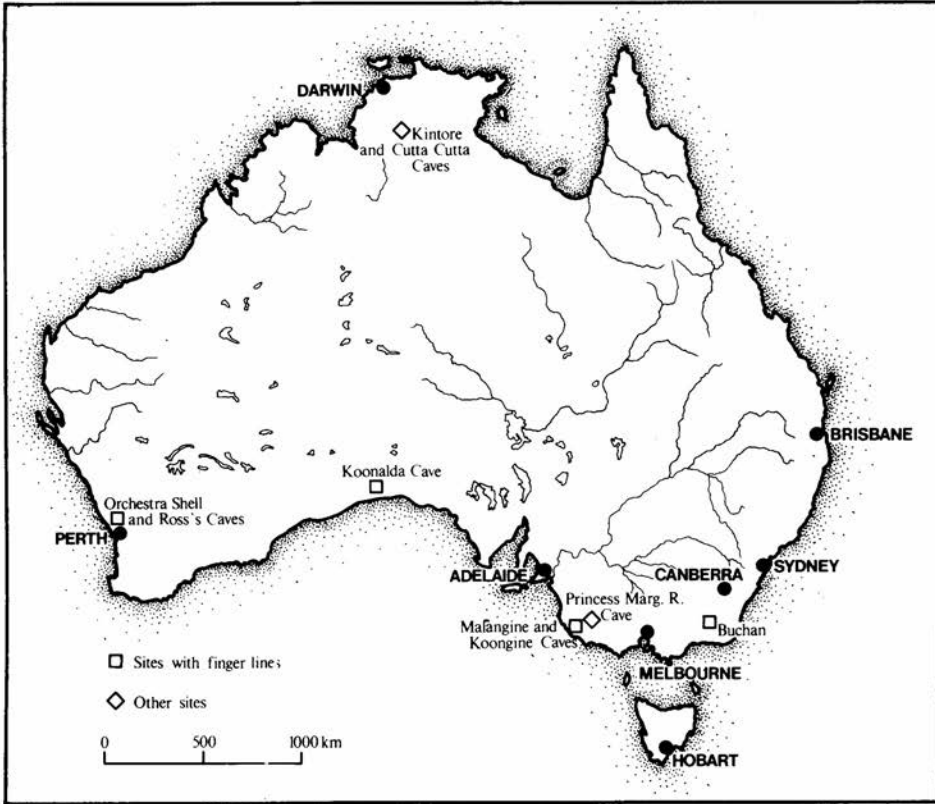


Fig. 56  
Some of the Australian sites investigated.

graphical context, technique, spatial distribution, and differing antiquity. There are instances where petroglyph generations are actually separated from each other by a substantial laminated secondary carbonate deposit. The following sequence has been established: a period of abundant *Montmilch* formation was followed by digital fluting, which in turn was succeeded by climatic changes causing stabilization of the deposit and speleothem growth. Figurative motifs and abraded grooves resembling a style occurring in many parts of Australia are superimposed, apparently during the Early Holocene. Near the entrances these are covered by a substantial travertine lamina bearing shallow incised lines. They in turn are obscured by a thin veil of travertine.

Malangine and Koongine Caves provide a convenient geographic link between Koonalda and Buchan. Since the present paper attributes the markings in Orchestra Shell Cave to activities similar to those evidenced at the other caves it could be inferred that a tradition of non-iconic parallel finger lines existed along the entire southern coast of Australia.

A major roof collapse in Koongine Cave provides a *terminus ante quem* for the digital *Montmilch* fluting and its buried debris may help in absolute dating. At Orchestra Shell Cave part of the cave floor has subsided, probably due to the activities of phreatic water. Occupation deposits on the lowered floor could be interpreted as indicating that the subsidence, which has rendered some of the ceiling markings beyond human reach, has occurred

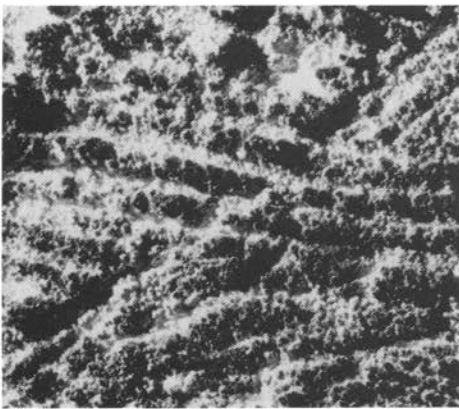
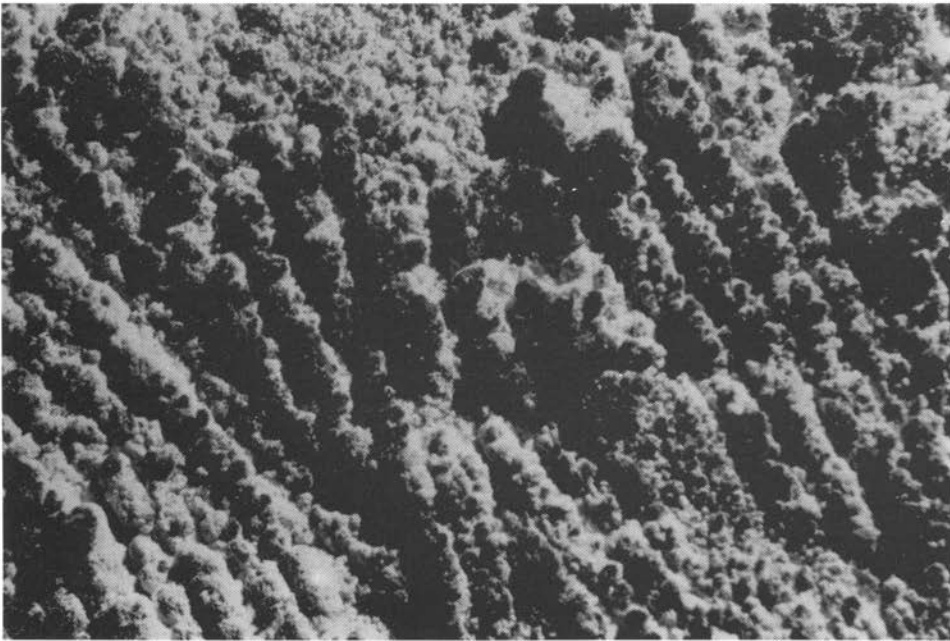


Fig. 57-58  
*Intersecting sets of finger lines, heavily encrusted with travertine. Ceiling of Malangine Cave.*

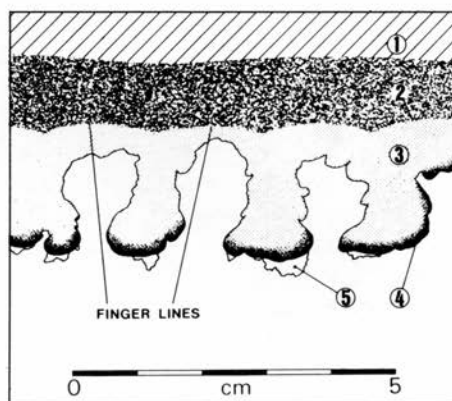
Fig. 59  
*Finger line arrangement in ceiling recess, Koonging Cave. Note broken chert nodules at the top.*

well before 6,500 B.P. Three radiocarbon dates from Koonalda Cave suggest that the incised lines there are at least 20,000 to 30,000 years old, and these may be contemporary with, or younger than the finger fluting. It is therefore reasonable to assume that the antiquity of the Australian tradition of polydigital fluting is of a magnitude comparable to that of the European tradition.

Malangine Cave has excellent prospects of yielding Australia's first dated sequence of rock "art". The stratified travertine layers have experienced some exfoliation and fragments of them have been recovered from a core hole sunk 2.21 m. into the well-graded sediments. Two samples of *in situ* travertine have already been dated by the method of Franke and Geyh (*e.g.* Geyh,

Fig. 60

Extreme form of speleothem development over finger fluting, seen in section: 1) primary rock of cave roof; 2) dehydrated *Montmilch*; 3) pearly travertine exudations of calcium carbonate; 4) brown organic stian, partly interstitial, concentrated on the surface; 5) yellowish-white efflorescence of sulphates.



1969; I express my gratitude to Professor Dr. M. Geyh, Hannover), and one of the adjusted C-14 ages can be related to "art styles": Hv-10241, of  $5,550 \pm 55$  B.P. is the minimum mean age of the dense laminated travertine separating a generation of abraded grooves and near-iconic motifs (mostly "bird tracks") from lightly incised lines. Isotope exchange by an infiltrating younger vadose solution would have a rejuvenating effect, had it occurred, and it can therefore be assumed that the former of the two "styles" is significantly older than 5,500 years, the later (executed before the lamina had become desiccated) could perhaps be in the order of 5,000 to 5,500 years old.

There have been several attempts of interpreting the *Montmilch* finger lines, both in Europe and Australia. The Abbé H. Breuil pioneered the idea that the earliest iconic images of the Aurignacian may have developed from random scribbles of finger marks. Arrangements at European sites appear to corroborate this view (e.g. at Altamira, Pech Merle, Gargas).

Marshack disagrees with this proposition. He argues that, firstly, the ability to see an image in a random cluster requires culture. Secondly, he does not consider the "meanders" as random accumulations but as a sophisticated image system. He proposes that they may not be subsidiary signs but in fact represent the most complex element in the iconography (Marshack, 1977). His postulate that "naturalistic" animal representations associated with sets of parallel lines almost never appear "as an afterthought out of a meandering line" can be verified at several sites.

A relationship between the markings and the prehistoric chalcedony mining activities would be plausible at Koonalda. Gallus initially interpreted the finger fluting as a means of communication, connected with the mining of the silicate seams. This would find support by my observations at other sites: at both Bara Bahau and Malangine Cave poor quality chert has been extracted in the immediate vicinity of finger fluting, yet both these sites are located in regions rich in superb flint and chalcedonies. The evidence from these sites supports Gallus' (1977, p. 380, 382) proposition that the chalcedony from Koonalda Cave's interior may have had special significance to the people mining it. Nevertheless, the correlation of chert mining and finger lines is of no avail at any of the remaining localities in question (-except Rouffignac) as they lack silicate deposits. This does not rule out the possibility, however, that the mining was only one aspect of the mode of cultural behaviour that also produced the finger fluting.

Webb (quoted in Gallus, 1977) suggests that perhaps only the physical contact with the cave wall, the act of touching and marking it (*cf.* also Marshack, 1977, p. 288) was of ritual significance. The resultant marks would have no semantic purport themselves. Another possibility mooted, that the marks were simply made by people groping in the dark, does not warrant serious consideration, partly because of the objections already raised by Maynard and Edwards (1971, p. 79), and partly because there are several occurrences of finger markings in caves admitting ample natural light.

The thesis emphasizing the finger lines' resemblance of cave bear claw marks, and the common occurrence of both types of marks at many French sites deserve investigation. Probably the most impressive evidence in favour of such an association is at Bara Bahau (superimposition of finger fluting over bear scratches). Interestingly, animal markings are prominent at three of the Australian caves (Koonalda, Koongine and Malangine Caves).

Finger fluting could have been caused by people removing the *Montmilch* for its own sake, perhaps in a ritual context. The clayey, moist precipitate could have served as a body decoration, as a medium conveying some spiritual essence, or even for medical purposes (*Montmilch* was used in some Alpine regions as an ophthalmic analgesic in historic time). Finally, Maynard and Edwards (1971) suggest that the finger marks at Koonalda Cave may simply represent prehistoric man's response to the softness of the cave wall, combined with an impulse to "make marks". Many members of Wright's 1967 expedition admitted to similar impulses when in the cave. While one may agree with the general concept of a spontaneous impetus, a human reaction to existing marks may also be considered. The only modern counterparts to the Palaeolithic finger lines I have ever observed were those adjacent to them, or defacing them.

However, in a broad overview of the European phenomena of producing parietal finger markings, different traditions apparently utilized a convenient technique, often in response to existing designs.

*NOTE: Significant discoveries have been made since this preliminary report was written. So far, the number of known Australian sites of finger markings have been increased sixfold through my "Parietal Markings Project" — a survey embracing all caves in the world with finger flutings. The Mt. Gambier district, in the south east of South Australia, now has the biggest regional concentration of such sites. In addition a new tradition of Pleistocene rock art has been identified in this area, a district formerly believed devoid of any rock art. It consists of non-iconic motif and is perhaps related to very early petroglyphs in North Queensland and Tasmania. The most recent find is the largest site of Australian cave art, Karlie-ngoinpool Cave, which contains thousands of petroglyphs. The emerging picture suggests that parietal art may be as widespread a phenomenon here as it is in Western Europe.*

*But more important than these discoveries is the resultant proposal of three hypotheses, one of which has far-reaching consequences. It links the typically Upper Palaeolithic human innovations with a rapid acceleration in the development of advanced intellect and communication methods, results of a successful attempt to define the nature of the cosmos: an anthropomorphic system of consciousness was conceived with the help of pre-existing neural patterns when these were both externalised and perceived. Another result of the intellectual "quantum jump" heralding the Upper Palaeolithic is the emergence of externalised concepts of reality, i.e. art. Thus the earliest rock art is thought to document the origin of the modern human intellect.*

*Résumé:* Les signes digitaux non-figuratifs sur des dépôts de boue ont été révélés dans au moins deux régions du monde: dans l'ouest de l'Europe et sur le long de la côte sud de l'Australie. Les deux traditions ont beaucoup de similitude et les deux datent du Pléistocène Supérieur. Dans les deux régions, ces signes sont parmi les premières expressions graphiques de l'homme. Un étude comparé permet de constater les similitudes entre les origines de deux traditions artistiques très éloignées l'une de l'autre.

Quelques essais d'interprétation de ces signes sont considérés. De même, les données chronologiques sont examinées pour les sites Australiens.

*Resumen:* Marcas digitales aparentemente no figurativas, sobre depósitos arcillosos de las paredes de las grutas, se encuentran en por lo menos dos zonas del mundo: en Europa occidental y a lo largo de las costas meridionales de Australia. Las marcas de una y otra zona presentan muchas semejanzas; en ambos casos remontan al Pleistoceno superior y figuran entre las primeras expresiones gráficas del hombre. Su estudio comparado pone de manifiesto las semejanzas existentes en los albores de dos tradiciones autónomas de creatividad artística. Se discuten brevemente algunas tentativas de interpretación de estas antiguas marcas. Se examinan los datos cronológicos y de contenido de los lugares australianos.

*Riassunto:* Segni digitali apparentemente non figurativi su depositi argillosi sono stati rilevati su parete di grotta in almeno due zone nel mondo: nell'Europa Occidentale e lungo la costa meridionale dell'Australia. Le tracce hanno molte similitudini ed entrambi risalgono al Pleistocene Superiore. In ambedue le zone sono tra le prime espressioni grafiche dell'uomo. Il loro studio comparato mette in luce le similitudini esistenti tra gli albori di due tradizioni separate di creatività artistica. Alcuni tentativi di interpretare questi antichi segni sono brevemente discussi. Sono esaminati i dati cronologici e contenutistici dei siti australiani.

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