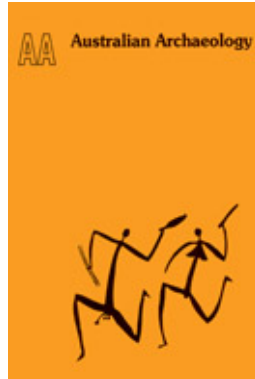


Australian Archaeology



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Other Activities

J. Allen completed the editing of volume 3 in the departmental series *Terra Australis*, which is a revised version of a PhD thesis on traditional trade in the New Guinea highlands written in the Department of Human Geography, Research School of Pacific Studies, by I. Hughes now of the ANU's Human Sciences Program, School of General Studies. Allen also continued with the editing of the Sweatman journal and, with Golson and Jones, undertook the preparation for publication of the papers from the Sunda and Sahul symposium organised by the Department for the 13th Pacific Science Congress in Vancouver last year.

J. Golson

(Adapted from the department's 1976 annual report.)

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RECENT ARCHAEOLOGICAL RESEARCH IN
WESTERN AUSTRALIA

General Investigations

1. Devil's Lair

Dortch and Merrilees have continued their Devil's Lair investigations with a sixth field season in April 1976 during which they recovered bone and stone artefacts from layers well below that now dated in excess of 31,000 years ago (personal communication, C. Dortch). The stone material was mainly limestone, but included two quartz pieces. These lower layers differed from those encountered higher in the deposit in that they no longer represented undisturbed occupation levels, but appeared to have a component of secondarily derived material. It is not yet possible to make unequivocal statements about the faunal associations of this cultural material.

The human hip bone with a date of about 12,000 BP recovered in 1975 (Dortch 1975) has now been described by Allbrook (1976) as comprising the major part of the right half of the pelvis of a mature, probably male, individual. Its recovery from a hearth near the side of the cave raises questions of its role in the activities in a site which has yielded also a perplexing narrow pit, barely wide enough to hold a man (Dortch and Merrilees 1973), and two detached central incisors (Davies 1968; Davies 1973). Freedman (1976) points out that the finding of a third incisor, this time an upper lateral deciduous incisor from an individual probably only about eight years old, would throw doubt on the possible interpretation of this material as denoting initiation rituals.

This latest tooth is about 19,000 years old, while the previous deciduous specimen (Davies 1973) was almost as ancient, probably about 17,000 BP, and the permanent incisor first found, like the hip-bone, probably belonged to the last stages of the cave's use, around 12,000 BP.

The activities denoted by flat pieces of limestone, possibly from the cave roof, bearing surface scratches (Dortch 1976) have a similarly wide span of date, from about 20,000 years ago (Plaque B3652, 20,400 \pm 1000 bp, SUA 32) to around 12,000 (Plaque B3651, 12,000 bp, bracketted by 11,960 \pm 140 bp, SUA 102 and 12,050 \pm 140 bp, SUA 103). Ochre, a probable bone pendant (Dortch and Merrilees 1973) and two bone beads indicate probable self-ornamentation over this same time-span. Like Koonalda, (Sharpe, C.E. and K.J. 1976) Devil's Lair now evidences symbolic activities well back into the Late Pleistocene. In my opinion the two deciduous teeth do not comprise a sufficient argument for rejecting the likelihood that the entire Devil's Lair sequence stems from intermittent sequestration of youths and men in a ritual/symbolic rather than mundane domestic context. If such activities continued over days or weeks rather than hours, even those engaged in "men's business" must eat; and hearths can indicate fires lit for other than domestic, or not only domestic, purposes.

2. Fauna

Whether domestic or sacred, Devil's Lair remains one of the longest and earliest sequences in Australia. Of overwhelming significance is the vast quantity of bone material from the sequence of deposits, far exceeding the artefactual content, and the opportunity which this offers for deriving an insight into environmental conditions and their changes over time. The herculean task of analysing this material continues under Dr Merrilees in the Department of Palaeontology of the Western Australian Museum. A grant from the Australian Institute of Aboriginal Studies is enabling Miss Balme to work fulltime during 1976-7 on the analysis of the Devil's Lair faunal remains, and the problem of the extent to which these represent the results of human activity.

In the same department Dr Merrilees and others are reviewing a number of Late Quaternary mammalian assemblages which also contribute to defining the context of human presence in the west of the continent. Mr Kendrick continues to work on stages in the development of molluscan fauna, which will in the long run provide a complete chronological framework for Quaternary deposits and their artefactual contents. Such a framework is particularly necessary to resolve the problems of the west coastal plain. One important recent molluscan study (Kendrick 1976) demonstrates marine conditions high up the Swan-Helena, i.e. very little freshwater flow and extremely dry conditions, in the mid-Holocene. In Madura Cave, on the southern edge of the Nullarbor Plain, dingo replaced thylacine about 3500 years ago, soon after increased amounts of bone and artefact debris indicated an intensification of human activity around 4000 BP (Milham and Thompson 1976). The lower levels contain less occupation material, back to 8000 years ago, and some fragments of extinct fauna, e.g. *Protemnodon*, *Sthenurus*, probably derived from channelling and reworking of older deposit (*ibid.*).

3. Flora

Miss Milne came to Perth in March 1976 to begin post-graduate studies in Geology under Dr Balme in the University of Western Australia, working on the Quaternary palynology of some southwestern estuaries.

4. Geomorphology/chronology

The importance to prehistory of faunal, floral and geomorphic studies is made clear by the problems which arise in assessing, for instance, the chronological span of the occurrence of assemblages containing artefacts manufactured from Late Eocene fossiliferous chert (plus usually a few in silcrete, and some quartz) in deflating hollows within the sand deposits of the western coastal plain. Several unsuccessful attempts have been made (e.g. by Hallam near the mouth of the Moore River in 1973) to recover artefacts of Eocene chert in stratigraphic, datable, context. Dortch (1975) finally recovered chert flakes *in situ* within the Spearwood Dune system at Minim Cove, on the Swan River just north of Fremantle. Accompanying charcoal has given a date of 9930 ± 130 bp (SUA 454 - personal communication, C. Dortch 1976). R.H. Pearce (n.d.) has excavated artefacts in this same chert from Walyunga, also alongside the Swan, but within the Darling Range east of the coastal plain, from levels spanning from before $8,000 \pm 260$ bp (SUA 510) to after $6,135 \pm 160$ bp (SUA 509). Similar stone was used for artefacts between 25,000 and 12,000 bp at Devil's Lair (Dortch and Merrilees 1973; Dortch 1974; Dortch 1975). Nonetheless, no lower limit has been established for the span of use of artefacts from Late Eocene sources, nor for the formation of the deposits which contain them.

Indeed, the chronology and processes of formation of the coastal plain deposits, and the environment of its early occupants, are so little understood that debate is still possible as to whether the yellow non-calcareous sands of the eastern half of the Perth Basin represent decalcified aeolianite (McArthur and Bettenay 1960) or an extension of the sand facies of similar (yellow) colour, texture and siliceous composition which covers much of the Yilgarn Block to the east of the Darling Scarp, interpreted by Glassford and Killigrew (1976) as "the product of several arid zone advances...throughout the Quaternary". This might imply dates for the yellow sands (and possibly their contents?) earlier than the more coastal, and partially overlying, aeolian limestone, which on Rottnest has been given a date in excess of 100,000 BP (Teichert 1967; Geological Survey of Western Australia 1975, p. 256). A purely aeolian origin for west coast sand deposits is perhaps rather difficult to reconcile with the overall pattern of anti-clockwise sand-flow during peak aeolian activity at glacial maxima, with westward winds far to the north of the Perth Basin (Bowler 1976).

Besides the problem and potentialities offered by the geomorphology of the coastal deposits as a framework for human activity, the lunettes of the saline lakes of the interior of southwestern Western Australia, with peak dune-building about 20,000 to 15,000 BP (Bowler 1976), offer another potentially datable context for investigation of artefact assemblages.

Mr M. Lofgren, Curator of Anthropology in the Western Australian Museum, is investigating artefactual material which on geomorphic grounds appears to be of potentially great age.

5. Skeletal salvage

The Department of Aboriginal Sites of the Western Australian Museum has been inevitably concerned with rescuing eroding skeletal material from various deflating coastal dunes, including public beaches where bones would be exposed to fossicking e.g. Karatha (Palmer, June 1975); near the mouth of the Bowes River (Maynard and Wright, January 1976); and south of Bunbury (Maynard, June 1976; Maynard and Wright, October 1976).

Mr Lofgren is engaged in the conservation and preservation of human skeletal material from Western Australia.

6. Petrology

Dr Glover of the Department of Geology of the University of Western Australia has continued his studies of the sources of the raw materials for southwestern artefacts. He has widened his interest from the Late Eocene fossiliferous cherts, which occur commonly in the western part of the Perth coastal plain, and decline eastwards, suggesting a source offshore below present sealevel, now made more likely by the finding of Late Eocene rock in offshore bores (Glover 1975a; Geological Survey of W.A. 1975, p. 254) and by the date for the cessation of the use of fossiliferous chert given by Pearce's Walyunga excavations (see below). Glover has now published a full review of rock-types used in artefact assemblages in the Perth Basin (Glover 1975b) and has prepared (Glover, in press) a study of a particular variety of greenish "cherty" material available from the PreCambrian rocks of the Darling Scarp, and much used for finer tools, especially backed artefacts and "flat adzes", in assemblages from sites both in the Perth Basin, west of the scarp, and also eastward into the Darling range and as far inland as the Avon valley.

7. "Small tool" studies

Another investigation focussed on a particular topic rather than a particular region is Mr R.H. Pearce's study of "small tool" assemblages, a post-graduate project in the Department of Anthropology of the University of Western Australia. This includes a comparison of the measured characteristics of the backed components of systematic samples and existing museum and private collections from sites distributed from Zanthus on the transcontinental railway in the east to the Perth area in the west, and from Pardoo and Millstream Station on the Fortescue River in the north to the south coast; seeking significant variation in date, in region and in available raw material. Several test trenches were excavated to try to obtain dated assemblages - at five sites near Perth (Fremmells, Bingham Street, North Lake, Soldiers Road-Mundijong and Walyunga) in May to June 1975; at two sites in the Murchison (Mt. Narryer Lunette and Bilung Pool) in September 1975; and at Lake Ewlyamartup, just east of Katanning, about 170 miles SSE of Perth, in May 1976.

Of these, the most significant results came from the Walyunga site, 25 miles north of Perth, near a permanent pool a few miles upstream from where the Swan River Gorge emerges from the Darling Scarp. As noted by Dortch (1975) the lower metre of the 1.8 m sequence of aggraded deposits contains a small but steady proportion of artefacts in Eocene fossiliferous chert. These cease (except for one stray near the surface) at the level before that in which the first "backed blade" occurs. Silcrete also ceases to be used. The upper part of the sequence is characterised by small numbers of "backed blades" and "flat adzes" throughout; an increased number of fabricators; and a large increase (x 6) in the amounts of the locally available mylonite used. The latter may be seen as a substitute for the fossiliferous chert, the sources of which have been lost below rising seas. This agrees well with the dates now obtained. The abrupt change in the characteristics of the sequence, between spits 17 and 16, is bracketted by a date of $3,220 \pm 100$ bp (SUA 509) in spit 14 above it, and a date of $6,135 \pm 160$ bp in spit 19 below it. Eocene chert has ceased to be available, and "backed blades" and "flat adzes" have appeared between these two dates.

A date of $8,000 \pm 260$ bp (SUA 510) has been obtained from a depth of 150-155 cm. The lowest artefactual material comes from 180 cm. An extension of the area of investigation is needed to obtain sufficiently large samples from each level of the long sequence.

The great significance of Walyunga is that as an open site it is far more representative of normal day-to-day Aboriginal activities than a cave; while nonetheless offering a long sequence of datable occupation tracing major changes in the tool assemblages of the southwest.

8. Ethnohistory, ethnoarchaeology, material culture and experimental studies

The recording done by the regional field officers of the Aboriginal Sites Department of the West Australian Museum has a major ethnographic component, because the 'sites of significance' programme in this state is closely concerned with sites which are of continuing significance to present-day Aborigines, whether or not these are sites which would be distinguishable archaeologically. These studies are particularly valuable both in what they can contribute to the interpretation of sites, both ritual and domestic, and in demonstrating the relative role of these material remains in both the cognitive and economic life and lore of the groups concerned, and how much would escape the archaeological net.

The area-by-area work of the Sites Department is detailed below under Regional Investigations.

Palmer, for instance, has published a paper attempting an interpretation of rock engravings in the Dampier Archipelago, on the basis of oral evidence from mainland Aborigines (Palmer 1975; cf. Wright 1968).

Paintings in the Kimberley (south of the Wandjina area) are described by Akerman (1976b). Those in white clay include representations of men playing the didgeridoo, and must be dated by the ethnohistorical evidence for the spread of the instrument into Kimberley from the Northern Territory early this century.

Akerman is continuing his studies of the material culture of the northwest and centre of the state, often with clear implications for archaeological interpretation e.g., the use of baler shell for hafted chisels and knives (Akerman 1975a); rafts as efficient watercraft (Akerman 1975b); the now abandoned use of stone fish-traps (Akerman 1976a).

In reviewing material from the west coast of Dampierland, Akerman (1975c) uses ethnographic knowledge of exploitation patterns to interpret the patterning of archaeological assemblages; and in a study of large "backed" implements from one particular site (1976c) he applies it to artefact technology. This type of study is taken one stage further in Akerman's (1976d) experiments in the manufacture of elongated flakes from prepared cores, suitable as leilira knives. A more purely archaeological study (Akerman 1975d) concerns the use of australites as raw material for small tools.

A combination of ethnographic and experimental work has also, surprisingly, been possible in the south of the state, where Mr Beecke, a local farmer, has been recording the surviving data on Aboriginal patterns of exploitation and technology in the Katanning area, including participating in the activities of hunting and butchering kangaroo, and manufacturing from the fibula a pointed pin for fastening the skin cloak, and a hollow spatula for piercing holes in the skin and threading a thong through the hole. The first implement thus manufactured bears a remarkable resemblance to a similar form excavated from 19,000 BP levels in Devil's Lair (Dortch and Merrilees 1973, fig. 8.2) and the second can also be matched there.

Valuable ethnohistorical material on the south of the state has recently been made available with the publication of the information recorded for Jarramungup, an isolated sheep station about 100 miles northeast of Albany, by Mrs E. Hassell, who lived there from 1878 to 1886. Mrs Hassell's valuable material had already been partly published as edited by Davidson, but the new book (Hassell 1975) edited by C. Hassell retains not only information on dress, weapons, and myths, but a lively impression of the total quality of life.

Erickson's (1974) book on the Toodyay area illustrates ethnohistorical data providing a potential baseline for archaeological extrapolation. Whitfield's detailed list of Aborigines and the stations to which they were attached in 1840, and Salvado's similar individual-by-individual census for 1858 are rare examples of reliable demographic data.

Regional Investigations

1. Northcliffe area

Dortch, in association with Gardner (Dortch and Gardner 1976) is responsible for a very important regional investigation in the south of the state. While not so immediately spectacular as the Devil's Lair excavation, his regional study of the Northcliffe area reveals a pattern of life on the dunes and swales of the southern coastal plain maintained and modified continuously for over 7000 years. Most of the 30 sites and site complexes investigated lie on dune ridges adjacent to marshes or lakes. Most sites are small (many less than 20 artefacts) representing probably brief ephemeral occupation; while two major domestic sites and one quarry represent recurrent usage by larger groups. The inland forest sites are smaller on the whole, which would correspond to the pattern of scattering into smaller groups in the winter seen elsewhere in the southwest (Hallam 1975). Camp sites in calcareous dunes, with caves nearby, in the area of Malimup Spring produced sparse scatters of edible molluscs, the first substantial evidence south of the Hill River for a time when the ban on eating molluscs (evidenced at contact) did not apply. The assemblages from this group of sites included uniformly trimmed pebble tools. In most other assemblages, including the two largest near Point d'Entrecasteaux, there is little to suggest much occupation before the first use of backed tools and flat adzes some time after 6800 years ago. The major raw material is silcrete, and an outcrop and quarry have been identified. Economic activities are taken up to European contact with the description of a fish trap on the Blackwater Creek near Point d'Entrecasteaux.

2. Lake Peel-Preston Lakelands

Mrs V. Novak of the Aboriginal Sites Department (see below) investigated in May 1975 an area running south from Mandurah, lying between the sea on the west and the Peel Inlet - Harvey estuary - Harvey River system on the east. In a short period some sixty sites were added to the seven previously known. Of these sites, one was a ceremonial site, one a cave containing fresh water in its depths and with roof scratchings, all other sites being surface scatters of artefacts. Of 65 sites, the great majority were small surface scatters comprising fewer than a dozen artefacts; only 10 total assemblages comprised more than a dozen artefacts, only three more than fifty, and only one site more than 200. Only this last site and two others had grinding material. Blanket surveys such as this are needed to give a correct estimate of the ratio of small ephemeral to recurrently frequented sites, and an even wider survey is needed to delineate the overall picture which includes localities much frequented by big groups over long periods (cf. Walyunga). The ratio of frequented sites appears considerably lower in the Swan survey (see below) - perhaps the thoroughness of search has been greater, revealing more "trace" sites!

3. Swan River survey

This project has been under way in the Department of Anthropology, University of Western Australia, since 1974, with the help of funding from the Australian Research Grants Council to Mrs S. Hallam for a graduate research assistant (Hallam 1976; n.d.).

The original aims of the project were "to elucidate the changing occupation patterns of prehistoric Aboriginal populations over an area which included at least the range of movement of one community and part of the terrain of adjacent groups along a transect, centred on the Swan estuary, across the coastal plain and the forested Darling Plateau, to the more arid country further inland". The survey was undertaken because preliminary ground surveys had suggested differences in the patterns of usage between different ecological zones, the forested area, for instance, showing little evidence of exploitation as compared with the coastal plain on one side or the Avon valley on the other; while different ecological sub-zones within the coastal zone showed different degrees of exploitation, site density being far higher, for instance, around the swamps and lakes of the sandplain (Bassendean Sands) north and south of Perth than on the coastal limestone (Spearwood Dunes); while the recent immediately coastal dunes (Quindalup Dunes) were devoid of Aboriginal sites. Preliminary survey had also suggested differences in the trends which usage of different areas showed over time, e.g. while there was little difference between the numbers of sites per unit area before 5,000 years ago (Early Phase) and after 5,000 years ago (Middle and Late Phases) in the inland, there was a vast preponderance of Late Phase sites on the coastal plain, particularly over the sandplain; by contrast, the coastal limestone showed some Early occupation, but relatively little Late. Certain crucial sites and zones showed persistent heavy occupation through all phases:- sites by permanent water, e.g. on streams debouching from the hills; sites at the foot of the Darling Scarp, adjacent to forested upland and coastal plain resources; and sites where the dry sandhills of the Bassendean Sands lay adjacent to the fertile pastures of the coastal plain alluvium (Pinjarrah Plain) (Hallam 1972, 1975).

These general aims are being pursued through a number of specific investigations:- Selective *excavation* at a few sites had established a basic chronological frame. The investigation is now centred on *surface surveys* aimed to locate, record and make systematic surface collections from individual sites and groups of sites. It was hoped initially to carry out a systematic search of a statistically valid sample of grid squares in order that inferences might be drawn on the relative degree of usage of each zone and each sub-zone within each phase, and trends between phases. The detailed classification, counting and percentaging of all artefacts in a representative sample from each site was deemed necessary in order to determine (i) the *density* of material on the site, and so the order of magnitude of the *total* quantity (as some measure of intensity of usage x time) (ii) the *type* of sites, e.g. the presence of grinding material indicates much-frequented base camps used by all members of the community, while a few sparse flakes indicates an ephemeral stop-over; (iii) the *phase* (or phases) during which the site was frequented, e.g. the presence of fossiliferous chert and/or a high proportion of steep scrapers indicates early usage, backed blades a time after 5,000 BP, high proportions of quartz and fabricators a Late occupation, worked European glass post-contact usage. Statistical study of assemblage analyses is planned to determine recurring patterns of assemblages (e.g. to test the apparently recurrent association of grinding material with dense artefact concentrations, high total quantity, and multi-phase occupation) and to test significant differences in intensity of usage (as indicated by numbers of sites and quantities of material

per unit area) between ecological zones and between phases. Ethnohistorical data had already been used to suggest the model for investigation. Oral sources, while immensely valuable, were seen as a separate field of investigation, but thrust themselves upon us nonetheless.

The main stress throughout has been on *surface survey*, beginning with sites already discovered and reported. We immediately began to realize both the potentialities and the responsibilities of working in the Perth metropolitan area, and this has continued to shape the development of our work. It is the pace of earth movement (in sand quarries, industrial sites, building sites) which provides both the *opportunity* to discover and delimit artefact scatters devoid of vegetation cover, and the *necessity* to record and make systematic collections before destruction. Sites left until our grid search reaches the area will have inevitably disappeared by then.

We have therefore followed a two-fold policy of (i) *recording* and collecting as soon as possible from *sites reported* by students and interested amateurs; and (ii) *systematic search*, grid square by grid square, restricted so far to the metropolitan area. The proportion of the metropolitan area which is *not* available to investigation is so high (though not as high as in much of undeveloped bush and forest country immediately around) that a policy of *total* search across a belt of grid squares has been adopted. So far a belt immediately either side of the river (as highest in potential and risk) has been searched, plus an east-west swathe from the coast at City Beach across to Guildford, crossing proportionate sections of Quindalup Dunes, Spearwood Dunes, Bassendean Sands and impinging on Pinjarrah Plain.

This west-east swathe now extends from the coast (at approx. gridline 374,000 yards E) to grid-line 400,00 E. The North and South boundaries lie at 1,058,000 N and 1,050,000 N. Two-thirds of the next west-east swathe (south to 1,040,000 N) have already been covered by the river belt survey. It is hoped to extend fully systematic survey into a third and last east-west belt (south to 1,034,000 N) by 1977; and to extend all three belts east to the Darling Scarp at approximately 404,000 E, a more difficult task because more heavily vegetated country is involved.

For each site a record is made of location, condition, ecology (soil, vegetation, water), density and extent of artefact scatter. A collection is made from sample grid squares, or a total collection where material is sparse. Just over 260 sites of all types (including art and ritual sites) have now been recorded. Of these nearly 240 have a domestic component. About a quarter of these sites were recorded in the last two years.

The classification and counting of site material enables us to say, for example, that only a fifth of the sites contain grinding material indicating "base camp" functions; that about 10% have such quantities of material as to indicate intensive frequenting, by

large numbers of people, and/or for long spans of the year (though not, it appears, necessarily through a long range of dates). The fertile alluvium of the Pinjarrah Plain carries a much higher proportion (over a third) of intensively occupied sites than the general proportion. Similarly site distribution by phase of occupation can be investigated, though the sampling belt needs to be carried across to the scarp before adequate figures can be obtained.

An elaborate format evolved in 1974 for recording a full range of data on each site (field characteristics, lithology, typology, etc.) will make it possible not only to investigate the more obvious gross characteristics of sites (e.g. the correlation between size of site and presence of grinding material); but also to look at e.g. the correlation between the presence of backed blades and other site characteristics (size, permanence, ecological zone); or preferences for the use of certain stone types in the manufacture of certain artefact types.

A major difficulty is sampling procedures. Artefact assemblages are not visible under heavy vegetation and can be detected only when disturbed. Hence highly disturbed areas such as the metropolitan area offer the maximum opportunities for investigation, although large areas are sealed by buildings, etc. and not available for sampling. Efforts have been concentrated on exploring the (large) residue of open areas within the metropolitan belt. It is thus possible to make certain types of statements (e.g. *no* sites have been discovered in the Quindalup Dune zone, or the Bassendean Sands zone carries a relatively high ratio of Late to Early sites, while for the Spearwood Dunes that ratio is low), but not others (e.g. the ratio of sites of each phase to area explored in each zone is not really meaningful). Nonetheless we have a body of data on the relationships between site type, phase, and ecological zonation which I believe to be unmatched in hunter/gatherer studies. The *bulk* of material coming in represents a massive task in classification.

While largely forced by logistics, the concentration of effort on a smaller area is making possible an extremely thorough study. This remains within the framework of earlier preliminary investigations which set this section of the coastal plain within a wider context.

4. Murchison/Gascoyne surveys

Mr D. McCaskill who for many years had been recording rock art in his spare time in short spells in the field (e.g. McCaskill 1968; n.d.) was granted one year's leave from the Methodist ministry to take up an Australian Institute of Aboriginal Studies grant which enabled him to spend the whole of 1975 recording sites in the Gascoyne/Murchison area as part of the Aboriginal Sites of Significance programme. McCaskill has worked closely with the Aborigines of the area, with whom he has built up a close rapport over many years, enabling him to give an in-depth significance to sites which it had previously seemed must necessarily remain tantalising collections of art motifs.

Mr J. Clark has worked with McCaskill on conservation aspects. In September 1975 Mr R.H. Pearce accompanied McCaskill to the Murchison to carry out systematic sampling and trial trenching on sites with surface assemblages, some of which had a 'backed blade' component. Mrs V. Novak of the Sites Department was also involved in recording Murchison sites in April/May 1976.

In May 1976 D. Byrne, of the Department of Anthropology, University of Western Australia began a survey of archaeological sites in the Lower Murchison River area. This area is at the southwestern margin of the Australian arid zone and is dominated by the drainage system of the Murchison River. Initially the focus of attention has been the tract of country adjacent to the river. It is intended to investigate the influence of the river on gross settlement pattern and seasonal movement of groups. Within 50 kilometres of the coast over 40 occupation sites have been located in close proximity to the river. In 1977 a small excavation of one of these sites is planned in addition to broadening the site survey to areas more distant from the river.

5. Pilbara and Kimberley surveys, etc.

A programme for the recording of engraved art in several valleys on Dampier Island is being carried out with the help of an Australian Institute of Aboriginal Studies grant to Mr E. Virilli (n.d.). The emphasis is on not only the careful recording of individual motifs but on precise surveying of the position, orientation, and characteristics (e.g. weathering) of these in relation to the boulders on which they are engraved and the valley as a whole. Dr M. Lorblanchet, acting as consultant to this project, excavated a shell midden at the bottom of Skew valley in May 1976, following a preliminary testing of the same midden carried out on behalf of the Sites Department in 1974.

A great part of the burden of archaeological survey ahead of proposed developments in the north and east of the state has fallen on the Aboriginal Sites Department within the Western Australian Museum, which is responsible for the administration of the Aboriginal Heritage Act (1972). Mr B. Wright took up the appointment as Registrar of Aboriginal Sites heading this department in 1975, when Mr W. Dix left to become Deputy Principal of the Australian Institute of Aboriginal Studies. This department has responsibility for carrying out a programme of site recording and site protection. Regional Research Officers have been appointed to carry out this work in the Kimberleys, the Pilbara and the Western Desert (Mr C. Hamilton, Mr K. Palmer, Mr M. Robinson and Mr K. Liberman). A Research Officer, Mr J. Clark, has also been appointed to carry out research on the conservation of rock art, while a Research Officer - archaeology (currently Ms L. Maynard) undertakes site surveys and excavations in rapid development and salvage situations. A Training Officer (Mr P. Randolph) and Aboriginal trainees (some of whom have now become technical assistants) have also been involved in recording and conservation.

A major focus of the work of Regional Research Officers is contact with Aboriginal people in order to establish the nature, location and current significance of sites, including potentially threatened sites, to them. This work has led to the location and recording of hundreds of such sites. Some are mythological sites without any archaeological component (in the sense of a material feature which can be distinguished as a human artefact), but most are sites with some associated material objects or components.

Palmer has worked with Aborigines in various centres in the Pilbara recording traditions associated with various sites (e.g. Palmer 1975, see above). In particular he has undertaken a study of the Fortescue River area as a site complex; and has also recorded the mythology of some of the East Pilbara desert sites in the vicinity of Jigalong and the Canning Stock Route. Clark worked on rock art conservation in the East Pilbara desert area in July/August 1976. Randolph and others were also involved in Pilbara recording during 1975.

In March, April and July 1976, Wright and Maynard recorded archaeological (including rock art) sites in the Pilbara. The main objective was to assess the relative impact on Aboriginal sites of several alternative possibilities for the siting of dams in the Pilbara area, (on the Sherlock, Harding, or middle Fortescue River) in order to draw up a rating of 'preferences' which might influence the final decision.

Wright and Maynard also examined a rock shelter at Mount Newman threatened by mining operations. One cubic metre was excavated in April 1976, and proved rich in artefacts and hearths, and a further one metre probe failed to reach the bottom of the deposit.

Hamilton in the Kimberley has worked in close association with Aboriginal people in locating and recording the significance of sites in the Yampi Peninsula coastal area, the Kununurra area, and the northern section of the Canning Stock route including the Durba Hills (see Dix 1972). He has also worked in the Munja and Mitchell Plateau areas.

In July and August 1976 Dr I. Crawford and Mr P. Randolph recorded sites in the Cape Voltaire, Institute Archipelago, and Mitchell River areas, with the emphasis on patterns of Aboriginal exploitation of terrain.

Other recent recording projects carried out by the Aboriginal Sites Department in the north and east include:- a survey in the Agnew area carried out in June/July 1976 by Ms L. Maynard, Mrs V. Novak and Mr K. Liberman in October 1976 of the proposed Yeelirrie mining area, north of Leonora.

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