



KEYWORDS: *Language – Petroglyph – Pictogram – Austronesia – Polynesia – Migration*

## VOYAGERS OF THE PACIFIC: ROCK ART AND THE AUSTRONESIAN DISPERSAL

Ralph J. Coffman, Jr.

**Abstract.** Languages and cultures are related phylogenetically in that both derive from a common ancestral tradition. Austronesian is a linguistic classification that represents a common language phylum that correlates with archaeological and cultural traditions that span the Pacific from the east Asian mainland to the furthest reaches of Polynesia. For instance, a linguistic-cultural correlation can be used to identify a common Polynesian culture through shared patterns of language, society and symbolism. This study attempts to evaluate the extent to which this symbolism can be used to elucidate 'Austronesian' as a broader linguistic-cultural category, in which sense it will be used in this study. This will be undertaken against a background of linguistic and archaeological correlates, including Austro-Asiatic languages and their associated cultures, through a focus on the use of design elements and their combination in motifs as they are found in rock art.

### Introduction

This study has been greatly influenced by two people, Dai Qing and Donald Stanley Marshall. Dai Qing leads the international opposition to the Three Gorges Project as both a journalist and the author of *Yangtze! Yangtze!* (1989). As a Harvard University Nieman Fellow (1991), the winner of the International PEN Award for Freedom (1992) and the Goldman Environmental Award (1993), she has been at the forefront of trying to save the cultural heritage of China. Her inspiration led me to probe the Neolithic origins of rice agriculture in Yunnan and along the Yangtze. She currently leads an experimental farming co-operative called 'Twenty-first Century' in a remote village in the Beijing area. Don Marshall is a scholar of Oceanic culture, which he studied at Harvard University during the heyday of lexicostatistics in the 1950s. When I first met Don in the 1980s, he was ensconced in the 'Little Red School House' at the Peabody-Essex Museum in Salem, Massachusetts, as their Oceanic Specialist and Editor of *The Neptune*. He suggested I study the diffusion and distribution of certain diagnostic artefacts as well as petroglyph images as a way of understanding the Austronesian cultural dispersal. We developed the most pleasant and fruitful of all associations and went on several expeditions to remote sites in Hawai'i. The 'Little Red School House' no longer houses his collections and books, but, thankfully, the islands and their images still remain.

In what follows I have included Austro-Asiatic languages and their associated cultures as a continental counterpart to the Austronesian marine dispersal, since it is now recognised, albeit controversially, that both fissioned from

an ancestral Austro-Asian macro language family about 6000 BP in south-western China (Blust 1995).

A word should be said about my approach to rock art. In this study, forms of decoration on rock and other materials are considered as culturally conditioned by technical processes and social customs. For instance, the process of pecking a relatively hard rock surface to create design elements (petroglyphs) involves the use of a hammer stone by direct percussion. The process of impressing a dentate stamp on (Lapita) pottery is quite different, and the use of a bone comb on human skin ('smooth' tattooing) involves indirect percussion. The process of incising images requires a relatively soft medium, a hammer and a sharp chisel such as a basalt adze (used in wood carving) or bone blade as used in 'grooved' (*moko*) tattooing (found in Aotearoa, New Zealand). Finally, the process of applying a design to a surface such as wood or rock (pictograms) can be accomplished with paint, which requires a brush element, pigment, a diluent and sometimes involves a binder (blood or milk), or is accomplished with a heated tool on bamboo or gourds (pyrography). All of these are craft specialties but they usually have evolved from cultural contexts that impute to the artist a functional and a social role that is deemed critical for the maintenance of the community. In this respect rock art is rarely developed as a craft specialty for its own sake. It is usually produced to function within a social and cultural context. In what follows, I shall attempt to relate technical processes and social customs to rock art and its correlates in other media in an attempt to elucidate its cultural implications.

AUSTROASIAN MACRO FAMILY
PROTO AUSTRASIATIC (CONTINENTAL) FAMILY, south China, Yunnan ? (Blust 1995) 6000 BP
Mekong River Trajectory
Salween River Trajectory
PROTO AUSTRONESIAN (MARITIME) FAMILY (Yangtse-Mekong River Trajectory)
AUSTRONESIAN-Formosan: Taiwan
Malayo-Polynesian:
<b>Western Malayo-Polynesian</b> (Yunnan, Cambodia, Viet Nam, Kalimantan, Madagascar), 4500 BP
Central Malayo Polynesian (Sumbawa, Timor, Flores, Maluku), 4500 BP
Eastern Malayo-Polynesian, 4500 BP
Oceanic, 4000 BP (cf. Pawley and Green 1984, 3600-4000 BP)
Solomon Islands-New Caledonia (Lapita)
Central Eastern Oceanic
Remote Oceanic
Central Pacific
East Fijian-Polynesian
Fijian (Fiji)
Polynesian
Nuclear
East
Central
Marquesic
Hawai'ian, Marquesan
Tahitic
Rapanui (Easter Island)
Samoic-Outlier (Tonga, Wallis and Futuna)

**Table 1.** Family tree model of Austronesian languages (after Grimes 2000; Blust 1995, 1998).

Austronesian-Western Malayo-Polynesian-Malayic (72)
Achinese-Chamic (11)
Achinese (1)
ACEH (Indonesia, Sumatra)
Chamic (10)
<b>North (1): TSAT (Yunnan, China)</b>
South (9)
Coastal (6)
Cham-Churu (3) (Vietnam, Cambodia)
Roglai (3) (Viet Nam)
<b>Plateau, HAROI, JARAI, RADE (Viet Nam)</b>

**Table 2.** Austronesian-Malayic languages (after Grimes 2000). Bold face indicates Austronesian languages that fissioned from Austro-Asian in Yunnan, China.

## 1. The Austro-Asian macro family and the emergence of Austro-Asiatic and Austronesian

### 1.1. The Austro-Asian family

Table 1 provides a hierarchical arrangement of Austro-Asiatic and Austronesian language families. This is not without controversy but it does provide a new perspective in viewing the genesis of Austronesian cultures. Rice was first domesticated around 6000 BP in south-western Yunnan, where the Salween, Mekong and Yangtse Rivers run parallel. This implies that at this time there was a transition to a settled agriculture, which produced a robust rice-fish economy. In

turn this led to a population expansion and a dual cultural diffusion. One branch fissioned into continental Austro-Asiatic while the other fissioned into marine Austronesian. Austro-Asiatic radiated down the Mekong and Salween Rivers and diffused throughout mainland Southeast Asia. Austronesian (only represented by the Tsat in Yunnan today, Table 2) may have radiated down two river systems, the Yangtse to the south China Sea (Formosan) and the Mekong to Plateau Viet Nam (Haroi, Jeraï and Rade) (Hoàng Thi Châu 1969; cf. Blust 1995). Therefore, Austro-Asiatic and Austronesian are both found along the Mekong trajectory in Cambodia and Vietnam (Annam) where Austro-Asiatic Mon Khmer and Vietnamese (Nguyễn Phúc Long 1975: 12-3) borrowed words from three mainland Austronesian-Malayic languages, Haroi, Jeraï and Rade (Shorto 1979: 276-7). Meanwhile the Yangtse Austronesian trajectory probably reached the south China Neolithic cultures at Hemudu, radiated south through Jiansu Province and across the Formosa Strait to Taiwan where Proto-Austronesian Formosan fissioned into twenty-three languages. This was the staging area for Western Malayo-Polynesian, which radiated south about 4000 BP through Malaysia, Sumatra, Borneo and Indonesia to Madagascar and the three subsequent Austronesian fissionings of South Halmahera-West New Guinea, central Malayo-Polynesian and Oceanic (Fig. 1).



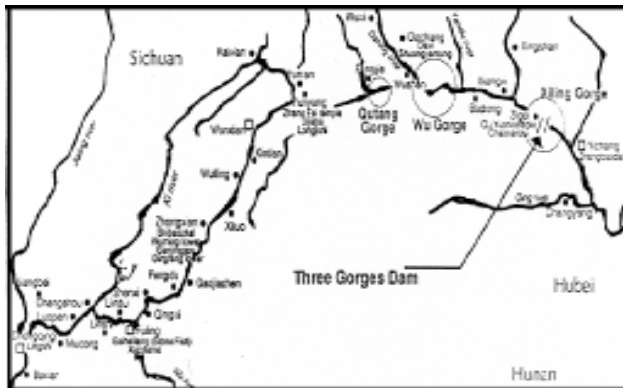
**Figure 1.** Western portion of the Austronesian dispersal (after Kirch 1999).

### 1.2. South-western China

South-western China's isolated but lush river valleys offered starkly beautiful mountain refuges for the development of a macro family of Austro-Asiatic origins. In these valleys rice was domesticated c. 6000-5000 BP. Like islands of the Pacific, Yunnan's western valleys were seemingly isolated amidst towering snow-capped mountains, but the headwaters of three mighty rivers flow through these valleys: the Salween flows through Myanmar to the Andaman Sea; the Mekong flows through Laos and Cambodia to the South China Sea; and the Yangtse flows through China to the East China Sea. Along these rivers, Neolithic cultures diffused, respectively the Burmese, Chenla and Hemudu.

Along the Mekong and its tributaries bordering the provinces of Guizhou, Guangxi and northern Vietnam, Kaday

languages of the Daic family are spoken. The Yangtse wends eastward through rice-paddy villages, tiered layer upon layer until it reaches the Three Gorges (Qutang, Wu and Xiling) with magnificent perpendicular cliffs, fascinating rock formations and famous rapids and shoals, respectively, a region yielding evidence from the Upper Palaeolithic (50 000 to 12 000 BP) to the present. The Three Gorges Dam had been proposed by Sun Yat-sen in 1919, and is now being constructed, forcing the relocation of 1.5 million people and threatening to destroy hundreds of archaeological sites, specifically, for the purposes of this study, Neolithic sites dated from 6000–3000 BP associated with the Ba-Shu culture (Fig. 2).



**Figure 2.** The Three Gorges area in southern China (after *Zhongguo Changjiang Sanxia* 1993: 26).

Beginning at Chongqing and extending to the Three Gorges area are numerous important ‘low-water calligraphy’ petroglyphs (*kushuitike*) that are visible on the Yangtse’s limestone walls, dating from the Han and Eastern Jin dynasties (A.D. 317–420) through the Qing period (Fig. 3). These Mandarin ideograms were reference points for recording low water and therefore warned cargo boats engaged in river transport of perilous passage.



**Figure 3.** Three Gorges *kushuitike* petroglyphs marking low water. Photo Megan Epler-Wood, Jan. 1997.

However, another class of petroglyphs had an entirely different function. These are the eighteen bas-relief fish petroglyphs at Baiheliang that have recorded the low water

periods of the Yangtse for over 2000 years. An inscription of A.D. 917, recorded that

[i]n the spring, February, of the Tang Guande era [763–764], *suici jiachen* day, the waters receded and the stone fish appeared, so that the 4 chi [Chinese feet] were visible below the fish (known as *shiyu*, i.e., ‘stone fish’). According to legend, the [seer] Xian said, ‘When the Yangtse waters recede [and] the stone fish appear, the year will witness a rich harvest ...’ (Zhuang 1995: 20).

According to Gong Tingwan, associate researcher at Chongqing Museum in Fuling City, this Tang era inscription only refers to the point when the *shiyu* were rediscovered. Researchers had assumed that the stone fish ranged in age from the Tang (A.D. 618–906) to the Qing period, with most of them dating to the Song (Childs-Johnson and Sullivan 1996: 57). However, based on Gong Tingwan’s investigations, the Chinese adage that ‘Harvest ensues when stone fish surface above water’ is at least 2000 years old and perhaps even dates to the Neolithic period. His reason is that it relates to the point at which rice could safely be planted and so the receding Yangtse presaged a bountiful harvest (Ji Tao 1998: 9). This interpretation of the *shiyu* is important for understanding the Neolithic diffusion down the Yangtse to Hemudu on the coast. Therefore the Baiheliang petroglyphs may have been created by Neolithic farming cultures related to those in western Yunnan where rice was first domesticated c. 6000 BP.

The archaeological evidence for two Neolithic rice-farming cultures in the Three Gorges area might support this interpretation. The Daxi culture is located along the Yangtse at Wushan, Sichuan Province, and dates to 6000–5000 BP. Yu Weichao, Director of the National History Museum of China in Beijing and an excavator of the Neolithic cultural sequence at Zhouliangyuqiao in Hubei Province, feels that the western border of the Daxi is in Wushan. This is adjacent to the Ba-Shu culture, which Yu Weichao believes to have centred on Shuangyantang in the upper Daning River, a massive town of over 10 000 sq. m.

The strange thing is that it is located along the riverbed where the water level undergoes great change. In the past we never believed that such a [permanent rice farming] site would lie in such an area. About five or six kilometres from Shuangyantang we discovered a very large *zun* [wine vessel] roughly 80 centimetres in height and exactly like another excavated at Sanxingdui in western Sichuan. We can now identify Shuangyantang as an early centre of Ba culture (Dai Qing 1996: 62).

The Ba-Shu Neolithic rice farming culture grew so powerful that it helped defeat the Shang dynasty about 3100 BP. Normally the Ba-Shu site at Shuangyantang would take decades to excavate, but the salvage operation must be finished by 2006 (Dai Qing 1997: 86). The Ba-Shu culture may represent an antecedent to the lower Yangtse culture at Hemudu and may have potential significance for the Proto-Austronesian diffusion.

### 1.3. Yunnan Province

The semi-sedentary cultures in the western Yunnan valleys of the parallel-flowing Yangtse, Mekong and Salween Rivers in the time horizon 8500–7800 BP adapted to their seasonal, flood-prone environments by constructing dwellings on wooden pile stilts so that they could remain in proximity to the dual economic resources of wet wild rice and fish. Primary to this dual economy was the development



of wooden weirs constructed so that the flooding of the rice-paddies allowed fish to enter that were then trapped as the waters receded. Design of fish weirs is an ancient art that spans the entire southern China and Southeast Asian area. These designs involve a constricting funnel leading to a fish trap area. Similar designs are found in Near and Remote Oceania, but their construction involved not only bamboo and wood but stone as well.

On an overhanging limestone cliff (called Dawang) on Mount Yangjiaolao's southern buttress 200 m from Chouyang River are two unique pictogram panels, believed to date to the Neolithic period, about 3000 BP. Mount Yangjiaolao is in Malipo county, south-eastern Wenshan, Zhuang-Miao Autonomous Prefecture bordering Vietnam to the east and south and is the historic home to Zhuangs, Miaos, Yaos, Huis, Yis and Hans. These pictograms are painted in three colours: white kaolin clay, red ochre and black charcoal (Fig. 4).

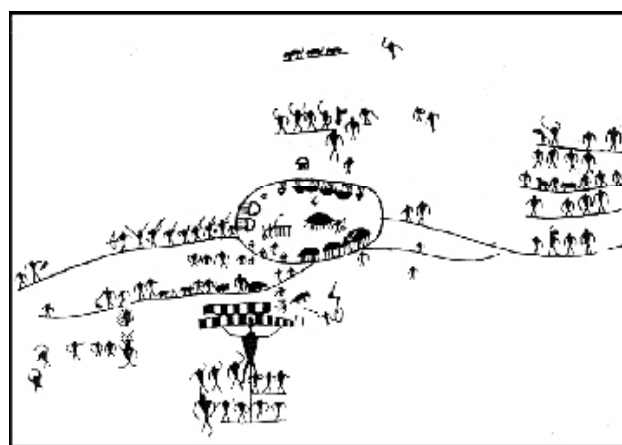


**Figure 4.** Mount Yangjiaolao's Dawang cliff pictogram panel (after Shanlin and Yudong 1993: 86).

Communal organisation was essential to the creation of this panel, since the paintings span the 20-m-high cliff and the paintings are about 3 m from the ground, which required scaffolding. The panel occurs on an overhang so that it would be protected from the elements, while surrounding (and perhaps extraneous) figures have been obscured by the deposition of calcium carbonate.

The distinctive 'masks' of these figures incorporate curvilinear elements to produce a heart-shaped facial motif, divided vertically by a prominent nasal ridge. A similar motif will be seen in Austronesian-produced Lapita masks, below. The figures also have bodily structures and poses similar to the Tiki gods of Polynesia. The local Zhuang people still worship these figures on the first day of the seventh lunar month, when they burn incense and pray for rain, peace and prosperity, to these deities of the first fruits and a bountiful harvest.

Other Neolithic pictograms with Austro-Asiatic associations are found in Cangyuan, Wa Autonomous County, the home of the Sino-Tibeto-Burman Lahus and the Dais, along with the Austro-Asiatic Wa. Cangyuan pictograms are located in pastoral areas of scenic splendour, probably where Neolithic agricultural festivals were held. Scattered over cliffs in the Awa mountains near China's border with Burma, pictograms were painted using red ochre supposedly mixed with blood for a binder (a practice still observed among the Lahu and the Wa, involving ox blood). Presumed scenes include presumed depictions of hunting, cattle-raising and village life (Fig. 5). Wang Ningsheng, of the Yunnan Provincial Nationalities Research Institute, rediscovered the pictograms in 1965. Subsequent finds were made in 1978 and 1981, scattered over a 90-km area. Over 1000 paintings cover a total of 300 sq. m (Wang Ningsheng 1984).



**Figure 5.** Wa-Lahu pictograms at Cangyuan that have been interpreted as depicting a village (after Wang Ningsheng 1984).

The Cangyuan traditional way of life is rooted in a 3000-year-old Neolithic rice-based economy, a counting script utilising incised notches on wood and a writing system of hieroglyphs, some of which have been recorded in rock art. All of these traits were adopted by the Lahus, when they entered the area in the first millennium B.C. Meanings were probably associated with ideograms. For instance, salt is claimed to have indicated 'friendship', pepper indicated 'anger', and a chicken feather signified 'warning'. When the Austro-Asiatic Wa immigrated from the north around 2200 BP, the Lahus adopted elements of the Wa language, while the Wa adopted the Lahus' Neolithic numerical system, their hieroglyphic script and their presumed sun god cult. Acculturation no doubt flowed in both directions.

The sun god cult is thought to have been adopted by the Lahus from their Neolithic predecessors who may have been Proto-Austronesian speakers. This deity is similar to that of the Polynesian harvest deity Lono. The Lahu Sun God fetish was mounted on a long staff on which were draped bamboo streamers, resembling Lono's fetish (Fig. 6). It was ensconced in the central plaza of the village where tribute was paid to the chief of the area.

A Sun God temple with a thatched roof and wattled walls is still typically constructed on a hill facing west

toward the setting Sun, the direction from which the Lahu had immigrated. Inside the temple is an altar where gifts are offered to the Sun God. On the summer solstice (June 21) the women go to the Sun God pole in the centre of their village with baskets of grain, which they scatter round the pole as they pray for prosperity. Then, the men assemble and beat drums, go to the west-facing mountain slope and perform ritual fertility dances. When they return they form a procession into the temple of their ancestors. Then, both men and women assemble before the Sun God's shrine. The priest, wearing his queue on his temple, chants ancient songs and scatters grain on the heads of attendees until sunset (Lahu 1999).

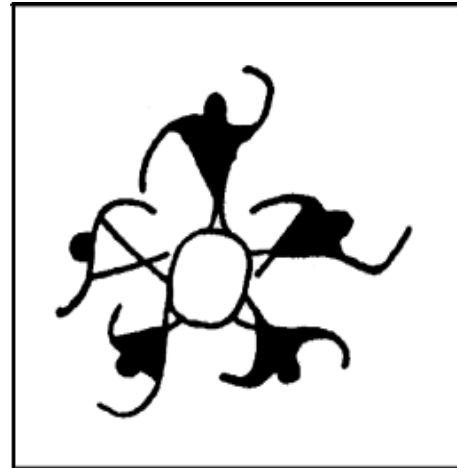


**Figure 6.** *The Lahu Sun God fetish with Sun God temple on left.*

When the Wa migrated into Cangyuan about 2200 BP they brought with them their Austro-Asiatic culture but adopted many attributes of the Lahu as well. This cross-cultural sharing seems illustrated in a pictogram at Cangyuan, in a village scene that may depict the Wa penchant for juggling and hunting and the Lahu penchant for sacred dancing during the first-fruit festival (Fig. 7). This presumed dance scene was the inspiration for the modern dance-drama 'Song of the Ancient Cliffs' enacted by the Lahu-Wa Cangyuan performing arts team.

The style of the V-shaped anthropomorphs is distinctive, as are the elaborate headdresses, the size of which may indicate relative social standing. 'Bovids on a tether' being led by 'men' may indicate the domestication of water buffalo. 'Hunters' are shown in various postures with bows and arrows as they pursue 'monkeys'. Presumed priests are depicted with 'horned headdresses' and spiky arms. 'Axe-

and sword-wielding warriors' are shown with elongated Wa 'shields'.



**Figure 7.** *Cangyuan red ochre pictogram (after Wang Ningsheng 1984).*

The Wa-Lahu culture still preserves the Sun God Festival and Neolithic Austronesian design elements found in the ancient rock art, including circles (signifying communal dancing), triangular-shaped anthropomorphs (signifying physically and spiritually powerful participants). These motifs are found among Austronesians in general and Polynesian cultures throughout Oceania in particular, implying that these pictograms give evidence of Proto-Austronesian influences.

The Lahu Sun God is also worshipped by the Jingpo, another Austro-Asiatic culture that was influenced by Austronesians. A Jingpo legend recounts how the Sun God told them that a sheaf of rice would grow into the size of an ox's foreleg and a grain could be as large as a horse's hoof, but Hedgehog challenged the Sun God and persuaded the people to worship him instead. As a result the Sun God made rice grow into sheafs which were only as large as a hedgehog's tail (Jingpo 1999).

Since 1949, the traditional Wa and Lahu cultures have had to compete with Han acculturation. Old ways and new collided: slash-and-burn farming, mortar and pestle rice grinding, bow and arrow hunting co-exist with tractors, electric machines and imported Kalashnikov rifles. Still, the meanings of these ancient Sun God symbols persist among the Wa and Lahu people.

#### 1.4. Southern Jiansu and northern Zhejiang Provinces

The Yangtse River terminates in southern Jiangsu on Hangzhou Bay, which borders northern Zhejiang. Here, at Hemudu, is a cluster of Neolithic sites with rice-paddy farming and thatch-roof houses built on wooden pilings (Fig. 8). A southern Chinese Neolithic culture associated with an economy of wet rice and fish diffused down the Yangtse. This culture is distinct and separate from the Neolithic villages of the coastal Huang-ho (Yellow River) area and the Ta-wen-k'ou (Dawenkou) culture of Shantung (Wenwu 1976: 45–61).

The Hemudu sites, dated to 7200–6900 BP, has wooden houses with mortice and tenon carpentry and piling as pro-



tection from Lake Dong-Ting's monsoonal floods, which determined the seasonal planting cycles of *japonica* and *indica* rice. The position of constellations indicated when to plant, and water wheels were used for irrigation. Husbandry included water buffalo, pigs, dogs and chickens. This hybrid economy would accompany migrants south along the Fujian coast and across the straits to Taiwan.



Figure 8. Hemudu (Ho-Mu-Tu) archaeological sites, Jiansu Province (after K. C. Chang 1984).

Hemudu black pottery, which is rich in carbon added as a temper, was also intricately incised with designs from a vocabulary of curvilinear and circular design elements. Ceramic shapes consisted of containers and bowls, which were very different from the Yangshao pottery of the middle Yellow River valley in the north, since they were designed for high temperatures enabling maximum extraction of food value from splintered bone and meat as well as rice and fish. This ceramic series is a separate southern Neolithic tradition with design elements similar to those of western Yunnan, which may have been a source of its cultural inspiration (Fig. 9).

The Hemudu culture had been formerly termed Ch'ing-lien-kang (Qinglinagang) or South-of-the-Yangtse type, but owing to confusion with a northern Neolithic culture of the same name, K.-C. Chang has renamed it Ma-chia-pang, and has divided it into three phases, Ma-chia-pang, Sung-tse and Liang-chu, the last being a southern version of the Longshan culture of Shantung Province (Chang 1986: 195-8). The Ma-chia-pang culture is characterised by wooden pile house structures using mortice and tenon carpentry, wooden boats, lithic tools and utensils. Curvilinear designs, which incorporate anthropomorphous faces and reverse-curve motifs, are carved on jade adzes and are incised on clay pottery.

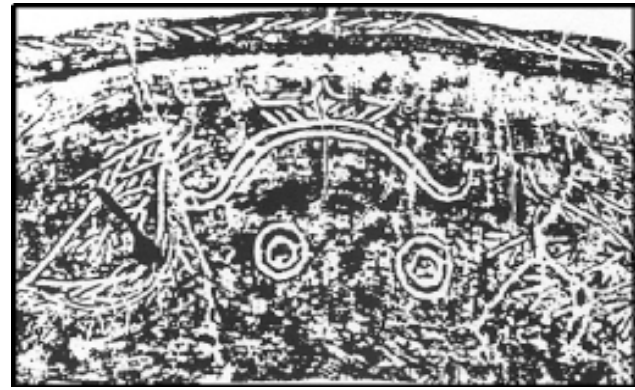


Figure 9. Hemudu black incised pottery, Jiansu Province (after K'ao-ku hsueh pao 5: 1951).

Petroglyphs in southern Jiansu and northern Zhejiang depict anthropomorphous faces such as those on the main cliff in the Jinping Mountains in Haizhou district in Li-anyungang City. From Jinping we can trace a trajectory of diffusion through southern Taiwan where the Austrone-sian Rukai people live today. In Rukai legend a person who had transgressed the *tapu* system was punished by being permanently locked within a rock and the only evidence of their presence was the impression of their face made when they were engulfed. It may be that some later anthropomorphous petroglyphs of Polynesia have an association with this *tapu* system of punishment and the origins of Lapita pottery facial elements

Astronomy was used by the rice farmers to determine when to plant and harvest crops in southern Jiansu and northern Zhejiang. There, cupules and concentric circles are reputed, on the basis of ethnographic information, to indicate constellations and planets, the magnitude of which was indicated by the number of concentric circles (Fig. 10). This use of concentric circles may represent one of the origins of the cupules that we find among Austronesians in Oceania.

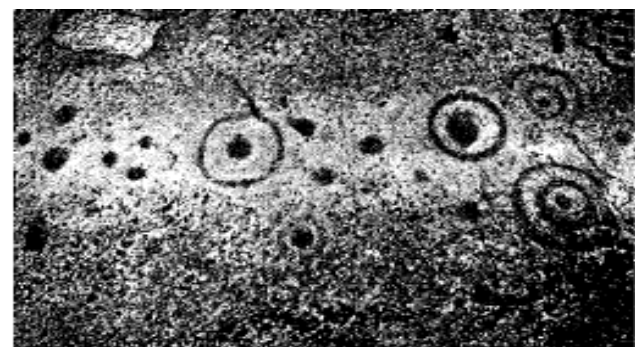


Figure 10. Presumed constellation petroglyphs, Jiangjunyan, Liangyungang, Jiansu Province.

#### 1.5. Fujian Province

A subsequent southerly diffusion of the Liang-chu culture is suggested by the cultural continuity of the archaeological assemblages uncovered at Tanshishan and Fuguotun in Fujian Province, the P'eng-hu Islands (Pescadores) and Taiwan at a time horizon around 6500-5000 BP (Chang 1986, 1989; Tsang 1992)

At Xianzitan of Tainei village of Shajian township in Hua'an county are two panels of cliff drawings which may have acted as apotropaic warnings not to enter to those who did not belong to the village (Fig. 11). One stick figure appears similar to the Yunnan Sun God fetish with an anthropomorphous worshipper. The pictograms of Fujian continue the anthropomorphous design elements, similar to those in Jiansu and Zhejiang. Now, however, they are combined with stick figure elements and heart-shaped facial elements, similar to those of the Lapita culture.



Figure 11. Petroglyphs, Xianzitan, Fujian.

About 4000 BP Hong Kong is thought to have been home to the Yueh tribes, of whom the Vietnamese are the closest living relatives today. These tribes created a vibrant culture based on a rice-fish economy, perhaps derivative of the Neolithic cultures of western Yunnan. A rice harvest festival was celebrated with wooden drums used as musical instruments, drums which when inverted became mortars wherein rice was pounded into flour. When the Yueh were invaded about 3800 BP by the southern Chinese Lac Lords, the wooden ritual drums, originally used to supplicate the god of first fruits, now became martial musical instruments cast in bronze, extolling the Lac Lords' invasion by outrigger canoes depicted on the drums' tympana (Kempers 1988).

Design elements on these bronze drums echo images found in the petroglyphs on six of Hong Kong's islands. These glyphs may have been regarded as guardian spirits protecting mariners and fishermen as they launched their boats, since many rock art sites overlook harbours and beaches, with the best vantage point selected to view boat-launching and with smooth rock surfaces (Meacham 1976).

Shek Pik Bay on Landau Island in Hong Kong harbour has petroglyphs on a volcanic rock outcropping 6 m above sea level, 300 m from the shore at the eastern end of a harbour which was probably at or near sea level in Neolithic

times (Fig. 12). The glyphs are composed of geometric designs, one set of six interlocking square spirals, one rectangular spiral and two circular spirals (Schofield 1975). These may have been territorial markers, and it was reported but unverified that another set was known to be located across the bay. This set of petroglyphs would have acted as signposts to the entrance of the village, Sha Gan Buey. This village was excavated first in 1937 by archaeologist W. Schofield and then in 1939 by Chen Kung-che, a local avocational archaeologist, who located the main Neolithic settlement and excavated stone adzes, knives, rings and a pottery mould for casting bronze fish hooks. Another panel was rediscovered 2 km up the valley at an elevation of 350 m overlooking the bay, consisting of two squares (17 and 24 cm) quartered and then criss-crossed. The site is a good lookout point and perhaps the squares were a type of gaming board, which was used by villagers waiting for returning fishermen. Petroglyph gaming boards similar to Chinese checkers and regular checkers are called *papamu* or *konane* in Hawai'i.

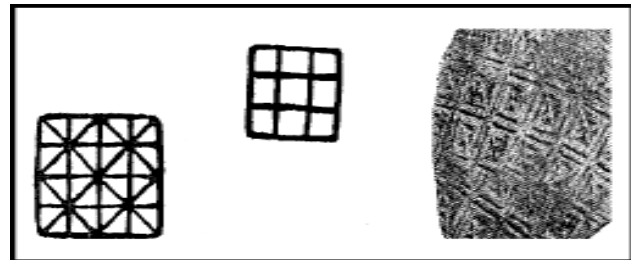


Figure 12. Gaming board petroglyphs, Shek Pik.

The wave-beaten island of Po Toi has several petroglyphs pecked into a granodiorite dyke in a cliff face about 5 m above sea level. A narrow ledge permits access to two large vertical panels (Fig. 13). Nearby is a small boulder with petroglyphs. The two panels are separated by a rock fracture 70 cm wide. All three suites of glyphs appear to be of different styles. The right-hand panel is composed of interlocking mirror-image spirals and appears to be almost symmetrical along a vertical axis, while the left panel is without symmetry and is composed of various abstract figures connected by lines. The boulder (not illustrated) is incised with two sets of glyphs, and one series of horizontal lines appear like I-Ching symbols.

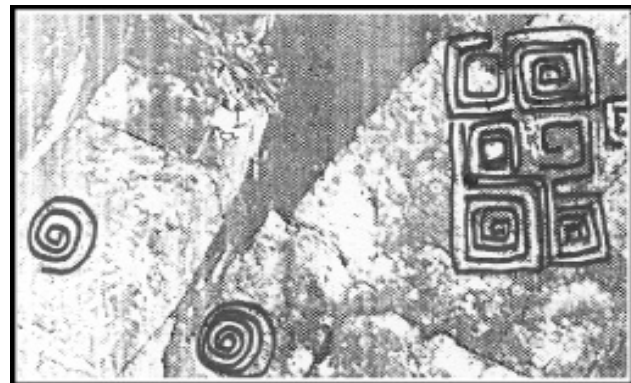


Figure 13. Petroglyphs at Po Toi. Right panel 130 cm by 50 cm.





Figure 14. Petroglyphs, Big Wave Bay, 180 cm by 90 cm.

Big Wave Bay on Hong Kong Island has a petroglyph panel pecked into basalt 6 m above sea level, overlooking a beach used for canoe launching. An abstract figure with curvilinear and scroll-like elements, prominent, solidly filled circular eye elements may have been intended as a protective maritime spirit. To the right rectilinear design elements may portray a canine (Fig 14).

Petroglyphs of Shang-type dragon masks may have acted as territorial markers or guardians. They have been found on two Hong Kong Islands. Chueng Chau Island petroglyphs were 'discovered' in 1970 by C. J. Peng, a geologist at the University of Hong Kong, on the eastern *tombolo* or causeway connecting two segments of the island, encompassing 200 m of a Bronze Age site. The design elements are interlocking curvilinear and other geometric shapes and are suggestive of Shang masks. Similarly, the petroglyph at Kau Sai Chau Island in a basalt dyke on the northern coast more distinctly resembles a Shang dragon mask, and it was placed on a promontory overlooking a Neolithic fishing village on the bay.

Perhaps the most provocative petroglyph panel in Guangdong is a cliff-side panel in which as many as eight apparent double canoes with a prominent prow and a prominent stern are depicted (Fig. 15). Double canoes are supposed to be a Polynesian invention found on the Solomon Islands, New Hanover, New Caledonia, Pitcairn, Tupaia (site 6), Maupiti on Tahiti, Teuto, Tahauku, Hivaoa in the Marquesas and Oahu in Hawai'i and Pitcairn Island. Their apparent depiction here is unexplained (Fig. 16).

#### 1.6. Taiwan (Formosa)

This sub-tropical island of 36 000 km<sup>2</sup> is bisected north-south by a mountainous ridge which lies on an ancient fault of the Pacific rim, exposing it to dangers of earthquakes and seismic activity. Perhaps for this reason, local people regard rock formations as alive and having shapes in the form of natural scenes, people or animals. Taiwan is regarded by many linguists as the origin of the Austronesian diffusion. Today, out of Taiwan's total population of 21.3 million, there are more than 350 000 who are indigenous tribal Austronesian Malayo-Polynesian speakers (Chen 1968). Despite the fact that their languages are derived from the same root, these modern Austronesian languages are not mutually intelligible because of the 6000-year time-depth separating them. Robert Blust believes that 'there can be no question the Austronesian speakers were on Taiwan

around 4000 B.C.' (Blust 1998: 31). At this time horizon, Austronesian speakers were a Neolithic culture which was identified by a rice and millet economy, wooden houses on stilt pilings as protection from flooding, domesticated pigs, dogs and water buffalo and perhaps chickens. They also engaged in true loom weaving, hunting with the bow and arrow, and pottery manufacture. Clearly, these Neolithic rice farmers had migrated from the mainland, where the closest rice farming community was Hemudu.

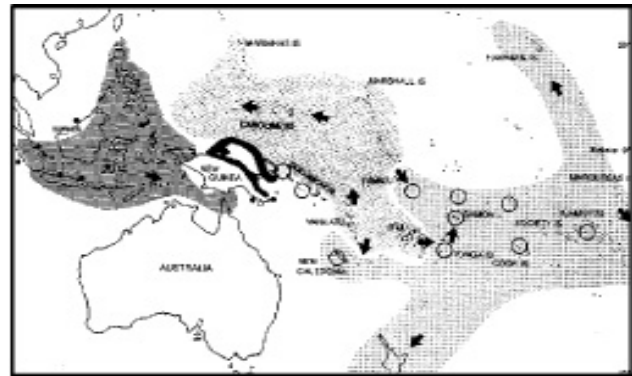


Figure 16. Canoe type distribution in the Pacific (after Doran 1974). Indonesia: double outrigger, rectangular lug sail, tacking. Middle zone, Micronesia: single outrigger, lanteen sail. Polynesia: double canoe and single outrigger. Dark V-shape in centre: mixed traits.

Taiwanese Austronesians include the Ami, Atayal, Paiwan, Bunun, Rukai, Puyuma, Tsou, Saisia, Yami (Da-Wu) and Pinpu. According to anthropometric measurements and genetic studies conducted by the Academia Sinica of Taipei these peoples exhibit substantial differences among them. Their social-cultural differences are even more interesting. In terms of family structure and kinship, there are three groups characterised by a stem-family structure with an equal status for both patri- and matrilineal kin (such as the Paiwan, Rukai and Puyuma). There are three patrilineal societies with patrilocal residence (such as the Bunun, Tsao and Saisai), one matrilineal society with matrilineal residence (the Ami), while two others are characterised by nuclear family units, patrilocal residence and parallel status for both bilateral kin.

The rock art in the Rukai area in the vicinity of Wanshan or Ten-thousand Hills in southern Taiwan exhibits Austro-nesian design elements, such as the heart-shaped anthropo-morphous head with a prominent, curvilinear nasal ridge and abstract geometric elements such as the cupule, concentric circles and the spiral (Fig. 17). A Rukai legend recounts how these people had come from the north into a virgin jungle when they were still head-hunters (McGowan 1987). It should be remembered that the Wa were originally head-hunters and that they shared this trait with the Lahu. If the networking principle pertains here, head-hunting may have diffused from Cangyuan where the Wa-Lahu hybrid culture was also responsible for the god of first fruits festival, similar to the Polynesian Makahiki.

Among petroglyphs of Ten-thousand Hills are morphous heads without bodies that may relate to the disembodied head petroglyphs in Jiansu and Fujian on the mainland. Another





**Figure 15.** Petroglyph boulder panel, Guangdong at Baojinwan on Gaolin Island in Zhuhai city (after Meacham 1976).

important motif is the spiral, which may signify the coiled-up sacred One-Hundred-Step Serpent (*Trogonocephalus ancistrodon*), a lethal viper local to Taiwan whose victims were said not to be able to take one hundred steps after being bitten. Professor Kao Yeh-Jung, of Pintung Technical College recorded a legend of the Rukai people of Wan San village from two informants in the 1970s (Kao 1991). This legend recounted the marriage of a young Laba'ulai man and a young Lada'ulongan woman. One day the bride was baking taro in the traditional earth-oven manner using cooking stones. Alone in the house, she uttered a hissing sound which called forth many snakes, among them the sacred One-Hundred-Step Serpent. The young bride coiled them around the cooking-stones in order to bake the snakes along with the taro. Once the snakes were cooked she ate them. When her family returned from the fields, she made no mention of the snakes and served them the taro in silence. Gradually, over the next few days her family began to lose their strength. Then one day working in the garden the family discovered the bones of the sacred serpents she had buried beside the house. When they confronted her, she was so ashamed of having broken the taboo of eating the sacred serpents that she could not admit her guilt. Hurriedly, she told her husband to meet her on Ten-Thousand Orchid Mountain at the place of two boulders named Tsubulili and Gubatsaeh. Then she gathered all the serpent bones, placed them in her blouse, grabbed the remaining uneaten serpents and hurried to the appointed spot. As she walked, the rock on which the boulders lay was as soft as 'little rice cakes' and her feet made impressions. When she sat down, she ate the remaining serpents with one hand, while with the other she drew a spiral petro- petroglyph of the serpents with her

index glyph of the serpents with her index finger into the soft rock. As she spat out the serpent bones they became alive again. Still feeling ashamed of her behaviour, she chanted a magical spell. Then, the rock engulfed her as though it were molten lava, and when her husband arrived all that was left were petroglyphs of her footprints, the spiral coiled serpent and the image of her face peering from the rock surface (McGowan 1987, 1994).



**Figure 17.** Petroglyphs, Wanshan, Gaoxioang, Taiwan (after Kao 1984).

## 2. The Philippines

About 5500 BP Neolithic Austronesian speakers reached the northern Philippines by outrigger canoes (Blust 1998: 30-2). They developed an economy comprising horticulture of yams, taro, banana, sago, breadfruit, coconut

anthropoculture of yams, taro, banana, sago, breadfruit, coconut and sugarcane (introduced from Taiwan).

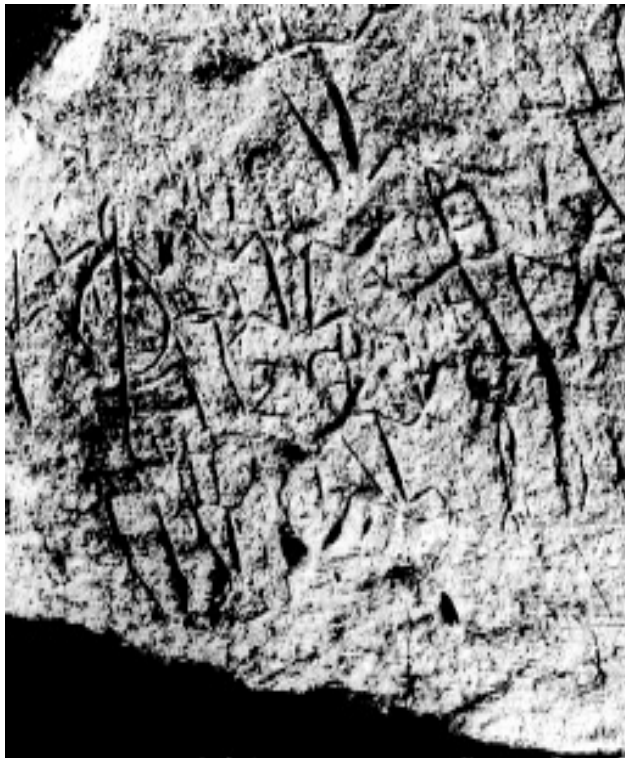
Early Austronesian Filipinos may have also engaged in headhunting as their Taiwanese ancestors had done. This practice was related to the conceptualisation of the human being as an entity in which the head was the repository of knowledge and power so that even though the head was separated from the body it remained a receptacle of knowledge and the traditions of the ancestors.

It took about 500 years for the Austronesian migrants to reach the southern islands, when, about 5000 BP (Blust 1998), two streams split, one colonising Borneo and Sulawesi, the other colonising the northern Moluccas and eastern Indonesia. The latter stream then split with one stream colonising the central and southern Moluccas, the other following the New Guinea coast, reaching the Bismarck Islands by about 4000 BP. From there it colonised island Melanesia, Micronesia and Polynesia.

Today, 166 Austronesian languages are spoken in the Philippines (Table 3). This indicates a great time depth of the presence of Austronesian speakers in the Philippines to which they had migrated from Taiwan.

Meso Philippine (60)
Northern Philippine (70)
Sama-Bajaw (9)
South Mindanao (5)
Southern Philippine (22)

**Table 3.** Austronesian languages spoken in the Philippines (after Grimes 2000).



**Figure 18.** Petroglyph panel, Angono, Philippines.  
Photo 1999 courtesy of Orlando V. Albinion, Curator

for Conservation, National Museum, Republic of the Philippines, Manila.

### 2.1. The Angono rockshelter site

The unique example of rock art in the Philippines was 'discovered' in March 1965 by the Filipino muralist, Carlos V. Francisco, at the Angono rockshelter in the hills at Binangonan, Province of Rizal, 29 km east of Manila on the island of Luzon. The site is due north of Laguna de Bay (Fig. 18).

A geological survey of the area by Elmer B. Billedo (1999), supervising geologist, Mines and Geosciences Bureau, has determined that the shelter is comprised wholly of volcanic rocks, mostly scoria, tuff, pumice and ash. The rockshelter is situated at the foot of a 235-m-high peak, which is a noticeable landmark in the area. This was caused by a geological fault, probably in early Holocene times. Billedo also determined that at the time-horizon when the petroglyphs were made (c. 3000 BP or earlier) the shoreline was close to the site, but subsequent silting caused the shoreline to retreat.

The ancient coastal location of the shelter suggests that at least some of its ancient inhabitants were of a maritime culture. Because there is no other rock art site yet identified in the Philippines, one hypothesis is that this was a temporary landing area for peoples who were migrating on a known trajectory through the region by marine craft.

Two rock strata comprise the shelter wall, an upper tuff where the drawings are incised and a lower one of volcanic ash, which becomes dust when tread upon. Spalling from the tuff surface has reduced the panel to 127 figures. The panel apparently once extended across the entire wall so that it is now only half of its original area. Two methods of engraving were used, a V-shaped groove for smaller figures and a U-shaped groove (to a maximum depth of 2 cm) for larger ones. There is no use of intaglio, relief or pigmentation.

There is no evidence that the grooves were made by metallic instruments. The angular design elements, which appear discrete and unrelated to each other, were apparently produced singularly and without any conception of overall composition within the panel. Such an individual-ised pattern may account for the panel as a complicated palimpsest that was probably produced at different periods by potentially different cultures.

Sixty-three extant anthropomorphic figures are all presented in a frontal stance, 37 of which have legs flexed as if crouching, with both arms upraised. The lower appendages of these figures are drawn in outline, sometimes with a gap or space between the legs, in which sixteen figures have a small cupule or 'V' placed between them, in much the same way that *piko* marks were used to distinguish females in petroglyph figures in Hawai'i (Figs 19).

Peralta and Evangelista (1972) sought an ethnographic parallel with these images by examining motifs in the material culture of several of the indigenous tribal peoples of the historical Philippines. An inquiry of the townspeople of Binangonan failed to produce any knowledge of the rock drawings or of the culture that produced them. Peralta and Evangelista have concluded that the cultures associated with



the Angono petroglyphs are not related to any surviving artistic or cultural traditions. This is not at all unusual for ethnography dealing with petroglyph sites; indeed it is the norm.



**Figure 19.** 'Female' anthropomorph with 'piko' (?) mark, Angono, Philippines. Photo 1999 courtesy of Orlando V. Albinion, Curator for Conservation, National Museum, Republic of the Philippines, Manila.

If one compares the Angono figures to the red ochre pictograms of Cangyuan in Yunnan, China, certain parallels become obvious. In Cangyuan, the ritual 'birthing-praying' posture has been attributed to a fertility rite with conspicuous Sun symbols comprised of rayed-circles providing an organising principle relating to the Sun's germination of crops. V-shapes (vulva signs?) at Angono suggest procreativity, a theme also perhaps indicated by the turtle figure (Fig. 18, left). Therefore, Angono and Yunnan might depict females in childbirth in association with Sun symbolism and with animals symbolic of fertility rites like the turtle, an association that is found in Hawai'i.

### 3. Kalimantan (Borneo) and Sulawesi (Celebes)

#### 3.1. Kalimantan

Rock art in Borneo was first studied by Tom Harrisson, Curator of the Sarawak Museum at Kuching, Sarawak, and excavator of the great 'Painted Cave'. He recounted how

300 ft up a difficult cliff, the whole back wall ... is painted with primitive designs in scarlet haematite. ... The cave floor was littered with relics of late Stone and early Iron Age rituals for secondary burial (transference of bones) and the journey of the dead, including quantities of early Chinese porcelain and other mainland imports ... This 'Painted Cave' showed no signs of having been visited by man during several centuries. It is too high and light to contain either of Niah's modern incentives for search—bat guano

or edible nests. After reconstructing, by excavation in association with the wall paintings, a picture of what we think was going on there about a thousand and more years ago, we found that some of the same ideas were present in the folklore and custom of the Punans living at Niah today. They themselves became so interested in this that, with the help of some of the oldest men, we have been able to revive the old Punan death rites for secondary burial to assist the spirits in the journey of the dead. This clearly goes right back into the ancient past ... (Harrisson 1964).

On the floor of the cave were found 'death ship' coffins carrying the dismembered bones of the dead for their transport to the world hereafter, while on the ceiling scarlet paintings of these coffins floated across the heavens to their final resting place. In addition there were supposedly praying figures, very similar to those in the Philippines (Fig. 20, lower right). This 'death ship' motif and its linguistic counterpart derives from the Austro-Asiatic diffusion down the Mekong and Red Rivers from south-western China into Annam where it was adopted by the Annamese (Vietnamese) and through them, the Han Chinese. The Vietnamese concept of the mythical 'river' (*song*), down which ships of the dead were floated on their eternal journey, had an Austro-Asiatic origin (Norman and Tsu-lin 1976), and the Chinese then borrowed this concept (*chiang*), when the Lac Lords invaded Annam, and made it a primary image on the Dongson drum (Fig. 21; Hoàng Thi Châu 1969). This tradition then spread to Borneo, across the Wallace line and merged with the Austronesian dispersal so that the spirit canoe in Melanesia was manned by spirits of the ancestors dressed in their totemic masks.

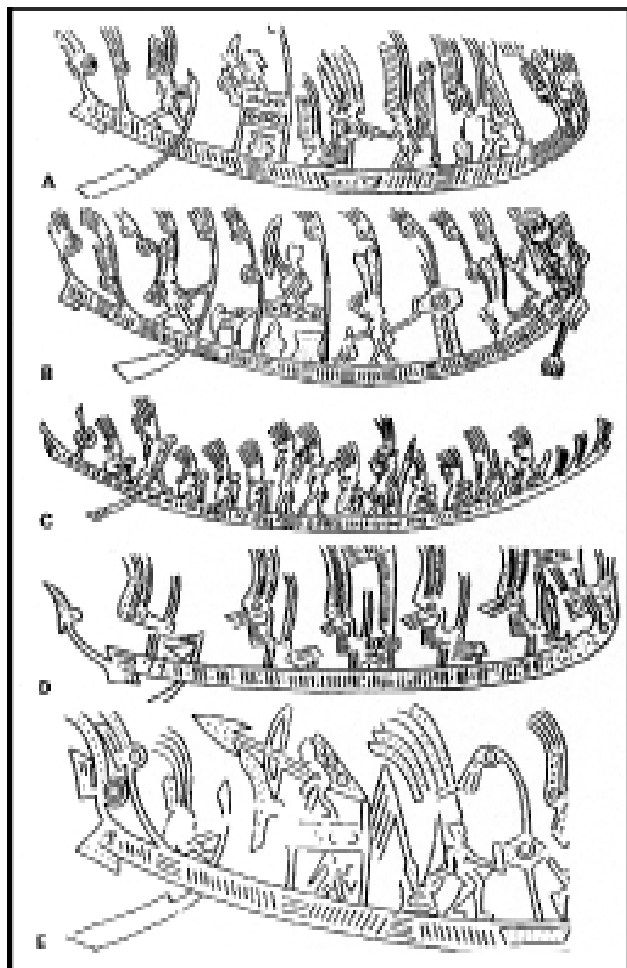


**Figure 20.** Petroglyphs, Niah Cave.

#### 3.2. Sulawesi

Spidery-shaped Sulawesi, meaning 'Iron Island' for its mineral wealth, has four peninsulas on which no town is more than 40 km from the shore. The Bugis of Sulawesi, with their elegant schooners called *pinisi*, were pirates and thought of as 'bogeymen' by marooned sailors.

The two southern peninsulas contain rock art, mostly in limestone caves. The south-western peninsula has caves with pictograms, which were explored by the Swiss brothers Paul and Fritz Sarasin in 1902-1903. They had also explored the caves of Cakondo, Uleleba and Balisao, which yielded stone implements and microliths, pottery shards, human bones and molluscs as well (Soejono 1969; Kadir 1983). The local people of the Toala culture, who still use microliths and who live in forests and caves, were thought to be the descendants of the painters of these pictograms. In order to verify this hypothesis, van Stein Callenfels excavated another pictogram cave at Tomatus Kacicang and found bone tools and a green glass bracelet. This bracelet was a diagnostic artefact for the early metal-using period

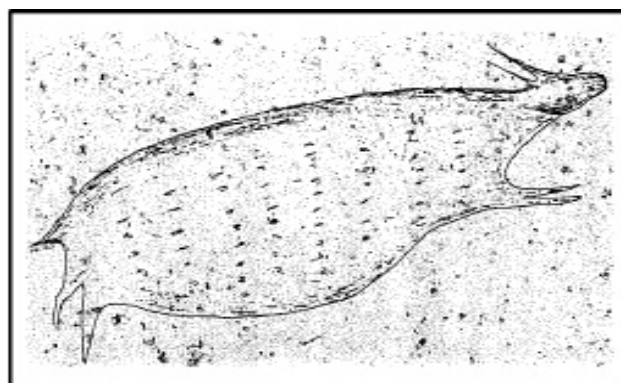


**Figure 21.** Ship images on kettle drums. A. Huang Ha, B. Ngoc Lu, C. Laos, D. Moulié, E. Hoàng Ha (after Kempers 1988: 146).

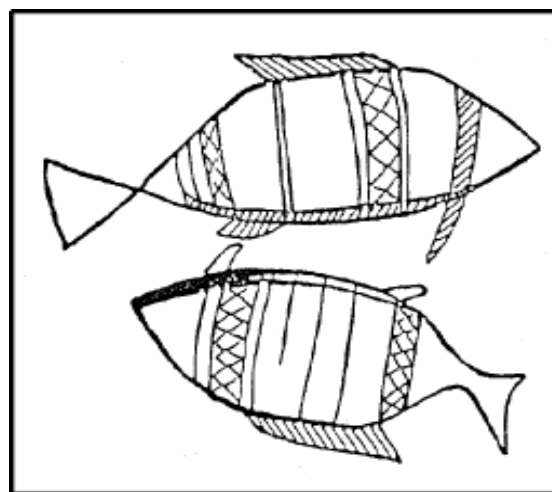
in Indonesia dating to about 2300 BP (Soejono 1970). Then, in 1950, archaeologist van Heekeren (1958) 'discovered' Liang Pattakere Cave I which contained a pictogram of a 'leaping *babi-rusa* boar' (Fig. 22). Hand stencils in Burung Cave were also found by van Heekeren. The Garunggung Cave in Pankajene, excavated in 1985, was found to have a number of pictograms of 'boars' and 'anoas' (wild cattle). Trident-like elements accompany these figures as do perhaps weapons (or vulva signs?), which have also been found at Salkluka Cave with hand motifs (both negative and positive) and 'boars'. Another cave, Cumi Lantang, only yielded red ochre hand stencils. In the adjacent regency of Pangkep the large Sumpang Bitu Cave is adorned with hand and foot stencils, 'wild boars', 'deer' and a 'canoe'. Lasitae Cave has hand stencils and fish images, apparently of the genus *Lates calcarifer*, decorated with diamonds interlaced in broad bands (Fig. 23). Lompoc Cave was found to contain pictograms of humans, 'sun symbols', triangles (vulva symbols?) and zoomorphs painted in charcoal. Kassi Cave also had charcoal figures of anthropomorphs alongside 'reptiles', 'snakes' and 'lizards'. In Sapiria Cave six anthropo-morphs painted in red ochre stand in a row holding each other's 'elbows', with a 'canoe' and

some geometric figures in the background. At Bulu Ribba Cave a 'dolphin' image has been observed.

The south-eastern peninsula's offshore island of Muna has a series of pictograms in a cave outside of the village of Raha. These were first 'discovered' in 1977, based on local reports of four caves: Metanduno, Kobori, la Sabo and Tangga Ara (Kosasih 1986). This potentially Austrone-sian art is organised into apparent scenes of hunting, dancing, fighting and farming, with a suite of wild animals ('deer' and 'boar') and domesticated animals ('horses' and 'dogs'). Separate from these is a potentially Austronesian suite of symbols including a 'mortuary boat', a 'sun symbol' and a 'bird-man', all painted in a brown pigment. Unique pictograms found in Toko Cave included 'coconut trees' and 'maize crops', while in Wa Bose Cave 'scenes' depict men and women with enlarged genitals.



**Figure 22.** Babi-rusa pictogram, Liang Pattakere Cave I.



**Figure 23.** Lasitae Cave pictograms (after Hampton 1993).

#### 4. Western Indonesia and Malaya

All but the last of these locations are outside the Austronesian influence, but they are presented here to indicate the cultures with whom Austronesians could have interacted.

##### 4.1. Sumatra

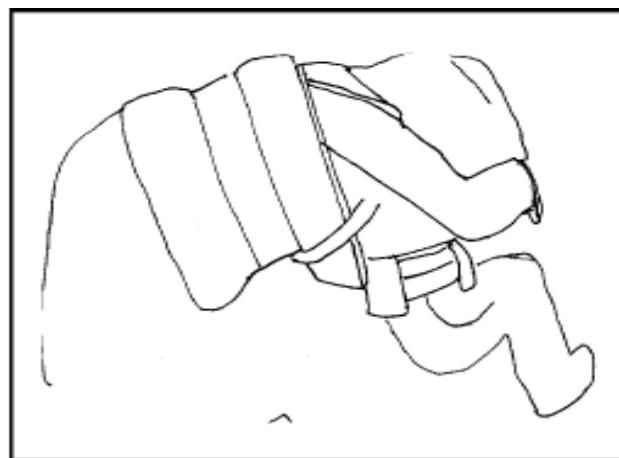
A variety of distinctive petroglyphs rendered in high relief on huge stones is found in the Pasemah Lands (Kabupaten Lahat). These petroglyphs are not Austrone-sian,



and reflect the traditions surrounding the Dongson culture as it expanded from south-western Thailand into Southeast Asia.

Sumatra features a mountainous plateau extending 70 km north-west to south-east and averaging between 500 and 1000 m above sea level. It is bounded by the provinces of Jambi, Bengkulu and Lampung. The plateau is volcanic and is dominated by Gunung Demp and its 3150 m crater, so basalt and tuff form the two chief materials from which the Pasemah people carved their megaliths, both in Pasemah itself and in adjacent regions (Thomassen 1932). As one enters Pasemah by way of Lahat Road, an old footpath leads by huge megalith sentinels, guardians of a sacred district, which has a reputation of being haunted by spirits of the ancestors (von Heine-Geldern 1945). These motionless menhirs of the Bronze Age watch over intaglio human figures carved into volcanic tuff and basalt. The figures wear helmets and leg-rings and carry Dongson drums to signal their troops. According to the local Pasemah, these figures were petrified by the great medium Seruntung Sakti, also known as Lidah Pait or 'Bitter Tongue', and hence they call the figures Batu Lidah Pait, 'Stones of the Bitter Tongue' (Van der Hoop 1932: 4). These bas relief figures were carved by master sculptors who were inspired by the natural shapes of particular rocks. On one were carved a 'helmeted warrior riding a buffalo'. On another, called the Batu-Gajah or 'Elephant Stone', two riders attempt to mount holding each of the elephant's ears, one rider looking forward and the other looking back. These seem to be depicted dressed in battle loin-cloths, girdles with broad swords having a very long hilt ending in a handle-grip pommel. Their high position in society seems attested by the torques or neck rings they wear, reminiscent of Indo-European torques, especially of the Celts. Their lower legs were protected by a series of rings or metal plates, and their helmets terminated in a sharp point. Van der Hoop first noted the possibly diagnostic artefact attributing this megalith to the Bronze Age, a Dongsonian Heger type Ia kettle drum (Kempers 1988) which is slung over the rider's shoulder, to be used in battle to warn his troops (Figs 24 and 25). Another petroglyph, the Batu Tatahan ('Sculptured Stone'), was found at Air Purah by H. W. Vonk in 1933, upside down on the bank of a small river. This panel consists of two men with pointed ears, both holding the handles of a 'kettle drum', the one on the left 'pulling a buffalo by a rope through its nose' while the one on the right 'holds another buffalo which he appears to be riding' in the same manner. Beneath the kettle-drum are a 'dog' and 'crocodile', each with 'teeth bared'.

Pictograms also are found in profusion in Pasemah. At Tegurwangi, where many megaliths were rediscovered by Van der Hoop. Five stone cist graves were also discovered. One (No. III) was found to have a badly preserved painting outlined in white limestone and filled with red and yellow ochre and black charcoal of a 'helmeted man sitting on a buffalo' (Van der Hoop 1932: 165-7). In the Tanjung region another painted slab in a cist grave was discovered with 'monkeys' and a 'buffalo' (Thomassen 1941: 317, Pl. 111).



**Figure 24.** *Petroglyph of warrior carrying a Dongson drum using a shoulder strap, Pasemah.*



**Figure 25.** *Dongson drum in open stern cabin of Lac Lords' canoe from the design on a Heger type I bronze drum of the same type as depicted in the Pasemah petroglyph.*

#### 4.2. Flores

The petroglyphs at Nua Mbako in the Wolo Topo district near Ende appear to be outside the Austronesian sphere of influence but are mentioned here to indicate the western Austronesian perimeter of influence. They were first studied by Verhoeven in 1954 (Verhoeven 1956). Petroglyphs recorded are a 'Dongson dagger' and 'socketed axe', a 'long boat' and a 'fish', all outlined by 2-mm-deep and 4-mm-wide incisions, and were obviously made with a metal implement. They may be the product of Bronze Age mariners, since a similar-shaped dagger was excavated at Bajawa only 140 km distant (Heine-Geldern and Verhoeven 1954). Therefore, they are unrelated to the Austronesian dispersal.

#### 4.3. Timor

Rock art in East Timor suggests the presence of Austronesian people in the stick figures on the islands of Tutuala, Ili Kere Kere and Lene Hara who hold apparent canoe paddles in a manner reminiscent of similar figures in Hawai'i. Some of these figures are paired as if in a ritual stance. Ili Kere Kere has steep cliffs and rockshelters with pictograms, mostly of anthropomorphs painted in red, black and yellow pigments (van Heekeren 1972: Pl. 64). Local people regard these as being ancestral figures who are depicted as brandishing their distinctive, carved wooden 'batons of power' and are depicted in ritualistic fighting or dancing in ancient ceremonies (Fig. 26). A second style depicts humans in three-quarter views apparently engaged in dancing, also

perhaps with ‘ceremonial batons’, but these appear as Papuan and not Austronesian (Fig. 27). Hand stencils also accompany these depictions (van Heekeren 1972: Pl. 68). A third style (not depicted) is represented by abstract designs of ‘starburst’ shapes with eight ‘rays’ extending from two circular centres (van Heekeren 1972: Pl. 66), connected by a crosshatched lozenge design.



Figure 26. Ili Kere Kere pictograms (after Ruy Cinatti in van Heekeren 1972: Pl. 69).



Figure 27. Ili Kere Kere pictograms (after Ruy Cinatti in van Heekeren 1972: Pl. 67).

## 5. The Moluccas (New Guinea, Buri, Ceram, Halmahera and Kai), Irian Jaya, the Bismarck Archipelago)

### 5.1. New Guinea

New Guinea, ‘discovered’ in 1526 by Jorge de Menzes, was named by Inigo Ortiz de Retes in 1545 because of similarities he perceived between the indigenous people and those on the Gulf of Guinea on the west coast of Africa. Today the island is divided into two political divisions: Irian Jaya in the west, and the Independent State of Papua New Guinea in the east (established in 1975 by the United Nations). The island is inhabited by three distinct ethnic groups, Papuans, Melanesians (along the coasts, often with Papuans) and pygmy Negritos (in the central mountains).

All Austronesian languages east of Cenderawash Bay on New Guinea belong to the high-order subgroup called Malayo-Polynesian or Oceanic (Fig. 28). According to Robert Blust (Pawley and Ross 1993), this is the first major split from the Formosan subgroup in the Taiwan area. Oceanic is the source of all languages spoken by

the Lapita culture and their Polynesian and Micronesian descendants (excluding the western Micronesian Palauan, Chamorro and Yapese).

Since *all* Austronesian languages of the west and central Pacific derive from Oceanic, there was, by implication, a single Austronesian colonisation that dispersed over this vast area (Table 4). The domination of about 750 Papuan languages on New Guinea indicates a much earlier influx of a different culture that makes it the linguistically most complex area on earth (Foley 1986: 3–4). Furthermore, a few Papuan-Australian cognates have been established which suggests they were of the same language family, perhaps on the time-horizon of 40 000 BP (Foley 1986: 8–9).

Proto-Austronesian
Formosan
Malayo-Polynesian (MP)
Western MP
Central/Eastern MP
Central MP
Lesser Sundas, Maluku
Eastern MP
South Halmahera, W. New Guinea
Oceanic

Table 4. Malayo-Polynesian language divisions.

In the New Guinea area, Papuan and Austronesian linguistic distributions reflect distinctions in cultural traits, especially art styles, including rock art. Figure 29 details how eight of the nine identified New Guinea art styles are Papuan affiliated, with one at the far eastern tip (including D’Entrecasteaux and Normanby Islands) being affiliated with Austronesian. However, as the linguistic map (Fig. 28) shows, there are very small pockets of Austronesian speakers on the north coast of New Guinea, and it is in these refugia that we should search for Lapita-associated traits. From Mussau, New Ireland and New Britain through the Solomon Islands, Lapita and Austronesian traits coincide, leading us to the conclusion that Lapita was the cultural expression of the Austronesian linguistic family.

New Guinea has nine historic artistic styles, each with a focal area. Five of these areas have rock art: (1) the north-west region—Gulfs of Berau and Bintuni, formerly McCluer Bay, and Kanrau on the Island of Kaimana; (2) the north central region—Humboldt Bay and Lake Sentani; (3) Huon Gulf region—in the Morobe district; (4) the Massim region (Normanby Island, D’Entrecasteaux Group); and the (5) Papua Gulf region, in the south. The other artistic areas, without discovered rock art, include the southern coastal areas of (6) Mimika and Asmat, (7) Marindanim, (8) Torres Strait, and (9) the central northern coastal area bounded by the Sepik and Ramu Rivers. It is problematic whether the historic art styles of these areas have any continuity with rock art styles.

#### 5.1.1. The north-west region: Gulf of Irian Jaya.

The Leo Frobenius Expedition in 1937, exploring the Gulf of Irian Jaya (formerly Geelvink) (Roder 1959),



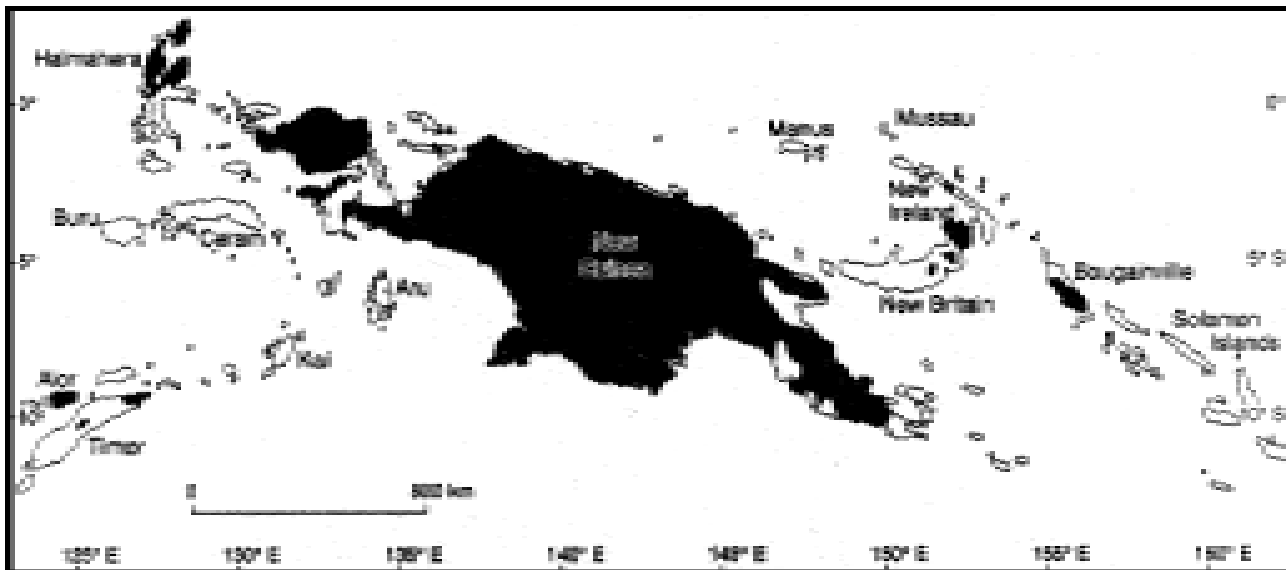


Figure 28. Distribution of Papuan (black) and Austronesian (white) languages (after Foley 1986).

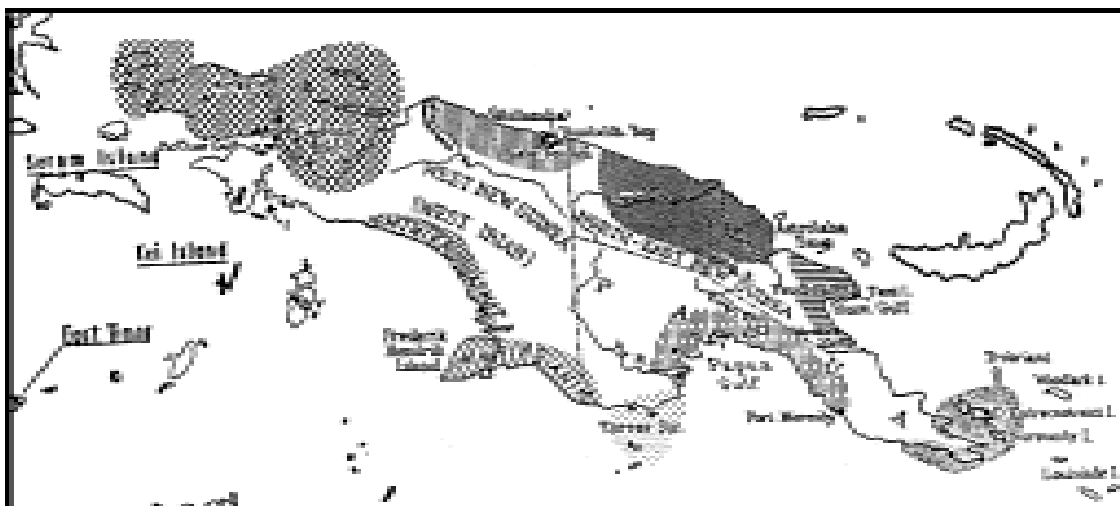


Figure 29. New Guinea art styles.

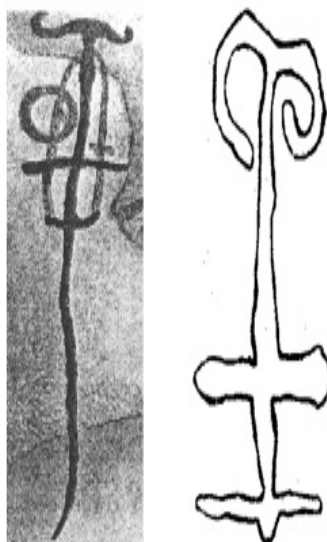


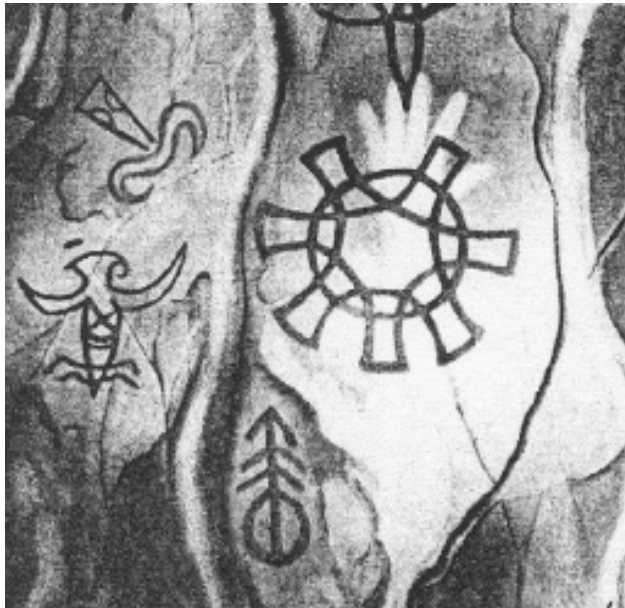
Figure 30. Irian Jaya petroglyph and pictogram (after Roeder 1959: 131, 133).

‘discovered’ rock art dominated by a scroll motif which is also incorporated into modern boat prows, staff-like fetishes, combs and bamboo containers (Fig. 30). The style is probably derivative of ancient motifs found on carved wooden ancestral statues (called *korwars*) of Papuan origin, either in rigid standing or squatting positions, which had hollow heads in which were placed the skull of the deceased. Later smaller statuettes were carved as lines below ancestral votary fetishes but without the enclosed skull. The votary fetish was developed into a petroglyph motif with scroll-like top part and two transverses. It resembles the Polynesian stylistic motif for the human face. The staff is also provocative in that it was used in conjunction with a head for the receptacle of the deceased’s skull. These were also hanging devices, like the Lono streamers. On Roon Island pictograms are more abstract, using curved lines, spirals and stylised reptiles (Galis 1948). These caves were used as mortuary sites and contain human skeletons and boats, which were perhaps to carry the deceased to their final resting place (Tanudirdjo 1985).

#### 5.1.2. Gulfs of Berau and Bintuni

It appears that these rock art sites have a common cultural heritage that is outside the Austronesian zone of influence. The Gulfs of Berau and Bintuni (formerly both part of McCluer Gulf) have rock painting sites of Papuan origin, identified at twenty-one and fifteen locations respectively, consisting of figurative and geometrical

motifs painted on limestone cliffs. On Arguni Island, on the south of Bintuni Gulf, Dudumunir Cave contains ancient pictograms of 'fish', a 'lizard', a tailed primate, a human with a pointed headdress, and a symbol that may be a Portuguese man-of-war (van Heekeren 1972). This region was studied in the early 1960s by R. P. Soejono who found that the local Irian fetish people regarded rock paintings as *amber-sibui*, or 'alien writings' (Soejono 1963), implying that they were a form of communication alien to them. The heptagram from Manga in west Irian Jaya (Fig. 31) is a symbol for the Roman seven-day week, adopted about A.D. 325, beginning with Saturn on Saturday and rotating among the Sun, Moon, Mars, Mercury, Jupiter and Venus (Gifford 1927). Contact with the Mediterranean seems implied by this motif. However, other motifs suggest the influence of local cultures, such as the figure below this, terminated by an arrowhead and a circle.



**Figure 31.** Pictogram panel, Manga, west Irian Jaya (after Roeder 1959: 124).

### 5.1.3. Bays of Bitsyari (Kaimana Island) and Triton

These sites, too, seem to have a similar cultural heritage outside the Austronesian zone of influence. On the south coast are the Bays of Bitsyari with Kaimana Island and Triton. A site on Kaimana Island has an unusual rock painting of three 'stylised human skeletons' which have three pointed rays extending from their skulls. On the coast at the village of Sisir I, 10 m above sea level, two different rock painting styles are present. One, painted entirely in red, depicts human figures, along with hands, 'trees', 'boats' and presumed sun symbols. The other, which is more stylised, is painted in both yellow and red and depicts 'reptiles', 'fish', 'fishing nets' and 'plants'. In the neighbouring village of Mai Mai a similar distinction is made between red paint only and red and yellow. Human figures depicted here have an anthropomorphous mask, and include a 'caged human', a 'hunter' and a 'legless reclining figure' (Kosasih 1991).

### 5.1.4. The northern coast

The northern coast around Humboldt Bay is inhabited by Papuans, and the area around adjacent Lake Sentani is inhabited by Melanesians. The proximity of these two groups and their reciprocal sharing has produced a hybrid Papuan-Melanesian culture.

For instance, the spiral is the most important design element in the art of the Humboldt-Lake Sentani area. Spiral designs are prevalent in ceremonial house ornamentation and in domestic items such as drums, paddles and bowls. They are even found in modern paintings, indicating the cultural continuity of this ancient design element. The spiral motif may have its origin in the tree fern, which played an important role in the lives of these people. Its root was used as a staple food, and its stalk was used in building and fencing. The tree fern could also be a verbal symbol of chieftainship. The spiral motif is found throughout Melanesia, where it may have been passed on to Austronesian cultures as they journeyed down the New Guinea coast into Near Oceania. In Aotearoa (New Zealand) the Maori elaborated at least forty-five spiral designs in carving and in tattooing. Among the Maori the groove type of tattooing (*moko*), which was similar to carving in that it was applied with a chisel, was typical. Among the Maori as well, the fern could be symbolic of chieftainship. Therefore, among the Polynesians, the adoption of the spiral design element may have been the result of contact with Melanesians.

Lake Sentani has pre-Historic settlements along the shore as well as an extensive rock art site on Asey Island in the middle of the lake, where petroglyphs commemorate the dead with totemic fish and animal symbols as well as depictions of warfare between local tribes. When a researcher, Bud Hampton, arrived on the island in 1988 the village elder related the following tale to him:

There is a story about an ancient village on the shores of Lake Sentani. One day the Ondoafi [first ranking chief] of that village received news that enemy warriors were advancing through the hills to attack and destroy his village. Alas, all of the villagers, except the Ondoafi and his powerful war chief, were gone. Some were far away on land gathering food; others were at the far end of the lake fishing. There were no warriors to repel the impending attack, only the Ondoafi and the war chief. The war chief was a powerful man skilled in the ways of black magic. He went into the hills alone to seek the enemy. Not far away he found the advancing enemy warriors, and with his magical powers turned those soldiers into stone (Hampton 1993).

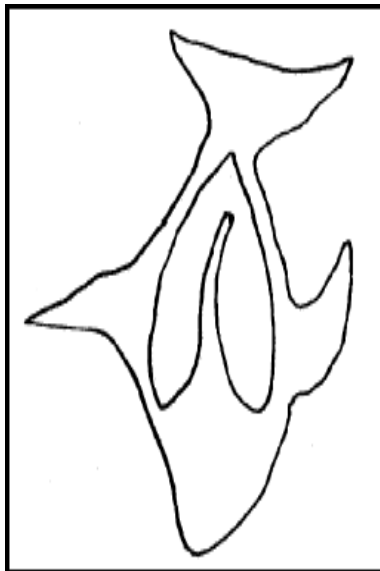
Near the village of Doyo Lama, overlooking the lake, Hampton found a rock-lined 'causeway' leading to 68 monoliths ranging from 35 cm to 90 cm high on the crest of a hill. Below the site were petroglyphs of a downward pointing fish and an upward pointing turtle. A reliable informant, Martinus Felle, a war chief of Jobeh Island, provided Hampton with the following explanation of the petroglyphs:

There is a story about two superhumans from Jobeh Island ... named Togam and Balo [who] made war with the villages of Hurali and Hamai. The two superhumans were very accurate with their bows and arrows. At the edges of the villages of the Hurali and Hamai, with their swift arrows they killed many people and put great fear into all the others. Some ran up into the hills where the spirits dwell and turned into stones which can be seen to this day standing erect and in formation near the crest of a hill. Other people afraid of Togam and Balo jumped into the lake and turned

into fish, turtles, frogs and other denizens of the deep. Then, lo and behold, these very same fish and turtle people appeared in the form of stones up on the hillside below their brethren, each stone person bearing his identifying clan symbol. Finally, the villages of Hurali and Hamai just disappeared, as if by magic (Hampton 1993).

Melanesians and Papuans in the Lake Sentani area believe in the transmigration of souls at death, when they, too, came to inhabit rocks. In the uplands mediums are used to assist the spirit to depart the body to the sacred mountain Gunung Rafini Ra-ra where rocks are believed to be ancestors, called *ondoafis*. Lake people believe that each person's spirit leaves the body at death to inhabit a rock not far from the village where he had lived. These rocks are decorated with petroglyphs of clan symbols, such as fish and turtles, that facilitate the spirit to choose them, being placed in such a way that they face the lake and the village below. Coastal people believe spirits hover in the ocean mist over coral reefs.

Among coastal and lake people, fishing is accomplished by trapping fish in nets suspended from floats. Clans are represented by at least two varieties of fish, the *gete gete* and the *gabus*, which are the staples of life. These are accurately pecked into the rock surfaces so that the transmigrating souls of the dead can readily identify their proper clan. The vertical orientation of fish indicates the rock is inhabited by the souls of the dead (Fig. 32), while a horizontal alignment indicates the rock is not yet inhabited. Similar designs of fish and spirals are incorporated into *tapa* designs, since both media partake of the same figural elements and their cultural meanings.



**Figure 32.** *Petroglyph of dead gete gete on ancestral spirit rock, Lake Sentani (after Hampton 1993).*

#### 5.1.5. Huon Gulf region—the Morobe district

This region is also inhabited by both Papuans and Melanesians, the latter primarily concentrated on the coast and on Tami Island. Near Finschhafen petroglyphs have been found incorporating hand prints, and quadrangular adzes have been found in archaeological contexts in this area, suggesting an age of around 5000 BP, when Melanesians were migrating into this area. In the Buang Territory, pictograms have been

found at four sites in the Morobe District in conjunction with ossuaries, indicating that this rock art was connected with the burial of the dead and worship of ancestors. Three rock art sites at Paveling'gne, Bareng and Ngarang are similar in style, with the principal motif being a frontally depicted anthropomorph with bent 'elbows' and 'knees' and a 'face' formed by two conjoined circles from which radiates a half-moon design. The fourth site at Pendigden has more ornate abstract decoration in the rock art paintings. The antiquity of this rock art is unknown, but the art is believed to be fairly modern according to F. Girard, the chief investigator of the area, based on comparisons of the art with nineteenth-century crafts (Austen 1939).

#### 5.1.6. Massim region

(Normanby Island, D'Entrecasteaux Group)

The Massim region is inhabited by Melanesians and includes the south-eastern tip of New Guinea and its adjacent islands, including the Trobriands, Woodark, Louisade and D'Entrecasteaux. There has been very little archaeological work undertaken in this region, but the existence of megalithic structures has been known since the nineteenth century (Strong 1923, 1924). However, little is known of the time-horizon and cultural contexts of the rock art. Pictograms and petroglyphs of anthropomorphs and zoomorphs have been found, together with geometric motifs similar to the type used in contemporary tattooing and in boat decoration (Williams 1931, 1954). There seems to be a link between the past and the present.

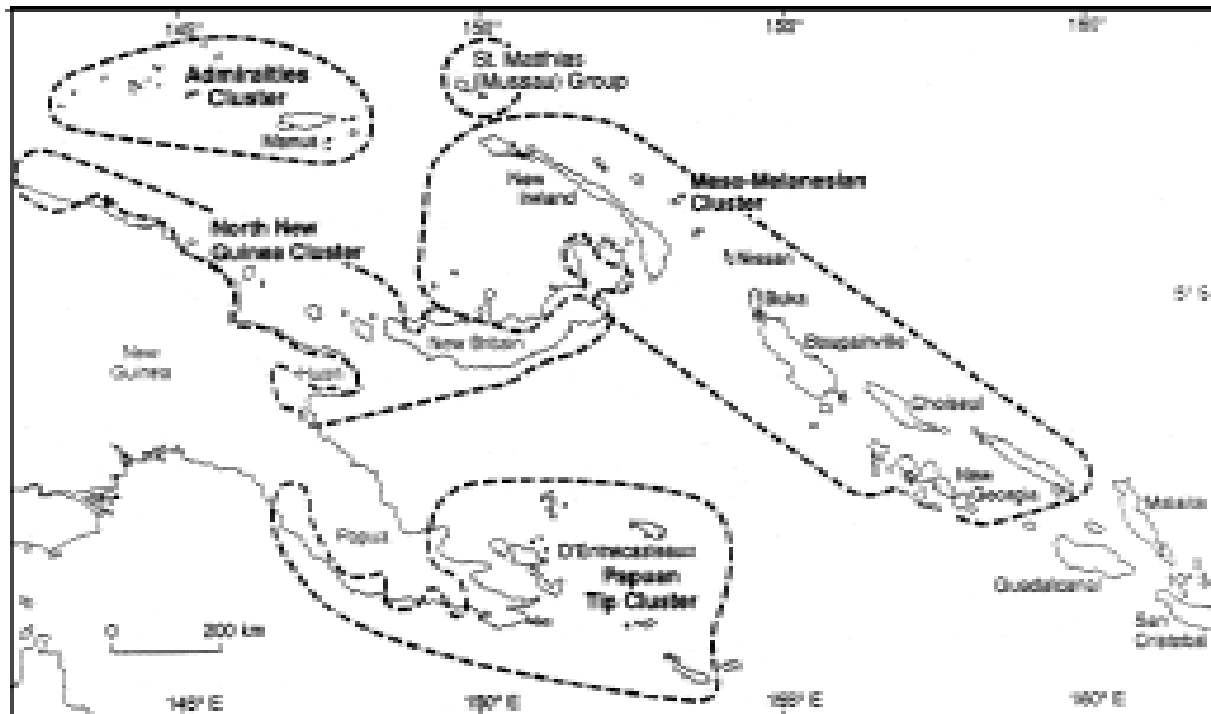
#### 5.1.7. Papua Gulf region

This area, which extends from the Torres Strait to Port Moresby, is characterised by geometric motifs, including the curve and the spiral. Anthropomorphous figures are so stylised as to become a purely decorative design. W. M. Strong, an early rock art researcher of this area, has confirmed the existence of similar designs in pictograms near Port Moresby. Besides these ornamental motifs, he has rediscovered almost shapeless anthropomorphous figures like those produced by contemporary artists in the Gulf of Papua (Strong 1923, 1924). According to one art historian, the spiral designs of this area constitute the most primitive stage of the Melanesian scroll style (Speiser 1936). These spiral designs may have been adopted by passing Austronesian voyagers on their journey east since the scroll design elements were incorporated into Lapita pottery.

## 6. The Austronesian dispersal

The family tree model of the Austronesian dispersal presented above (Table 1) implies a unified homogenous homeland, with communities diffusing independently, progressively and chain-like (Marshall 1956a; Dyen 1965). However, this model is overly simplistic in practice, since cultures interact non-hierarchically or in a network fashion with each other in regions along the trajectories of dispersal (Pawley and Green 1984: 139; Blust 1998: 31–4). Therefore, a network model is necessary to supple-





**Figure 33.** Lapita culture area and Oceanic languages of the Admiralty Islands, New Britain, New Hanover, New Ireland, Solomon Islands (Buka and Bougainville to San Cristobal) (after Ross 1988).

ment the hierarchical one. While the hierarchical model of diffusion accounts for progressive transformations of cultural attributes, including archaeological assemblages, linguistics and design elements along trajectories of dispersal, the network model allows the possibility of cultural transformations in situ as groups interact reciprocally with each other through trade and exchange. The Austronesian dispersal can be traced hierarchically from Taiwan to the north coast of Borneo (1600 km), from Borneo to Madagascar (6500 km), from Borneo to Tonga (4800 km), from Tonga to the Marquesas (1600 km), from the Marquesas to either Hawai'i or Rapa Nui (about 4800 km) and from Tahiti to New Zealand (about 8000 km). However, despite these huge distances the network model cannot be ruled out, since multi-directional travel occurred along and between many of these trajectories.

#### 6.1. The Austronesian dispersal

Proof of the robust nature of these apparently distant but culturally interrelated communities is that Austronesian culture has persisted. Today, there are about 270 million Austronesian speakers in thirty-seven modern geo-political areas of China, the Philippines, Indonesia, Vietnam, Cambodia, Thailand, Myanmar, Malaysia, Singapore, Brunei, Timor, Papua New Guinea, Solomon Islands, Vanuatu, New Caledonia, New Zealand, Fiji, Tonga, Niue, Tuvalu, East Samoa, West Samoa, Wallis and Futuna Islands, Tokelau, Cook Islands, French Polynesia, Hawai'i, Guam, Northern Mariana Islands, the Federated States of Micronesia, Palau, Marshall Islands, Nauru, Kiribati and Madagascar. Taiwan, the Philippines, Indochina, Malaysia, Indonesia and adjacent areas account for 500 Austrone- Austronesian languages, while the rest

are spoken on eastern coastal New Guinea and the islands of the Pacific. Clearly, in each of these settings both the hierarchical and the network models were at work, so both are needed to account for cultural diversification.

One aspect of this diversification is the fact that the Austronesian dispersal spanned over one-third of the earth's surface encompassing four major biogeographical settings: coastal and lacustrine south-eastern China; subtropical Taiwan and the Philippines (with dual monsoon and dry seasons), insular Wallacea; Borneo and Java west and Sulawesi, the Lesser Sundas, and New Guinea east (with alternating eastern coastal monsoons from November to May and western coastal monsoons from May to November). The fourth setting is tropical, volcanic, insular Near and Remote Oceania, in which the rain-shadow effect separates windward from leeward zones and modest elevations separate micro-climates.

Another aspect of this diversification is that three economic adaptations can be correlated with the Austronesian dispersal. The first was an economy of rice and fish that diffused to coastal China and Southeast Asia. The second was an economy of chickens, pigs, dogs and taro introduced in Taiwan, which diffused along the Wallace line between the two Pleistocene land-bridges of Sunda (Southeast Asia) and Sahul (Australia-New Guinea) through the Philippines to Borneo and Sarawak. The third major economy incorporated many hybrid plants and animals, introduced when the trajectory crossed into biotically rich Near Oceania, encompassing New Guinea, the Bismarck Archipelago and the Solomon Islands.

These aspects of diversification contributed to the fissioning of 1213 documented Austronesian languages in the Oceanic area, as compared with only 23 Austronesian

languages west of this area. Part of the explanation for this was that in Near Oceania Austronesian speakers interacted with speakers of some of the 789 Papuan languages of New Guinea.

### 6.2. The Lapita culture

As if in reaction to an overwhelming Papuan influence that could threaten their identities, Austronesians developed a distinctive Lapita culture beginning c. 3500 BP in the northern Bismarck Archipelago. The culture developed rapidly and diffused by 3300–3200 BP to the Reef Islands, the Santa Cruz Islands, New Caledonia and Fiji (Fig. 33). By 3100 BP Lapita culture was present on the high islands of western Polynesia. This geographic distribution over time has resulted in the definition of a Lapita ceramic series similar to that in the Caribbean (Rouse and Cruent 1963).

The Lapita complex has been defined in terms of five traits by Roger Green (1979: 34): (1) distinctive dentate pottery; (2) internally differentiated, self-sufficient coastal settlements; (3) a tri-partite economy based on marine exploitation, animal domestication (pigs and fowl) and horticulture; (4) reciprocal exchange of exotic materials (obsidian, chert, oven stones and pottery); and (5) mobiliary artefacts including those made of stone (adzes, flake scrapers and knives, sling-stones and net sinkers) and those made of shell (adzes, scrapers, rings, bracelets, discs, fish-hooks).

As Lapita peoples invaded Remote Oceania, a biotically poorer but vaster region, they sustained their lives and their culture by transporting plants and animals of their past lives, so that on each remote island they could recreate a traditional cultural life and economy, which was uniquely adapted to a new environment (Green 1991).



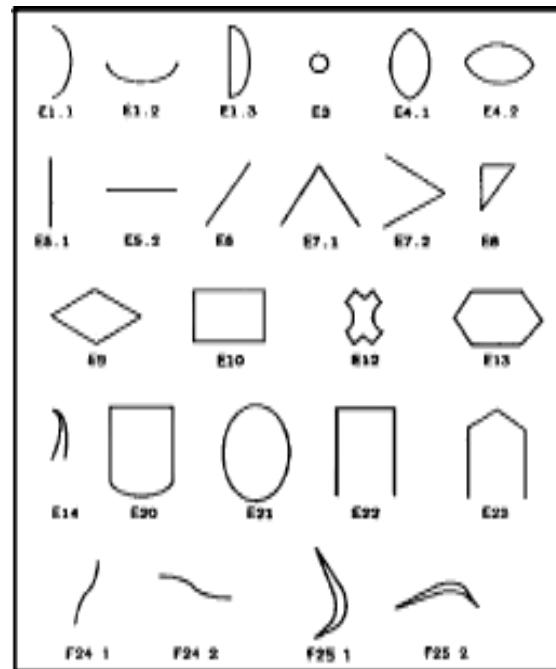
**Figure 34.** Lapita figurine, Kamgot site, Babase Island, New Ireland. Photo by Glenn Summerhayes from <http://artalpha.anu.edu.au/web/arc/resources/pacific/lapitaface/lapitaface.htm>

### 6.3. Lapita ceramics

Austronesians adapted Papuan traits and combined these with their own (Mahdi 1999). This is especially noticeable in ceramics, in which rare, three-dimensional Lapita figural pieces are obviously anthropomorphic. In 1997, during archaeological excavations at Kamgot site, on Babase Island, New Ireland, Glenn Summerhayes excavated a three-dimensional, modelled clay head in association with Lapita pottery (Fig. 34). Summerhayes argues that this anthropomorphic figurine with dentate stamping for eye and mouth design elements reinforces the idea that Lapita dentate impressions were intended to replicate the process of ‘tattooing’ the human body and that Lapita designs on pottery are also representations of anthropomorphic

tattooing (Summerhayes 1998). This hypothesis is of great importance when the social significance of tattooing is taken into consideration with regard to ceramics and rock art, as we shall see later.

As Lapita style developed, abstract design elements replaced earlier, less abstract representations. Furthermore, Sidney Mead examined Lapita ceramics and proposed that they were combined systematically, using application techniques (dentate and punctate), an inventory of design elements (Fig. 35), and a set of rules of composition (Mead 1975: 20).



**Figure 35.** Basic Lapita design elements (after Sharp 1988).

Austronesian ceramics had Asian shapes, which were now combined with distinctive Melanesian motifs (such as the spiral) and Papuan comb-like (or dentate) designs. Prominent among these designs was the curvilinear hook. The result was Lapita pottery. Lapita dentate design motifs were applied so consistently in zones on ceramic vessels that Sidney Mead and others have suggested that semiotic rules underlie this decorative system, much like a formal language has an internal grammatical structure (Golson 1971: 67; Mead 1979). The origin of this pottery may be the Samulo culture on Aitape on the coast of northern Papua New Guinea, according to John Terrell.

Lapita shards from Talepakemali on Mussau Islands clearly depict an anthropomorphic facial motif with dentate arc-shaped eyes in conjunction with a series of complementary design elements (punctate circles, dentate diagonals and dentate cross-hatching): an economy of stylistic representation is evident.

Dentate stamping is a technique of surface decoration made with a tooth-like device applied to the surface of clay with a tool similar to the Polynesian *uhi*, a bone blade comb bound with flax to a wooden handle, which was used in applying tattoos to the body. Petroglyphs were also produced

using a motion (percussion) similar to that of pricking the skin in the tattooing process. This type of tattooing is common to Polynesia, and is called ‘the smooth type’, because it was smooth to the touch. The grooved type was cut with a chisel into the skin to produce the pattern, which was filled with charcoal (Blackburn 1999: 12). This method was similar to the method of applying incised marks on rock surfaces as is found rarely in Polynesia because it was not well suited to *pahoehoe* or smooth lava surfaces which had crusty rinds unsuited to incising.

The development and diversification of specific Austronesian tattooing design elements are related to cultural underpinnings in religion, folktale, myth and dance, which probably influenced the selection of similar design elements in the production of petroglyphs. Therefore, Austronesian tattooing may have a direct relationship to petroglyphic art. Pictograms, on the other hand, which are rare in Polynesia, required an entirely different process for the application of design elements and may have an entirely separate cultural origin.

If one compares the Santa Cruz Lapita design with those from Mussau Island, both have dentate curvilinear nasal protuberances and both have dentate arcs for eye and mouth elements, suggesting conformity to a prescribed stylistic grammar.



**Figure 36.** *Lapita pottery, Talepakemali, Mussau Island, c. 3600–2500 BP (after Kirch 1997: 137; Kirch 1987). Drawing by Margaret Davidson.*

The form of the curvilinear nasal lines composed of a half circle and a straight line is reminiscent of the spiral design found on the north coast of New Guinea, which may be representative of a tree fern. These ferns were both the staple food for New Guinea as well as for Aotearoa and in both the fern was verbally symbolic of chieftainship and aristocracy. It appears that the delineation of an aquiline nose, whether or not it was associated with the fern as an aristocratic symbol, was regarded as being a sign of social or spiritual status. However, other examples appear to bolster the tree fern symbolism. On either side of the Lapita image from Talepakemali, Mussau Island, c. 3600–2500 BP (Fig. 36), are curvilinear devices that resemble the tree fern.

Similar curvilinear devices are on the Santa Cruz pot as well, even down to the radiate design on the Talepakemali image within the circular motif and the four circles within the large circular motif on the Santa Cruz image (Fig. 37).



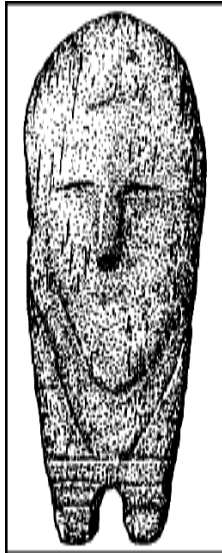
**Figure 37.** *Partially reconstructed Lapita ceramic from Nenumbo Gawa, Santa Cruz Islands, c. 3300–3200 BP (after Green 1974).*

If these anthropomorphous facial images are of a god of first fruits like Lono, for instance, then the reason these images were restricted to a limited range of vessel shapes ‘which seem best suited either for display or serving, but not for storage or cooking’ (Kirch 1997: 140) may be that they were ceremonial vessels associated with the rites of harvest in the Makahiki festival.

Furthermore, the extremely rare Lapita figurines appear to have been created as the devices placed on top of a fetish staff. The Lono fetish was comprised of an upright pole with a crosspiece draped in *tapa* cloth and with the carved head of Lono set on top. The image on the Santa Cruz Lapita pot (Fig. 37) clearly shows an upright element below the anthropomorphous head, and a crosspiece. This figure has a distinct aquiline nose. The reconstructed Lapita pottery from Talepakemali, Mussau Island, c. 3600–2500 BP (Fig. 36) also has a prominent aquiline nose and is wearing what appears to be a headdress, which would have been appropriate for a deity. The Lapita style anthropomorphous figurine (Fig. 34) may also be a figural image of Lono that once may have adorned a Lono fetish. The evidence for this supposition comes from another rare anthropomorphous figural head carved of porpoise bone with a clearly portrayed aquiline nose. Important features of this figural image are ‘two cross-grooves’ that suggest ‘these served to attach the figurine to some kind of shaft’ (Kirch 1997: 140) or upright pole, as would have been the case if this were a figural image for a god’s fetish (Fig. 38).

In terms of this reassessment of Lapita pottery and its social function in Austronesian Oceanic culture, several tentative conclusions can be drawn. First, the interplay of cultures along the north coast of New Guinea was artistically eclectic. Asian forms of ceramics were combined with





**Figure 38.** Porpoise-bone anthropomorphic image from Talepakemalai, Mussau Island (Kirch 1997: frontispiece; drawing by Margaret Davidson).

Papuan style ceramic decorations (dentate and punctate), while incorporating Melanesian design elements symbolic of local plants. Secondly, the movement of the Lapita peoples through this region was rapid, since within four hundred years they had reached central Polynesia from the Bismarck archipelago. Thirdly, the development of Polynesian deities and mythology must date from this Lapita cultural period. Fourthly, the use of tattooing was probably already an important element in Austronesian Oceanic society, so much so that it was incorporated into the depiction of their deities. Fifthly, the anthropomorphic depiction of figures on Lapita ceramics probably reflects ideals of social appearance and social rank. Therefore, the Lapita culture was at least incipiently a hierarchical society, with secular as well as sacred concepts of rulership. It may be supposed that at this point in time the two offices were embodied in one chieftain.

#### 6.4. Bismarck Archipelago: New Britain

The Melanesian inhabitants of New Britain (formerly Neu-Pommern) and the adjacent islands of Umboi (Rooke) and Siassi are farmers in the interior and fishermen on the coast. New Britain is culturally linked with Papuans of the northern New Guinea coast, being only separated by the island of Umboi and the Dampier Strait. When Lapita peoples passed through here about 3300–3200 BP on their journey to New Caledonia, there was an obvious exchange of cultural traits, and based on physical anthropology, undoubtedly some Austronesians intermarried with local Melanesians, thereby producing a mixed racial group. This is reflected in various aspects of their cultures, including rock art.

For instance, Melanesian artistic elements are obvious among the tribes of Sulka and Baining on the Gazelle Peninsula, where anthropomorphic and zoomorphic figures have been incorporated in Sulka masks, in soft tuff stone statuettes used by the secret Ingiet society (Bley 1909), and

in house posts, especially on the Island of Tami. However, Austronesian cultural elements were dispersed among the islands of this archipelago as well.



**Figure 39.** Petroglyphs, West New Britain, near Silimati village (Jim Specht photo from Rosenfeld 1988: 132).



**Figure 40.** Petroglyphs, West New Britain, near Silimati village (Jim Specht photo from Rosenfeld 1988: 132).

Three petroglyph panels from New Britain suggest Melanesian-Austronesian affiliations. The curvilinear elements in Figures 39 and 40 incorporate design elements found in Lapita pottery. Figure 39 shows a combination of these elements similar to those of the nasal motif and the tree fern. The long, tree-like, interlocking curvilinear motifs in a nearly symmetrical pattern (Fig. 40) are similar to the symmetrical curvilinear design elements in New Caledonian petroglyphs. These motifs appear to elaborate on the general design of Figure 39 and may also represent a tree fern, which was symbolic not only of the aristocracy but also of the source of

life (being a staple food). This interpretation appears likely when one examines Figure 40, since it is in the shape of a huge lingam with a cupule at its tip, which may have been used as a receptacle in fertility ceremonies.

Cultural interactions between Melanesians and Austronesians are evident in New Britain on the Island of Watom (off the New Britain coast) where excavated ceramics resemble Lapita pottery. Similar pottery is also found on Ile des Pins near New Caledonia. Umboi, the island in the Dampier Strait between New Britain and New Guinea, had rock art on three large monoliths (*biak*) of Melanesian origin. However, since these monoliths form the ritual area of an annual ceremony in which a pig is sacrificed, they were probably appropriated by the Lapita peoples for their Austronesian *pua'a* ceremony. Over a thousand years later in Hawai'i divisions of land were called *ahu pua'a*, signifying the place of the sacrifice of the pig. However, by the time the sacrifice reached Remote Oceania, pig sacrifice was limited to the aristocracy or *ari'i*.

#### 6.5. Bismarck Archipelago: New Ireland, New Hanover and Bougainville

New Ireland (formerly Neu-Mecklenberg), New Hanover (Lavongai), Tabar, Lihir, Tanga and Feni are comparable to New Guinea for the variety and imagination of their artistic productions. This is reflected in the fact that they were also in the zone of contact between the Papuan and Austronesian languages.

At the inland site of Likding on New Hanover a series of face-like petroglyphs has been recorded, and these appear to be similar to the Lapita face-like designs incorporating the tree fern motif (Fig. 41). These designs make use of symmetrical scroll-like elements or two circles separated by a vertical element that appears like a 'nose.' Sometimes these elements are combined, so that the scroll-like elements terminate in circles producing a 'heart-shaped' facial motif, which is characteristic of some Lapita designs. Another Lapita-style anthropomorphic stone face was reported from the Chatham Islands (see below).

Tabar and Lihir have produced remarkable stone bowls and pestles (which probably date to the early Melanesian migrations about 6000 BP. Shark figurines, on the other hand, carved from limestone or volcanic



Figure 41. Lapita-like facial rock art elements (after Buehler 1946: Fig. 11).

tuff are fetishes of a fishing cult and may date to 3000 BP. They are similar to stone shark figurines from Hawai'i and thus may be affiliated with Austronesian deity. There are also three examples of claw-like images that resemble well-known Austronesian sail shapes (Fig. 42).

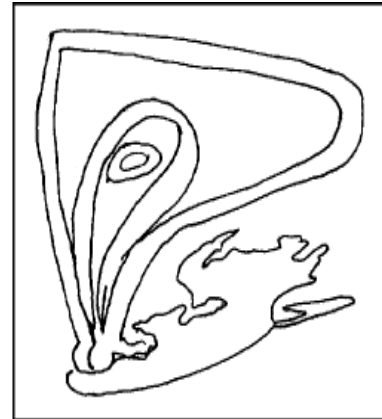


Figure 42. Petroglyph of claw-like sail on outrigger, south coast of New Hanover.

In New Ireland a bird motif at Majom near Kavieng in the north of the island may date back to Proto-Austronesian, it appears similar to avian designs in Hong Kong bay petroglyphs. Alongside this bird motif are characteristic Austronesian geometric figures, especially concentric circles and cupules that may have been used for birthing rites in which the umbilical cord was placed in the centre of the concentric circles.

On New Hanover, according to the local Melanesian peoples, many petroglyphs are regarded as having been placed there by spirits, which could mean, placed there by a foreign culture. These petroglyphs include geometric motifs such as concentric circles and cupules, which are typically Austronesian (Antze 1910). Other petroglyphs are of anthropomorphic figures and faces and are highly stylised in the manner of modern Melanesian masks.

#### 6.6. The Caroline and Admiralty Islands

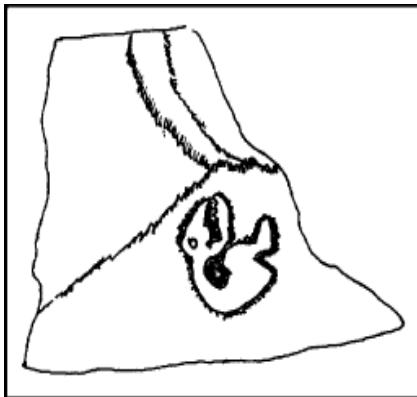
This archipelago surrounds the main island Manus on which live light-skinned people in houses built on piles on coastal reefs. In the interior are the Usiai who live in ground-level dwellings, while the Matankor are located between these two groups. On these islands, Melanesian motifs predominate in hand and footprints, 'crocodiles', 'turtles', 'suns and moons' (Nevermann 1934), and probably represent various cultural blendings of Melanesian and Austronesian traits.

##### 6.6.1. Kapingamarangi

This tiny, isolated atoll south of the Caroline Islands in the western Pacific, although well outside the Polynesian triangle, actually has a Polynesian culture. Located 100 km north of the equator it consists of a coral reef of 5 km diameter with thirty-four islets on its eastern edge, the home of about 500 people. It is not a good island for rock art since all of the rock-forming materials are calcareous skeletal debris, which is very poor for marking either by

engraving or paintings since its surface is so porous. Coral block masonry for houses or sacred *marae* altars abounds, but *marae* architecture is less impressive than that found on other Polynesian atolls. However, volcanic basalt has been transported to the atoll either as flotsam entangled in floating roots and weighing as much as 150 kg, or as 'trade ballast' in passing vessels which began in pre-Historic times and continues today. Basalt is valued over limestone for cooking stones in ovens because its density retains heat better, a distinct advantage where wood is at a premium (Buck 1950: 10-11). Fire is made using coconut husks spread over a hollowed depression in the earth. When all is aflame basalt is placed over the embers. Once the stones are sufficiently hot, banana and breadfruit leaves are placed directly on the stones and then the food wrapped in the same leaves is placed in the fire pit. Although basalt has provided an essential culinary service to the people of the atoll, volcanic rocks have remained utilitarian and have not been elevated as sacred objects and adorned with images. For instance, textiles involve the use of large flat porous volcanic boulders which are prized as anvils for making pandanus mats and volcanic pumice is valued as an abrasive (Leach and Ward 1980), but they too have remained utilitarian.

However, one rare petroglyph on Kapingamarangi illustrates the peoples' Austronesian connections, the stone of Uta-matua on Touhou Islet, which was probably received as flotsam on a coconut tree root and memorialised by being placed in front of the *marae* of the village where there was a special cult house. On its vertical seaward face is a figure in the shape of the Rapa Nui sooty tern-birdmen. The image is in slight bas-relief and chalked in white coral rendering it an impressive emblem (Fig. 43).



**Figure 43.** Birdman (*tangata manu* in Rapa Nui), stone of Uta-matua ('Landfall of the bird') on the east-facing beach of Touhou Islet, Kapingamarangi (see also Leach and Ward 1980: Fig. 8).

Fortunately we found an informant, Fatua, who could elucidate the story of Uta-matua. In an ancient time on Touhou Islet the Sun God was replaced by the *tangata manu* who offered new life to those mariners who would follow birds to landfall. According to tradition, the gods would visit the atoll every day, emerging from the sea in the mid-afternoon off the south-eastern edge of the atoll. They would gradually drift north to Touhou Islet, where they

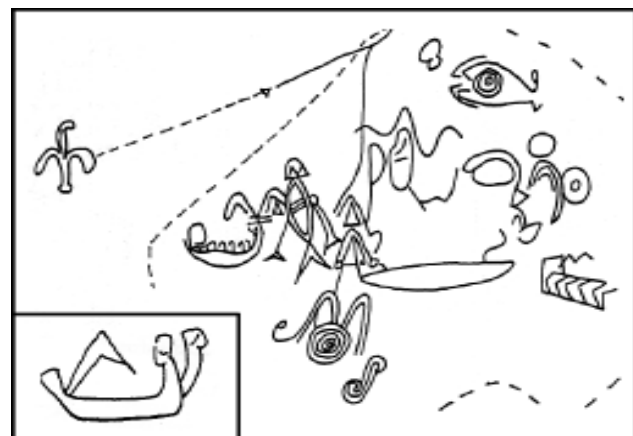
would emerge from the sea at Uta-matua and proceed to the *marae*. Inside the cult house, a pair of priestesses would remove the wall screens temporarily so that all could view the ceremony from outside. Meanwhile, the high priest that was at the lagoon end of the cult house would chant the evening prayers. The next morning he would come to the cult house on the *marae*, but this time he would go to the spot on the shore where the gods had emerged. He would then take down the screens again temporarily and chant the morning prayers. After the gods had departed to the sea about mid-morning, the priestesses would replace the screens. Several hours later the same ritual would begin again.

This sequence of daily events encapsulates the basic religious elements of Polynesian religion on this otherwise isolated islet. Gods are invited into the human realm with prayer and supplication; they enter a *marae* built of stone and sanctified by a fetish, the bird-man petroglyph on the basalt rock, Uta-matua. Since basalt was not native to the atoll, it was believed to have been sent by the gods, who had placed their symbol of renewal on it. Having been thus ushered into the human domain from their sea realm, the gods were offered a *tapu* place of refuge, returning in the morning to their spirit world beneath the waves. Such ceremonies of renewal were re-enacted across the Pacific.

#### 6.7. The Solomon Islands

This archipelago (see Fig. 33) was 'discovered' in 1567 by de Menda de Neyra and visited by Bougainville in 1768. Solomon Islands cover a vast territory. Their languages, rock art and the anthropological contrast between the very dark-skinned Melanesians and the light-skinned Polynesians suggest an ethnic diversity among its various peoples that extends into antiquity. This diversity is reflected in the petroglyphs. San Cristobal has the largest stone sculptures of diorite granite and limestone preserved in meeting-houses. Sarcophagi on Choiseul are of outstanding merit in their bas-relief designs, but are apparently not affiliated with the Austronesian culture.

The northern Solomon Islands' flared stone adzes with flanges shaped like birds' and animals' heads parallels the



**Figure 44.** Petroglyph boulder at Tombulu, SN-2-58, Solomon Islands (cf. Miller 1979: 51). Inset on lower left: Double canoe, Complex A, Orongo, Rapa Nui (after Lee 1992: 41).



tradition of stone carving found in other parts of Melanesia, such as on New Britain. New Britain also has Austronesian affiliated motifs, including a bird-like figure (Fig. 44 left), and a 'canoe' with an 'incurvate stern' (Fig. 44 centre), images which may be comparable to those in Polynesia (Fig. 44 inset). Other examples are concentric circles with central cupules, 'canoe' motifs and double-outline 'fish' and M-shapes (albatross? Bird wings?).

#### 6.8. Vanuatu (New Hebrides)

This archipelago, 'discovered' in 1606 by Pedro da Queirs, has been a republic since 1980 and encompasses about forty islands and islets. Rock art on these islands was first recorded in 1860 by Rev. J. Copeland (1861), who compared petroglyphs on the north coast of Aneityum Island with the recently recovered Assyrian monuments of Nimrud in Mesopotamia. Copeland perceived with uncanny accuracy that Austronesians carved these images on their way to Polynesia about 3900 BP. It was a generation before two other missionaries documented the use of petroglyph boulders. Rev. J. Inglis had been appointed the incumbent at the Mission station at Aname in 1852, a position he held to 1876. As an amateur anthropologist he found a petroglyph boulder at Nagesga (Inglis 1887: 30; Spriggs and Mumford 1992: 140) and recorded from his informants that

stones were the chief fetishes, or representations of the *natmasses* ('spiritual beings'); these were of all sizes, from that of a pebble to blocks of some tons weight. About a mile inland from our station are two blocks, each as large as the roof of a small cottage. Both of them were recognized as *natmasses*; the one, the larger, was called the sun, and the other the moon. The sides of the larger rock are marked with some rude sculpted figures of fishes and birds, and as one of the best fishing grounds could be seen from these rocks, certain incantations performed on these were believed to effect the success or non-success of fishing' (Inglis 1887: 30).

The Nagesga site (AT-19) that he mentioned here is an important source for understanding the dynamics of how multiple layers of petroglyphs can be used to identify the relative ages of motifs such as the famous one of Luahiwa, Lana'i, Hawai'i (Fig. 45).

In 1889 the Rev. William Gunn was appointed as incumbent on Aneityum where he remained until 1918. There he read Inglis' book and then conducted his own research:

Even in the days of Dr Inglis, who began his missionary labors in 1852, when the natives' knowledge of mythology and folklore was comparatively fresh and abundant, they could give no information regarding the origin or object of the figures. Some may be easily recognised. A few resemble birds. Others are evidently intended to represent fishes. The turtle near the top [of AT-19] is unmistakable. The star-like figures are said to represent the heavenly bodies, but those with the double tail are for trees. ... The figures could not have been the work of one person or a few. The sides of the boulder are so steep that a scaffolding would have been required—the work of many (Gunn 1906a).

Aneityum had been subjected to a destructive degradation of the environment similar to that which occurred on Rapa Nui. This site was 300 m from the shore and up-slope of an irrigated garden plot, which now stands in *Miscanthus* grass and fern scrub. It is similar ecologically to the Nagesga site. In 1909 an informant told Gunn a story

about the failure of crops on the island. In the ancient time there were too many people and not enough garden areas for them to work. Even the fish were no longer plentiful and at the Nagesga site on the south side of the island petroglyphs were commissioned by the lesser (i.e. ritual) chief to bring better catches. An old man, Yautea, told Gunn that Neta was *natimi elpas* of the Elihi people. More appeasement was necessary:

More and more people became specialists in rock engraving. Although food had become scarce the chiefs wanted their people to appease the gods by doing rock art. At night they made a fire with cooking stones but had no food. They did a ritual dance and people came to look at the engraved stones. When they came they brought food with them, which was how the Ehili people got fed. The people of Natimarid, the high chief of the wider area who lived at Umej, started doing their ritual dance every afternoon to appease the gods. The noise of this activity spoiled the kava drinking of Karahedmu, a lesser chief. He sent his men over and all of his group were killed and they were the ones who had primarily been responsible for doing the rock engraving. This is why no one knows how to make rock engravings today (Gunn 1909).

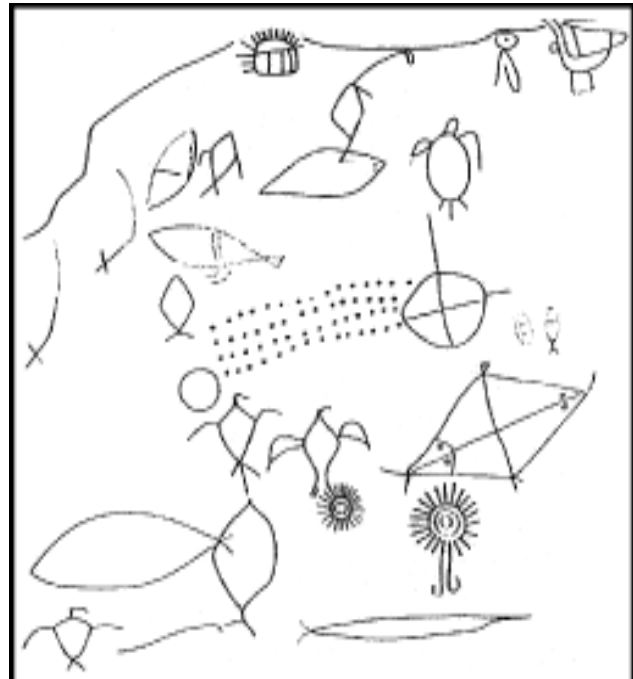
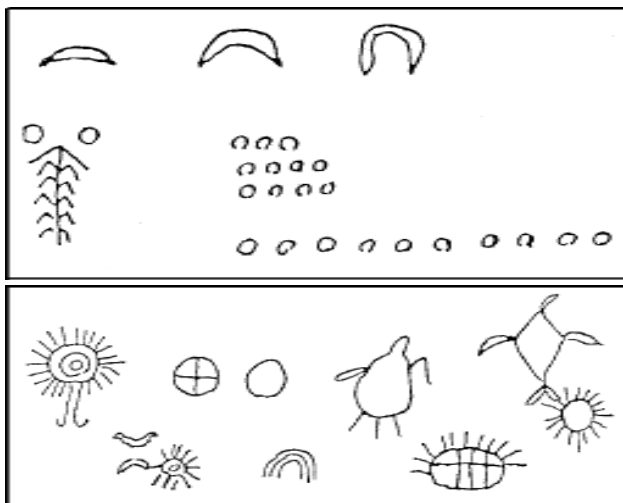


Figure 45. Site AT-19, Nagesga (Spriggs and Mumford 1992: 140).

On other islands in Vanuatu such as Malekula and Achin there are monolithic remnants of a non-Austronesian culture, which may be related to Papuan peoples of a much earlier time, together with some Austronesian remnants as well. Monoliths on Makelua have various petroglyphs in the shape of fertility emblems (phalluses) and human faces and sharks (used in rain-making and fertility cults). Similarly decorated monoliths are also found off the north-east coast of Makelua on the island of Achin. However, on Achin there are also spirals, which are only found in New Caledonia to the south, suggesting an Austronesian presence as well. The rock art of Vanuatu provides evidence of an earlier Papuan culture and later Austronesian migrations around 3900 BP.

Elsewhere on Vanuatu, such as at Gawa, the presence of Austronesians is overwhelming. This has been confirmed by archaeological excavations on Gawa which have revealed stone vessels and amulets connected with ancient fertility rites of a cult devoted to domesticated pigs, the primary staple of Polynesian voyagers. An Austronesian presence is also suggested by petroglyphs in geometric shapes throughout the archipelago, including circles (some concentric) and cupules, which resemble those of Hawai'i (Deacon 1934; O'Reilly 1931). Lunar and solar astronomical symbols, which were on the boulder at Nagesa, may be present among other island petroglyphs as well. On Efate crescents in various stages may indicate a lunar calendar, and associated cupules may indicate a counting system. On Aneityum circles, concentric, plain, quartered and radiate, may signify sun symbols (Fig. 46). Also present are human feet, and there are petroglyphs of 'fish' and 'rock lobsters' as well. Other petroglyphs suggest similarities with the heart-shaped Lapita anthropomorphous faces. Another site by the name of Pikad U reminds one of the cult places of turtle sacrifice in New Caledonia in honour of this most important animal of the Polynesians (Spriggs and Mumford 1992: 131).



**Figure 46.** Petroglyphs on Efate, above, and Aneityum, below (after MacDonal 1913).

#### 6.9. New Caledonia and the Loyalty Islands

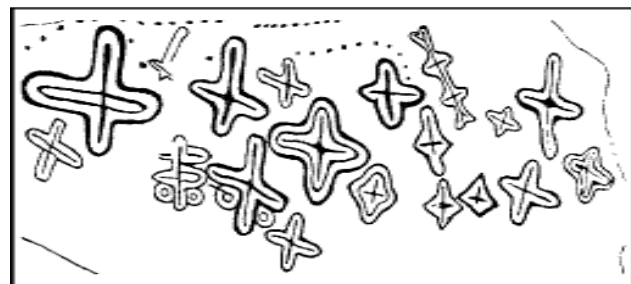
New Caledonia (Kanaky) is geographically the most isolated of all the Melanesian islands, an archipelago at the eastern end of Papua New Guinea, midway between Fiji and Australia. It is comprised of a main island, Grand Terre ('Le Caillou' or 'The Rock' to locals), the Loyalty Islands to the east and the D'Entrecasteaux reefs and Huon and Surprise Island to the north, and the Chesterfield and the Bellona group to the west. As the easternmost archipelago of Melanesia, it lies on a cultural and geological transition zone. Culturally, it is the 'Lapita' homeland of the first Austronesian voyagers to Polynesia. Geologically, it is the western edge of the Pacific plate slowly sinking under the Australian plate, with minerals (cobalt, manganese, iron, chromium and nickel) welling up from the earth's core and trapped in its craggy mountain strongholds 1639 m high.

Its winding coastline is the result of this subduction, and probably many archaeological sites lie submerged offshore. The main island of New Caledonia is the sixth largest island in the Pacific after New Guinea (400 by 50 km).

Melanesians (Papuan-speaking peoples) may have reached this archipelago 30 000 years ago, but their remains have nearly all vanished except for some potential rock art and megalithic dwellings. Austronesians (ancestors of the Polynesians) landed here about 3900 BP, as witnessed by their stone implements (quadrangular adzes of basalt) and Lapita pottery with its distinctive decoration (comb-like stamping, stacked horizontal zones, design units comprised of simple arcs, circles and right angles or complex curvilinear designs which embody the earliest dated representations of the human face found in the Pacific Islands). So plentiful were these waves of migrations that although Lapita sites near Kon and on the Ile des Pins have been dated to 3000 BP, shards of Lapita pottery still can be found crumbling along the rough coral sand beaches.

Rock art is perhaps the most eloquent and pervasive testimony of these ancient voyagers. Rare anthropomorphs with very rare curvilinear double-outlined bodies are similar to those of the Solomon Islands, New Hanover, Pitcairn, Tahiti, the Marquesas and Hawai'i. Those with long ears are regarded by locals as remnants of a much earlier culture and may date back to the first Austronesian voyagers about 3900 BP. Distending ear lobes was later practised (c. A.D. 900) among one of the bands on Rapa Nui.

However, the most pervasive Austronesian petroglyphs throughout the main island are geometric outlined crosses and multiple crosses and concentric circles (Fig. 47). A cognate and inter-related design with these elements is the stylised human 'mask'. These faces are similar to the frontal view of heads of stone figures carved from igneous rock from the Ambum River valley in Papua New Guinea, now in the Australian National Gallery, Canberra, thereby suggesting a Papuan, hence Melanesian influence.



**Figure 47.** Petroglyphs, New Caledonia.

Lapita anthropomorphous designs incorporate a vertical axis of head-body with horizontal arms and rosette hands. This basic cross design is perhaps derivative of the Southern Cross that has now been reformulated into a constellation. The two rosettes as eyes, the triangular connection of the eyes and the rosettes as the nose all suggest stars. Cupules, which are associated with these figural images, may perhaps indicate the stars of a constellation as well. Curvilinear elements on the other hand produce ethnic features such

as bulbous eyes and long, flared noses, features similar to those in the anthropomorphous rock art 'masks' of Rapa Nui. Circles, some concentric, may have been territorial markers as they are in Hawai'i. Vulva-like slitted ovals may have been associated with fertility rites, and isolated cupules may have been associated with birthing ceremonies (as the *piko* ceremony in Hawai'i as reported to Hiram Bingham). Cupules were used to hold the umbilical cord of a new-born, which if it disappeared before morning ensured the protection of the child into adulthood by the gods. Finally, rough limestone figures modelled in the round resemble those of eastern Polynesia, with oval heads (like Lapita 'masks') and thick-set trunks (like Marquesan figures), but they also have slender arms which are extended upwards, resembling the god-invoking petroglyphs of Hawai'i.

## 7. Central Polynesia, Fiji and the Society Islands

### 7.1. Fiji Islands

The Fiji (or Viti) archipelago is a 250-island transitional zone between Melanesia to the west and Polynesia to the east. The eastern Fijian islands were in regular contact with central Polynesia, especially Tonga, as the Dutch explorer A. J. Tasman, 'discoverer' of the islands in 1643, found. Polynesian settlers made their way to Fiji about 3000 BP, bringing with them their Lapita culture. Central to the archaeological identification of this culture has been dentate stamped pottery that firmly establishes Fiji as a Lapita (hence Austronesian) site, and Fiji's rock art supports its stylistic similarities to other Austronesian sites (Fig. 48). In fact, rock art has been discovered in sixteen locations in the Fiji archipelago (Snow 1953), including on the seven major islands like Vanua Levu (O'Reilly 1954) and minor islands like Vatulele, 32 km to its south (Ewins 1995).



Figure 48. Fiji anthropomorphous petroglyphs (masks?)

Vatulele, meaning 'slanting rock' in Fijian, is a 13 km by 5 km island, which, because of its paucity of water was apparently always only a temporary stopover for migrating populations of Polynesians who brought their Lapita pottery with them. At least one decorated Lapita shard, surface-collected by a Fijian in 1990 on Vatulele, is very similar to those from Yanuca 45 km distant and dated to 3000 BP. (The shard is in the possession of the Vatulele Hotel's manager, Roger Livingstone.) The Yanuca shards have been the subjects of numerous investigations (Clunie 1986: 2, Fig. 1; Mead et al. 1975). Then, they voyaged on to settle the more distant Pacific. Pictograms occur in the north-western wave-cut limestone cliffs that are over 30 m high. Because storms have removed a fringe of trees that had overgrown the cliffs, they now appear perhaps as they did to the Polynesians when

they stopped on their way to distant islands in the Pacific 3000 years ago. Denuded of trees, the cliff face radiates in the midday sun like a beacon to vessels far out at sea. This may have been what attracted the Lapita navigators when they selected this vertical, white cliff face as a canvas for their pictograms, a billboard to others passing that way.

The cliff face has recently been recorded and investigated by Roderick Ewins who has offered some tantalising and provocative insights into the significance of this rock art beacon. Some of the most significant rock art images are human heads that are shown with a variety of headdresses: these appear to resemble the ovate, stylised heads of Lapita pottery designs, especially the famed shard from the Santa Cruz Islands (see Fig. 37). These human heads have prominent brow ridges, egg-shaped faces, markings that may be tattoos, long, straight noses and a fringe of radiating lines around the head. Early Polynesians retained Austronesian figural mural painting and applied it to pottery and in Fiji to haematite pictograms on limestone cliffs. The long-distance voyages which had brought these Polynesians to the Fijian Islands necessitated worthy sea-going craft, one of which may be depicted in a pictogram panel which has been reconstructed by Roderick Ewins and which shows it to be a double-masted lanteen-sail craft of Melanesian origin. One tantalising element is added by Ewins (Fig. 49): an asterisk above its prow, which Ewins surmises to be Sirius, which passes directly over Vanuatu, Fiji and Tahiti (Ewins 1995). If this vessel is of the early Polynesians, it would support their astronomical charting of courses by the constellations in the night sky and would support Ewins' claim that the rock art panel on Vatulele's cliffs is not only a signpost for other sea-going navigators but also incorporates the star by which to sail. Other pictograms suggest faunal depictions: 'birds', 'dolphins' and 'turtles', the latter of which were reserved for consumption by the *ari'i* or chiefs.

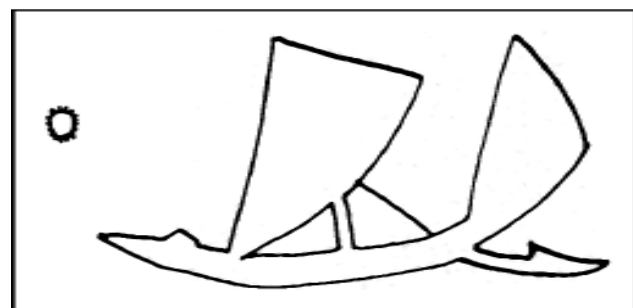


Figure 49. Vatulele 'outrigger' petroglyph.

As Polynesians forsook Lapita pottery at precisely this transition point in the Fiji Islands, they also forsook their depiction of the Lapita-style human head in their rock paintings. We do not know the social or cultural reasons for this transition, but we do know that it ended in Fiji, because human heads in rock art and Lapita pottery cease to be made concurrently. In Tonga anthropomorphs with indeterminate heads and 'muscular arms' and 'legs' begin to express a new Polynesian identity, which persists all the way to Hawai'i. Fiji is truly a transition zone between earlier and later Polynesian culture: one set of earlier Polynesian



images derived from the Lapita culture complex ends as a new Polynesian identity emerges. 'Polynesia—that vast galaxy of islands in the mid-Pacific from New Zealand to Hawai'i—was the last major area of the earth's surface to be discovered and occupied by man [other than Antarctica]. It is the largest area ever occupied by a single people—possessing the same culture, speaking the same language and having much the same physical appearance. ... And yet the Polynesians remain one of the great riddles of human history.' All Polynesians speak languages of the Austronesian family, which ultimately had its origins in Formosa and the Philippine archipelago (Wolff 1995). As they voyaged east they gradually diverged into five separate cultural areas, which extend in a massive triangle from the outliers through the western group of Tonga and Samoa through the intermediate group to the central group from which expeditions colonised Hawai'i, the Marquesas, Rapa Nui and finally, New Zealand. 'The clues we have suggest that the Polynesians colonised much of the Pacific at about the same time the Scandinavian Vikings were sighting North America' (Marshall 1956a)—and probably for similar reasons. As an ameliorated climate was enveloping planet Earth, populations expanded and the adventuresome 'Vikings of the Pacific', as Te Rangi Hiroa (a Maori) *alias* Peter H. Buck has called his ancestors, sailed to brighter horizons. They navigated double canoes across the largest wilderness on earth, reading the seas and the stars and settling on virtually every inhabitable island.

As though in reverence for the new land they found, they inscribed rocks with a vast array of images they had carried in their mind's eye throughout their voyages. Now, at last they could hammer these images into rock on dry land, providing us with the sole surviving records of these Pacific Vikings' long-lost memories. Their world is a foreign one to us, dominated by awesome *mana* (power) and *tabu* (sanctity), which were mediated by priests and legislated by the *ari'i* (rulers). Political districts usually were restricted to single islands or valleys, and this localism allowed individualistic rock artists to flourish—so much so that we can find a unique human image on Tahiti and identify its cousin thousands of miles away in the Marquesas or on Pitcairn Island.

### 7.2. Society Islands

This archipelago of fourteen islands of which Tahiti is the largest, situated between 153°–149° W long. and 16°–18° S lat., is one of the two centres (with the Marquesas) of two divergent Eastern Polynesian language groups and independent cultural traditions. This island paradise is a legendary gateway to Polynesia made famous by the exploits of Wallis, Bougainville, Cook and Bligh. In 1891 Paul Gauguin landed here after a 63-day sea voyage from France and found its people, the true allure of these islands, irresistible. Gauguin's experience was immortalised in Somerset Maugham's *The Moon and sixpence*: Gauguin is enraptured by a winsome Tahitian wahine, 'whose face flooded the interior of our hut and the landscape round about with joy and delight'.

The Society Islands were settled by Polynesians from the west, but the date is controversial. Although no radiocarbon

dates have been established prior to A.D. 1100 (Sinoto 1963), it is believed that a Tahitian burial site (undated) resembles those built by Society Island immigrants to New Zealand during the Moa Hunter Period, c. A.D. 950. Therefore, the Society Islands' settlement is presumed to have been somewhat earlier, perhaps around A.D. 750 (Emory 1963). Linguistic evidence from the Tahitian language is of little help in dating Tahitian language time-depth because when the inter-island chiefdom was established, neologisms were introduced which altered words in common usage (Marshall 1956b).

The Society Islands are generally bountiful, lush and fertile, havens for weary mariners. On the windward slopes of towering peaks, which reach a height of 2214 m on Mt Orohena, Tahiti, rainfall is daily and food is abundant. On the leeward slopes where rainfall was blocked, microclimates of scarcity amid plenty prevailed, but even in these regions on the coast, reef fish provided a constant source of food. In general, settlements on arable windward terraces exploded, crowding 1000 people per sq. mile (Adams 1947) as a result of the climatic optimum which lasted from A.D. 800 to 1250. Then the climate improved, a phenomenon that was opposite to the phenomenon in North America. At the height of this population boom, reclamation of arable land was promoted as far inland as was feasible: rugged, precipitous volcanic slopes were terraced with stonework and with irrigation systems comparable to those of Hawai'i. Then, islands reached a political climax. Warring chiefs of Raiatea commissioned elaborate war-canoes and sailed to Tahiti, Borabora and Huahine in search of prisoners and booty, creating a stratified and centralised 'state' of about 100 000 people, all sharing a common culture and a single genealogical system with an elaborate political structure.

Society Islands' rock art reflects the ancient history of this archipelago. Warring chiefs were still seeking political dominance when Bougainville and Captain Cook arrived in the 1760s. In 1788 Captain Bligh knowingly put his rough-and-ready crew in the fray on the side of the Tuamotuan despot, Pomare I, who gladly seized the opportunity, creating a European-style rule which was ironically supported by the first missionaries as a means of influencing the population to convert. With a Bible translated into Tahitian using the old cultic terms previously reserved for taboo observances the cultural legacy of the Society Islands was mortally wounded. The population was decimated by war and disease to 16 000 in 1797 and by 1815 only 10 000 were left.

RAR 19-599

---

*Due to the great length of Coffman's article, its second half will appear in the November 2002 issue. It will consider the rock art of central Polynesia, Hawai'i, the Marquesas, Rapa Nui and New Zealand, and will include the paper's bibliography.*