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FIRST RECORD OF PAINTED ROCK ART NEAR KUPANG, WEST TIMOR, INDONESIA, AND THE ORIGINS AND DISTRIBUTION OF THE AUSTRONESIAN PAINTING TRADITION

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Abstract. Here we describe a painted art site in an uplifted limestone marine terrace bordering the coast west of Kupang in West Timor, Indonesia. The site comprises panels of hand stencils, anthropomorphs and 'sun-ray' motifs which are similar to motifs recorded from Timor-Leste and the Kei islands to the east. We suggest that these motifs fit within a corpus of art found throughout the western Pacific and known as the Austronesian painting tradition (APT). We also discuss the APT more generally and suggest that its origins may lie within the islands of eastern Indonesia rather than in the proto-Austronesian homeland of Taiwan, or in the Philippines.

Introduction

During recent fieldwork in West Timor, Indonesia, a rock art locality was discovered in an uplifted limestone marine terrace bordering the coast near Kupang (Fig. 1). The motifs comprise hand stencils, anthropomorphous figures and geometric motifs, all painted high on the cliff wall. Patches of red pigment also occur over extensive areas of the walls. Today these are not discernible as images, even with the aid of enhancement techniques, and it is unclear whether they are the remnants of weathered images or merely pigment applied to the wall. The style, subject, colour and geographic and physical placement of the motifs all fit comfortably into what Ballard (1992) has defined as the Austronesian painting tradition (APT) and relates them to a broad corpus of painted rock art found throughout the western Pacific.

The Austronesian painting tradition

Specht (1979) was the first to distinguish a separation between the painted and engraved rock art of the western Pacific. He examined data of variable quality from 383 sites between Torres Strait and Tonga and noted that the engraved rock art had a coherence in terms of motif range and location, consisting 'generally of curvilinear geometric forms including spirals, concentric circles, face-like forms, and various other concentric forms' on boulders close to water courses or the sea, and in Austronesian language areas (Specht 1979: 74). This style of art has become known as the 'Austronesian engraving style' (hereafter AES) (Wilson 2002: 46). Specht (1979) also thought the painted rock art and engraved rock art separated

geographically with paintings mostly at the west of the distribution and petroglyphs in the east. Rosenfeld (1988: 134) reviewed the art of the western Pacific and also concluded that there appeared to be little overlap



Figure 1. Map of island Southeast Asia showing places mentioned in the text and inset showing West Timor and painting site south-west of Kupang.

between painted and engraved rock art and suggested that perhaps they represented two separate 'artistic traditions'. She also noted some coherence amongst the painted rock art in terms of the focus on geometric and anthropomorphic motifs.

Ballard's (1992) study of western Pacific rock art focused only on the painted art. Like Rosenfeld (1988) he recognised 'a unity in the painted art' of the islands from Timor in the west through to Bougainville in the east, which encompassed geographic and contextual placement of the paintings as well as 'a commonality of techniques, colours and motifs' (Ballard 1992: 98). He also noted that the painting sites throughout this region showed a high co-occurrence with Austronesian-speaking areas. Building on Specht and Rosenfeld's earlier observations, Ballard (1992: 98) thus suggested that the painted rock art might reflect a 'single symbolic tradition of cultural and historical significance' which may have accompanied the 'spread of Austronesian speaking communities' through Island Southeast Asia (ISEA) and into the Pacific. He thus proposed the term Austronesian painting tradition (APT) to characterise this rock art.¹ In view of the occurrence of some motifs in the painted rock art repertoire which he thought had affinities with those on Dong Son bronzes dating to after 2100 BP, Ballard (1992: 98) reasoned that the APT might be associated with a later Austronesian diaspora rather than initial spread.

Testing these models is difficult, especially for ISEA, as there are few detailed analyses or even descriptions of the motifs from the rock art sites in this region. Ballard's (1988) paper on the Dudumahan rock art site in Kai Kecil, SE Maluku, remains one of the few that contains a detailed and comprehensive description of motifs and shows that, aside from a range of geometrics, small anthropomorphic figures, often in active poses, dominate the rock art corpus (Ballard 1988: 150-1). Boats are the next most frequently occurring motif group (Ballard 1988: 152-3). Red pigment stencils are identified as dominant generally in the earliest phase of the APT (Röder 1956, 1959; Wilson 2002; Ballard et al. 2004: 394); however, recent U-series dating of carbonate encrustations overlying hand stencils and large naturalistic animals in Sulawesi has demonstrated that stencils were also executed in this region in the late Pleistocene (minimum age of 39.9 ka; Aubert et al. 2014). In terms of geometrics, motifs featuring variations on circles and rayed circles, identified as 'sun symbols' by Ballard (1988: 144-5), are common. In terms of colour and superpositioning, red rock art dominates and colour order appears to be black over red where there are overlapping images (Ballard 1988: 154).

Wilson (2002, 2004) subsequently reviewed previous models for the nature and distribution of painted and engraved rock art in the western Pacific, and

carried out multivariate analyses to test for similarities and differences between 160 rock art sites across this region (excluding Vanuatu) to test Specht's (1979) model that painted art dominated in the east and engraved art in the west. It is important to note that she did not include any of the islands of ISEA in her analyses.² Her findings indicated that the two media did separate on the basis of motif differences with painted and engraved rock art 'associated with two distinct but homogeneous motif groups that overlap in the eastern area of their distribution', but failed to support the geographic division between painting and petroglyph sites proposed by Specht (Wilson 2004: 186). Wilson (2004) also raised the question of whether the two media might represent traces of two separate movements of people at different times.

Wilson's (2002) detailed study of superposition and direct dating of some of the rock art sites in Vanuatu demonstrated that the earliest rock art is dated to ~3000 BP, and includes hand stencils and face motifs as well as patches of red pigment. She argued that the dating and other attributes of the Vanuatu rock art supported Ballard's association of this style with the movement of Austronesians into the Pacific but, rather than a later spread, she suggested that the early dates for Vanuatu indicated that it tracked initial migration (Wilson 2002: 216). Wilson (2002: 225) noted that after about 1500 BP the rules governing motif location, context, colour and style began to break down and rock art styles begin to diverge regionally.

O'Connor's (2003) analysis of the painted rock art from sites at the eastern end of Timor-Leste also largely supported Ballard's (1992) schema³. Most common figurative motifs are small active anthropomorphic figures often shown wearing head dresses and holding weapons and/or ritual paraphernalia. The Timor-Leste anthropomorphs are shown in both profile and frontal stance. Aside from small anthropomorphs, 'boats' dominate the figurative rock art repertoire and vary from simple schematised boats to representational examples, often showing features such as high raked prows and upturned sterns, decoration on prows, central sails and steering oars (O'Connor 2003; Lape et al. 2007). Some of the boats incorporate human figures. Other figurative motifs include zoomorphs such as crocodile/lizard/human figures and a variety of birds and fish, the latter occasionally shown in x-ray style (O'Connor 2003). The geometric motifs in the Dudumahan site, Kei Kecil, those in Timor-Leste, and those in the MacCluer Gulf, Papua, are

2 Wilson (2002: 92-118) included only sites in New Guinea and the Pacific.

3 O'Connor (2003) has noted, however, that in Timor-Leste there are other images which are stylistically distinct, occurring deep within caves, which may pre-date the APT-style paintings. Uranium-thorium dating of pigment encased in layers of calcite suggests that older art was executed in the caves in Timor, while older engraved art has also been found (Aubert et al. 2007; O'Connor et al. 2010).

1 The Austronesian languages are widely accepted as having a homeland in Taiwan, with the spread of Austronesian-speaking communities occurring from Taiwan after 4500 BP (Bellwood et al. 2011).

strikingly similar with the 'sun-ray' motif being prominent in the assemblages of all three. In fact there are such close parallels between the rock art motifs from Timor-Leste and MacCluer Gulf that interaction between these regions seems almost certain (e.g. O'Connor 2003: 120).

With the exception of stencils there is a clear separation between the APT and earlier dated rock art. Ballard et al. (2004) note the most significant motifs and design elements of the APT do not seem to occur in the few sites that definitely pre-date the local emergence of proto-Austronesian languages, such as those in Borneo dated earlier than 9000 BP (Fage and Chazine 2009), and those in the aforementioned Maros region of Sulawesi, where a range of Pleistocene dates have been obtained using U-series dating of calcite overlying the paintings (Aubert et al. 2014). Conversely, while large naturalistic animals such as endemic 'pigs' (probably *Babyrousa* sp.) feature in the Pleistocene rock art of Sulawesi (Aubert et al. 2014), neither wild nor domesticated pigs feature in the APT, and animal images are rare aside from the zoomorphs mentioned above.

As well as motif subject, colour and composition, the positioning of some paintings up to ten metres or more above the floor of the shelters, in inaccessible cliff edge locations often overlooking the sea, was identified as a prominent feature of the APT (Ballard 1992). It was suggested that this placement may have had significance in terms of visual signalling of rites/beliefs and also that in some cases there appeared to be a co-association of the painted rock art with human burials, including boat/canoe burials, and mortuary practices. The potential for symbolic signalling implicit in the locational context of the paintings has been further developed by Ballard and colleagues (Ballard et al. 2004).

Here we describe the rock art from an uplifted limestone marine terrace bordering the coast near Kupang, and compare the anthropomorphs and 'sun-ray' motifs with similar motifs recorded from Timor-Leste and the Kei islands to the east. We also discuss the origins of the APT more generally and suggest that it may lie within the islands of eastern Indonesia rather than the proto-Austronesian homeland of Taiwan, or in the Philippines.

The Kupang rock art site

Three separate rock art localities were recorded in 2014 in a limestone escarpment west of the main boat harbour of Kupang and near the small settlement of Alak (Fig. 1). The initial find and the only figurative panel is a composition of two anthropomorphs and



Figure 2. Kupang painted anthropomorph panel (red pigment) with 'sun ray motifs' (black pigment). The lower panel shows the pigment without any colour enhancement but with the pigment isolated and placed on a white background (photo: Julien Louys).

a partial 'sun-ray' motif in red pigment, other red markings and three black 'sun-ray' motifs (Fig. 2).

The overall height of the motifs from the base of the cliff line on the beach was approximately 8 m, making them clearly visible from a boat in the bay beyond, and it was from this position that we originally saw them. The anthropomorphs panel is positioned high on the sea-cliff walls, about 2 m above the highest ledge, which is narrow and inaccessible from the platform below. To execute the art the overhang may have been climbed, accessed by rope from the top of the ridge or, alternatively, scaffolding may have been erected on a lower ledge.⁴ We were unable to reach the ledge immediately below the panel to place a scale and have based the dimensions of the anthropomorph composition relative to the height of one of our party

⁴ The limestone reef terraces around the coast of Timor are subject to variable rates of uplift, but even assuming a high average uplift rate of 0.6 m/ka, such as has been recorded for areas of the north-east coast of Timor (Cox 2009), more than 10 000 years would be required to uplift the anthropomorph to close to its present position.



Figure 3. The sea-cliff shelter west of Kupang which contains the anthropomorph panel viewed from the beach below. The arrow marks the position of the panel with painted anthropomorphs and 'sun-ray' motifs (photo: S. Kealy).

on the beach below (Fig. 3). On this basis we estimate the red anthropomorphous composition at approximately 75 cm in width and 1.5 m in height. There is modern graffiti (names) also painted on the cliff face in the vicinity of the rock art at the level of the hand stencils.

Further inspection revealed two other localities in the same cliff line a few hundred metres to the west of the anthropomorph panel which comprised separate panels of red hand stencils. The hand stencils are badly weathered and have been enhanced using D-stretch in the intermediate panels (Fig. 4). The first group comprises three clear hands, two right and one left hand as well as areas of red pigment in which no patterning is discernible (Fig. 4). The second group includes four definite red hand stencils and seven further possible ones (Fig. 5). It is not possible to ascertain whether they are right or left hand stencils.

The red anthropomorph composition includes one red 'standing' figure (to the right) with the right arm raised and possibly holding a curved object. The head of this figure is large and may include a headdress. The second figure seems to be prone and has elongated legs and arms, a large globular body, long neck and small head. This figure appears to be crawling away from the standing figure. The

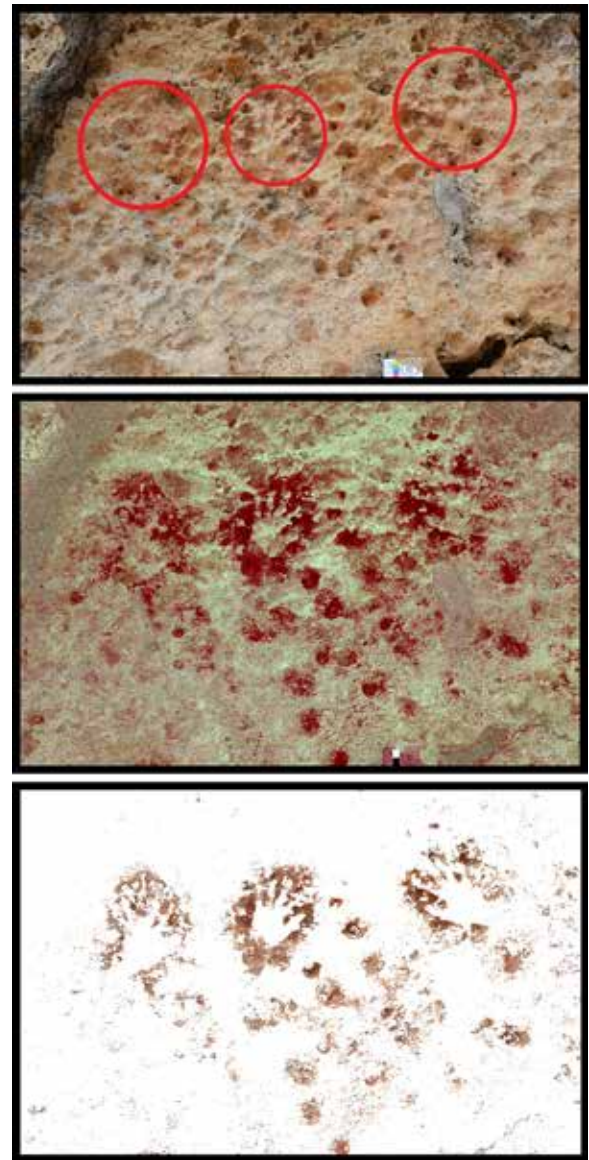


Figure 4. Kupang hand stencils group 1. The upper panel shows the unenhanced hand stencils outlined with red circles, the middle panel shows the results of the D-stretch plug-in with the YRE colour-space applied, and the lower panel shows the unenhanced stencils and associated pigment isolated and placed on a white background (photo: Shimona Kealy).

left leg of this figure has a large solid pigment foot which is touching the lower body of the standing figure and perhaps obscuring the second leg of the standing figure. Between the upraised arm of the standing figure and the extended leg of the prone figure is a partial 'sun-ray' motif in red with two red dots inside. Below this motif, between the splayed legs of the prone figure, is a faded black 'sun-ray' motif. To the left of the red anthropomorphs are two further partial 'sun-ray' motifs in what appears to be black pigment. Although we cannot be certain that the pigment used was black, during experimental D-stretching of this motif group (not included in Fig. 2) these two motifs tended to move off

towards the blue spectrum, whereas the motifs that were clearly red stayed within this spectrum. The higher of the two black 'sun-rays' encompasses three circles with dots which may represent eyes and a mouth (Fig. 2). Other red pigment markings appear to be related to the red anthropomorph composition but are not discernibly figurative. Based on examination of the photographs, in the few areas where the black motifs are in contact with red motifs, the colour order seems to be black over red.

Small 'active' anthropomorphous figures are the most distinctive feature of the figurative repertoire of the APT and 'sun-ray' motifs are a common geometric form (Ballard et al. 2004: 395). It is largely on the basis of these motifs and the physical positioning of the paintings on the cliff face and in the landscape that we suggest that the Kupang paintings align with the APT. Overall the Kupang anthropomorph composition has parallels with the small red anthropomorphs from the eastern end of Timor-Leste, which include many figures shown in active poses, holding objects such as those at Suntaleo 1 (also Sunu Taraleu Scarp; O'Connor 2003: 97) (Fig. 6) and Moa Mimi Raka. One group from Moa Mimi Raka shows what appears to be a head-hunting scene (Fig. 7). The Kupang anthropomorphs also share these qualities with those from the Dudumahan site in Kei (Ballard 1988).

Being Austronesian and the transformative power of ideology

Spriggs (2011) and Blench (2012, 2014) have both recently considered what it may have meant to 'become' Austronesian and why communities living across ISEA and Near Oceania took up the new language and culture

so quickly. As opposed to Remote Oceania, which was uninhabited, ISEA and Near Oceania (which includes New Guinea, the Bismarck Archipelago and the main Solomon Islands group) had been populated since about 45 000 years ago or longer (O'Connor and Hiscock 2014). Remote Oceania, which encompasses the rest of the Pacific islands including Micronesia and Polynesia, was settled only in the late Holocene after ~3400 BP.

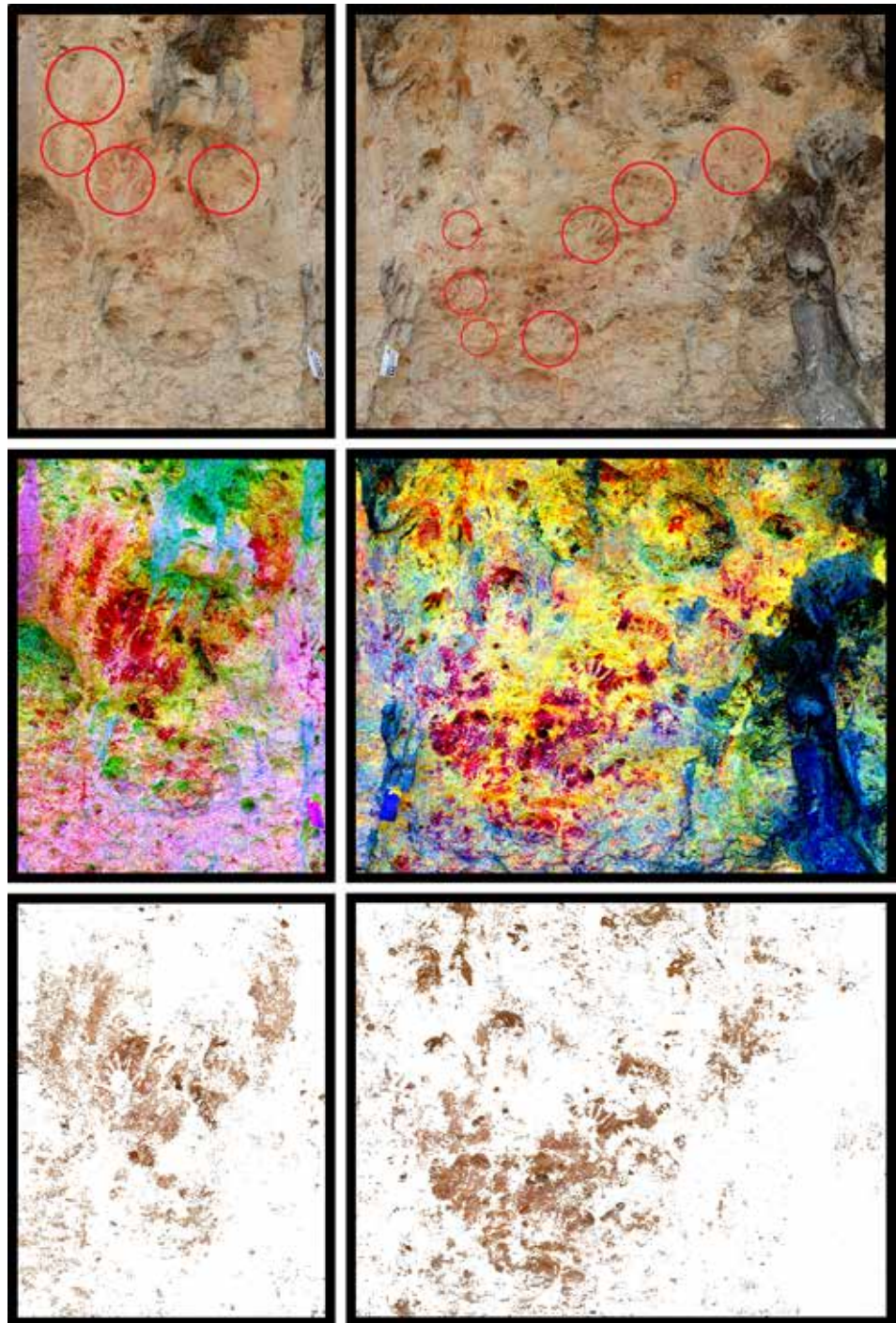


Figure 5. Kupang hand stencils group 2. The upper panel shows the unenhanced hand stencils outlined with red circles, the middle panel shows the results of the D-stretch plug-in with YRE colour-space applied, and the lower panel shows the unenhanced stencils and associated pigment isolated and placed on a white background (photo: Shimona Kealy).



Figure 6. Suntualeo painted panel showing small anthropomorphs and 'boat' (photo: Sue O'Connor).

The early Neolithic phase in ISEA south of Taiwan and in Near Oceania is usually regarded as consistently marked by the appearance of pottery and variably by other introduced material items and translocated animals, including patchy evidence for the introduction of domestic pigs and dogs (Bulbeck 2008; Spriggs 2011; Blench 2014; O'Connor in press). Although Bellwood (1997, 2002) argued that agriculture and the larger populations it supported was a driving force in the original dispersal of Austronesian language speakers, recent site reports and syntheses have highlighted the sparse evidence for agriculture and domestic animals in the early Neolithic layers of sites in ISEA south of Luzon (Bulbeck 2008; Simanjuntak et al. 2008; Spriggs 2011; Blench 2012; however, see Bellwood et al. 2011). Spriggs (2011) and Blench (2012) both argue that, rather than the movement of a farming frontier, language or objects, the evidence points to a rapid spread of people with 'powerful ideologies backed by new material symbols and practices' (Spriggs 2011: 524). Spriggs (2011: 524) believes that the 'Neolithisation of ISEA was a new process of identity formation that seized the

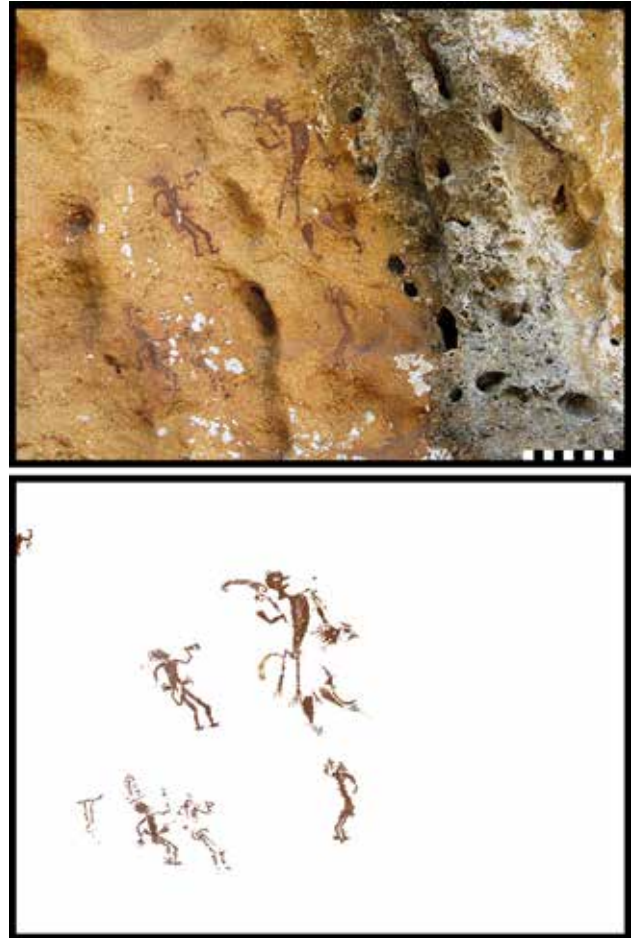


Figure 7. Moa Mimi Raka painted panel which appears to show a head-hunting scene (photo: Sue O'Connor).

imagination of a mass of people on hundreds of islands across thousands of kilometres of ocean, spreading like a pulse across ISEA and into the Pacific over a few centuries'. Blench (2012: 133) questions whether the Austronesian ritual practice of head hunting may have had a place in this ideology and draws a parallel between the ISEA Neolithic mariners and 'the Viking "raiders and traders" who spread over quarter of the globe in a short period of time'. Blench (2012) and Bulbeck (2008) both see advanced maritime technology as critical in facilitating rapid migration but suggest that it was the enabler not the driver of the ISEA Neolithic. Pointing to a commonality of iconography found across the Austronesian world, Blench (2012: 129) suggests that material symbols, such as those in parietal art and jewellery like 'the *linglingo*, the jade/nephrite earpieces which occur from Taiwan to New Zealand' and the '*bulbul*, a seated figure with either the arms crossed or held up to the chin' may tell us about the shared symbols of this ideology. While we think Spriggs (2011) and Blench (2012, 2014) are on the right track in identifying the transformative role of ideology, the *linglingo* is spatially restricted; not being found in the islands of eastern Indonesia in Neolithic-aged sites. *Bulbul* statues may have a wider distribution but there is no evidence that they have any antiquity. Rock art is

potentially the longest lasting and one of the most widespread manifestations of Austronesian ideology; one that with new advances in dating we have a good chance of tracking across the Austronesian world. Rock art also has the potential to tell us something of the symbolic concerns of the people that created it.

Ballard et al. (2004: 395) note that along with anthropomorphs, 'sun' symbols are the dominant motif in western Pacific sites containing 'boats', and are also executed in other media that link them to mortuary and divination beliefs, for example as painted designs on ceremonial shirts worn by shamans and on the prows of boat coffins. They note that the 'significance of sun symbols in eastern Indonesia is interpreted by Kooijman (1963) in terms of beliefs about initiation and head-hunting', and that ancestral cults are central to both (Ballard et al. 2004: 395). In Timor-Leste sea-cliff shelters with painted 'sun-rays', 'boats' and anthropomorphs are still used today for a range of ritual practices, including divination. At these ceremonies animals are sacrificed, blood is spilt, spirit beings are fed with the blood of the sacrificed animals, and the spleen is then read by a *Lurai* (customary law and ritual leader) to determine if the signs are prospective or otherwise (Pannell and O'Connor 2005: 199, Fig. 3; 2012; O'Connor et al. 2013: 212-5). Painted rock art is not made today in Timor-Leste and the paintings in the shelters are not believed to be the work of humans; however, some of the painted motifs are reproduced in the woven cloths produced for significant occasions such as funerals and weddings 'in accordance with the ancestors' (O'Connor et al. 2013: 216).

The origins of the Austronesian painting tradition

But what is the evidence for Austronesian diffusion of this painting style from Taiwan through the Philippines and ISEA? No painted sites are known to occur in Taiwan where the rock art consists entirely of engraved motifs dominated by concentric circles, face-like forms, spirals and lattices. The largest and best known of the Taiwanese sites is Wanshan in southern



Figure 8. Wanshan petroglyphs, Taiwan (photo: source unknown).

Taiwan (Bureau of Cultural Affairs Kaohsiung City Government; heritage.khcc.gov.tw) (Fig. 8). The Taiwanese rock art thus has some overlap of geometric motifs with the APT but lacks the figurative motifs which distinguish it, and moreover it is executed in a different medium.

Few petroglyph sites are known in ISEA but they are prolific in Island Melanesia and the Pacific where face-like forms and circle and scroll motifs underpin the style (Specht 1979; Rosenfeld 1988; Wilson 2002; Saidin et al. 2008). The Taiwanese petroglyphs do seem to have strong affinities with those of the AES in terms of media, motif style and content, and locational attributes.

In the Philippines both engraved and painted rock art occur, but neither is common. The largest petroglyph site in the Philippines, at Angono in Rizal Province, has some anthropomorphs; however, these

are predominantly angular static figures with triangular or rectangular torsos (Tan 2014; whc.unesco.org/en/tentativelists/5018/; www.artesdelasfilipinas.com/archives/152/the-angono-binangonan-petroglyphs) and are not comparable with the anthropomorphs of the APT. The Philippines petroglyphs are also quite distinct from the Taiwanese petroglyphs. The fact that they are carved into soft volcanic rock that weathers rapidly suggests their execution may post-date the Neolithic. The pigment rock art of the Philippines consists almost entirely of black drawn images and does not feature the anthropomorphs, 'boats' or 'sun-ray' motifs found in the APT. Examples found in at least twelve caves in Penablanca, Cagayan Province, comprise simple linear motifs such as crosshatched and divided circles, squares and rectangles sometimes with central dots, arrows, feathers, meandering lines and comb-like patterns. The only definite figurative motifs seem to be spiders and a spider-web although there are a few possible highly schematised human figures (Peralta 1997). Another group of similar black drawings have been reported from Singnapan Caves in southern Palawan (whc.unesco.org/en/tentativelists/5018/). The extensive rock art of the Pālaqwan of that region is dominated by black drawings, including images of aircraft (Novellino 1999). In short, the colour, subject, composition and style of the Philippines engraved and painted rock art differs markedly from the APT (O'Connor in press). Some red haematite hand stencils are known from the Anda Peninsula in Bohol Province (Tan 2014); however the ubiquity of hand stencils and their long chronology has already been noted (Aubert et al. 2014).

Conclusion

Most recent reviews (Spriggs 2011; Blench 2012; O'Connor in press) argue for a strong ideological element in the Austronesian expansion, and O'Connor (in press) has suggested that the painted rock art of the APT might provide a window into the ideology that underpinned this expansion. It would seem that there is compelling evidence for the introduction of pottery and a new style of rock art, the APT, into ISEA about 3500 years ago or slightly earlier. This style reached Vanuatu in the western Pacific at least 3000 years ago.

The APT does not appear to derive directly from an ancestral artistic tradition in Taiwan or the Philippines, as no red painted rock art conforming to Ballard's (1988) definition of the style has yet been located in these islands. However, concentric circles, scrolls and face-like motifs, which appear as a component of the geometric repertoire of the APT, dominate both the engraved rock art of Taiwan and the AES. It seems plausible that the AES originated in the Austronesian homeland of Taiwan and tracked the dispersal of Austronesian-speaking communities moving south and east into the islands of the Banda Sea, Island Melanesia and thence out into the Pacific. The APT, with its distinctive anthropomorphs and 'boats', may

have developed rapidly as a response to the challenges of communication and ideological signalling in this vast maritime world, while retaining some of the elements of the original 'homeland' petroglyph style. The APT may then have followed the trail of the AES east into Island Melanesia and the Pacific as indicated by the dates for the APT in Vanuatu. While this scenario is largely hypothetical, the Kupang painting site, attributed here to the APT, was a fortuitous find and indicates that many painted panels remain to be located in limestone cliff faces and shelters bordering the coast around the thousands of limestone islands in the Indonesian archipelago. Survey and detailed recording are urgently needed as coastal residential and industrial developments are proceeding apace across this region.

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