8

Other Portable Artefacts from the Batanes Sites

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This chapter describes the many portable artefacts found during the Batanes investigations, with the exceptions of pottery (chapter 6), spindle whorls (chapter 7) and nephrite (chapter 9). The main categories discussed in this chapter are ground, polished and hammer-dressed stone, baked clay (for earrings), shell, bone, and other relatively young archaeological materials such as glass and metal.

The portable artefacts from the Batanes archaeological sites come from both excavated and surface contexts. Surface finds came from all sites investigated, perhaps most prolifically from the site of Anaro on Itbayat. The surface finds from here are difficult to date individually since Anaro was occupied for perhaps 2000 years or more (1000 BC to later than AD 1000), and everything has become mixed up in falling down the slopes around the site. The material collected by the Kumamoto team from Sunget on Batan in 1982 was also mostly surface-collected from a road cutting, although in this case only a single occupation dating between 1200 and 800 BC is attested from our subsequent excavations at Sunget, so it seems reasonable to assume that the artefacts collected in 1982 also belong to this period. At Savidug Dune Site, many important surface finds were recovered from the road cutting next to the excavations, but most came clearly from the lower layer in the site (1200 BC to AD 1), since the upper cultural layer is ephemeral in this location. Table 8.1 shows the distributions of specific classes of non-pottery artefact by depth and trench at Savidug and Anaro.

In terms of raw material, the portable artefacts fall into several categories: stone, metal (rare in Batanes), glass (for beads), bone, baked clay (a bracelet and several penannular ear ornaments), and shell. This chapter uses raw material rather than presumed function as the primary classifier for artefacts.

Stone artefacts

These fall into 7 major classes: adzes with asymmetrical bevels (axes with symmetrical bevels do not occur in Batanes), flaked and hammer dressed “hoes”, bark cloth beaters, sawn and ground Taiwan slate points and knives, grindstones, pendants, and side-notched pebble sinkers. Surprisingly, definite examples of stone beads were not found.

Table 8.1. Distributions of chronologically diagnostic excavated artefacts by square and depth at Savidug Dune Site and Anaro.

Savidug Dune Site, all squares depths in cm.	Dates	Turbo marmoratus edge-chipped opercula	Trochus niloticus bracelets	Conus bracelets	Turbo marmoratus pendants	Double side-notched pebble sinkers	Taiwan slate knife	nephrite lingling-o	Biconical baked clay spindle whorls	Circle stamped pottery	Baked clay penannular ear ornaments	Imported stoneware, celadon	Sherds with internal fabric impressions	Iron	
													5		
													2		
					2								7	1	
				2	3								3	4	1
				2	3								1*	2	1
				1	4								1	2	
						1								1	1
						2								1	
0-10				1											
10-20															
20-30															
30-40															
40-50															
50-60															
60-70															
70-80															
80-90															
90-100															
100-110															
110-120															
120-130															
130-140	560-390 BC	1													
140-150		1													
150-160															
160-170															
170-180		1													
180-190	1114-901 BC														
190-200															
200-210	360-50 BC														
210-220	1139-930 BC														

Anaro 3, all squares depths in cm.	Dates (asterisked dates are presumed to reflect disturbance)	Nephrite	Slate and exotic siliceous rocks	Glass bead	Iron	Tridacna adzes	Stone bark cloth beater	^Spindle whorl *baked clay bracelet	Baked clay penannular ear ornaments
0-10									
10-20									
20-30									
30-40		1		2			1^		
40-50			1	2	1				
50-60			1		1			1	
60-70	AD 657-866	2	1				1*	1	
70-80	338 BC-AD 21	5	1		1				
80-90	349 BC-AD 4, AD 583-768*	1	1		1	1			
90-100	AD 607-768* ,AD 427-644*	2	4						
100-110	1038-813 BC, 767-414 BC	Sample size very small							

Anaro 2, all squares, depths in cm.									
0-10									
10-20									
Below 20									

What is most surprising is the lack of a flaked stone industry (excluding the side-notched pebble sinkers and flakes struck from polished adzes) in all the Batanes sites. The unground flaked cores, flakes and blade-like flakes that occur in many Palaeolithic and Neolithic contexts in islands to the south and east – the main Philippines, Indonesia, western Oceania – are virtually absent in Batanes, apart from a 12.5 cm long blade-like flake of volcanic rock from Torongan (square D, 50-55 cm), and a similar one from Anaro (3A, 0-10 cm), this last virtually a surface find. Anaro also produced one chert flake at 70-80 cm in square 3A, and a few tiny chips of crystalline rock were found at Payaman on Batan Island (*c.*AD 1-500). The rarity of flaked stone in Batanes could reflect lack of suitable raw materials, since the Batanes Islands only have coarse volcanic rocks and raised coral, with no chert, obsidian or fine-grained metamorphics. However, local volcanic rocks were sometimes used for adzes in Batanes (see below), and purely flaked lithics are also rare in Neolithic and later sites in Taiwan and southern China (see Jiao 2007 for Fujian). So there is a possibility that the absence could reflect a cultural choice for ground and polished tools, rather than simple lack of suitable stone.

Indeed, it is quite possible that a pre-Neolithic preference for purely flaked stone tools was imported as a cultural substratum into the Neolithic stone repertoire as it spread through Luzon and beyond towards the south and east, from resident native (preceramic) populations who were not present in Batanes. The southern Chinese Neolithic cultures from which the Island Southeast Asian Neolithic cultures were ultimately derived specialised in stone working by sawing (as in nephrite and shell working), hammer dressing and grinding/polishing, rather than by flaking alone, even though the latter was of course practised during the preliminary shaping of many subsequently-ground stone tools.

Figure 8.1. Lithic artefacts collected from Sunget, Batan, in 1982.

- A. Stepped adze of metamorphic rock (two views).
- B. Adze segment of metamorphic rock, probably reworked (two views).
- C. Segment of trapezoidal-sectioned adze of metamorphic rock.
- D. Small untanged trapezoidal-sectioned adze of metamorphic rock.
- E. Metamorphic rock adze of shouldered shape, although this could have been present in the original blank (two views).
- F. Polished adze-shaped stone pendant with an evenly drilled hole, but drilled from both sides.
- G. Another pendant with an hourglass-shaped hole drilled from both sides, of Taiwan slate or schist.
- H. Part of a Taiwan slate perforated point (worked into a stone saw?).
- I. A piece of coarse laminated Taiwan slate with a lenticular cross-section, similar in raw material to many slate artefacts from SE Taiwan.

Source: Peter Bellwood.

Stone adzes

In general terms, the Batanes adzes can be described as having trapezoidal cross-sections, but ranging through many intermediate shapes between rectangular and triangular extremes. Those with the most sharply rectangular cross-sections are from Anaro and of Fengtian nephrite (eastern Taiwan), shown in Fig. 9.3 and discussed by Hsiao-chun Hung in chapter 9. The only certain hafting modifications are either a horizontal groove or a step on the front of the adze, on the opposite side away from the bevel and the handle (Figs 8.2, 8.3, below). The front of the adze is always the widest edge of the trapezoid, and the closest Duff (1970) forms are 1A and 3. No definite shouldered adzes have yet been found in Batanes.

Most adzes are of metamorphic rocks which are not native to Batanes, although at present we cannot be sure whether the metamorphic raw materials (apart from nephrite) came from Taiwan, Luzon, or both locations. Only detailed geological sourcing research could ever provide certainty in this regard. So far, the only sourcing research with positive tracking results has been that on Fengtian nephrite by Yoshiyuki Iizuka at Academia Sinica in Taipei, as discussed in chapter 9. There are nine Fengtian Taiwan nephrite adzes from surface contexts at Anaro on Itbayat, and one from Sunget on Batan. Taiwan, in particular, has a long and well-dated sequence of stone adze manufacture with many different raw materials and shapes, extending back to before 3000 BC (Hung 2004). Many of the Batanes adzes match very closely with counterparts in Taiwan, and some forms also extend into Luzon.

The Sunget adzes

Because of their significance in terms of date we begin with the adzes collected from Sunget on Batan Island in 1982. As discussed in chapter 3, all indications are that the Sunget occupation dates between 1200 and 800 BC, and it is reasonable to assume that these artefacts are of similar date. Unfortunately, no stone tools apart from notched pebble sinkers were found during the Sunget excavations in 2002-4.

Fig. 8.1 A-E are five adzes found at Sunget, all of metamorphic rock (Koomoto 1983: Plate 35). A is a stepped adze of Duff type 1A, minus its butt; B is a fairly indeterminate segment of an adze, probably reused; C and D have the same trapezoidal cross-sections as many specimens from Anaro and the Cagayan Valley on Luzon (see below); and E is a possible shouldered form, although the shape could be fortuitous (and no shouldered adzes were otherwise found in Batanes, even though they do occur rarely in Taiwan).

This Sunget assemblage is important because it establishes a presence of the stepped adze (Duff type 1A, mainly) in Batanes at 1200-800 BC. Duff (1970: 115) illustrates stepped adzes from Luzon and from the Neolithic site of Yuanshan in Taipei, northern Taiwan (*c.* 1000 BC – Fig. 8.3 H), and Chang (1969:165) illustrates a much older example from the basal layer at Dabengkeng in Taiwan, probably older than 2000 BC. In nearby Fujian Province, stepped adzes occur in large numbers in the sites of Tanshishan and Huangguashan (Fig. 8.3 I and J), dated to between 3000 and 1500 BC by Jiao (2007). Heading south, their distribution goes at least as far as Ha Long Bay in northern Vietnam (Nguyen 2007). The direction of movement of this stepped form into Batanes from Fujian via Taiwan is fairly clear, and it is probably not coincidental that the 3rd millennium BC site of Tanshishan in Fujian has also produced red-slipped pottery, some with stamped circles. Another Fujian site, Damaoshan (3000-2300 BC), lacks tanged adzes, but it has yielded punctate-stamped biconical spindle whorls like those in Batanes (see chapter 7) (Jiao 2007:154).

Sunget is also important because of the presence of a small adze of identified Fengtian nephrite, shown in Fig. 9.2 A and discussed in the next chapter.

The Anaro adzes and their parallels

Figs 8.2, 8.3, 8.4 and 8.5 detail the main elements of the Anaro adze assemblage. A total of well over 100 adzes and adze fragments have been recorded from this site, most broken and small (local people find them all the time, so an exact total is elusive). But of the total, 10 are complete enough to be recognised as grooved adzes, and 7 as stepped adzes (Figs 8.2, 8.3). Nine untanged adzes are of Taiwan nephrite (see chapter 9).

Most of the recovered stone adzes from Anaro are surface finds, but the site also produced four specimens from excavation. A fragment of a battered and possibly stepped adze was found in Anaro 4a at a depth of 60-70 cm; Anaro 6 produced a fragment of a trapezoidal-sectioned adze from 30-40 cm; Anaro 7 produced the stepped adze shown as Fig. 8.3 E from a depth of 5-10 cm; and Anaro 3C yielded an indeterminate fragment of a possible adze from a depth of 55-60 cm, in association with Anaro circle-stamped type 1 pottery (chapter 6) dated between 700 BC and AD 1.

Figure 8.2. Grooved (scarfed) adzes from Anaro and Taiwan.

A. Anaro, surface.

B. Anaro, surface.

C. Kaxanggan (west side of Anaro), surface, probably metamorphic.

D, E. Below Anaro 4, surface.

F. Lagnaani (east side of Anaro), dark grey local volcanic rock that contains iron oxide, ilmenite, clinopyroxene, orthopyroxene, plagioclase and apatite, identified by Yoshiyuki Iizuka at the Institute of Earth Sciences, Academia Sinica, Taipei, using a low-vacuum scanning electron microscope equipped with an energy-dispersive x-ray spectrometer.

G. Kaxanggan (west side of Anaro), surface.

H. Taipei City, redrawn from Duff 1970:116.

Source: Peter Bellwood.

Fig. 8.2 illustrates seven of the grooved adzes from Anaro, all surface finds. This type of adze was referred to as “scarfed” by Duff, and he illustrated similar examples from Luzon and Taiwan, in the latter case from Yuanshan and “Taipei City” (Fig. 8.2 H) (Duff 1970:116, 137). The Neolithic Yuanshan culture in northern Taiwan, with its red-slipped pottery and stepped and shouldered adzes, is loosely dated to between 1500 and 500 BC by Tsang (2000:48). Chang (1969: Fig. 34/3, Plate 96) also illustrates grooved adzes from his “Lungshanoid” phase at Fengbitou in SW Taiwan. De la Torre (2000: Fig. 13, no. 11) illustrates one from Irigayen in the Cagayan Valley, dated to 1400-1000 BC (lower layer), and Ogawa (2002:100) illustrates two from the site of Magapit, also in the Cagayan Valley. It thus seems reasonable to assume that this form was widely distributed in the northern Philippines by around 1500 BC. Specimen F in Fig. 8.2 from Anaro is of a volcanic rock that is probably local to Batanes, according to Yoshiyuki Iizuka of Academia Sinica in Taipei. All of these adzes have cross-sections that are basically trapezoidal, some modified by damage. Thiel (1986-7a, 1986-7b) also illustrates stone adzes with trapezoidal cross-sections from Cagayan sites, but none appear to be stepped or grooved.

Fig. 8.3 illustrates 6 stepped adzes from Anaro, again all surface finds. Item C is from the track going to Torongan Cave, and is of the same pale grey metamorphic rock as Fig. 8.5 C, and indeed many of the adzes from both Anaro and the Cagayan Valley. It appears to have been sawn into shape. Apart from D and E, these stepped adzes have quite thin trapezoidal cross-sections, although this may just reflect their small size. D and E have been damaged by use, E apparently as a hammer stone. Fig. 8.3 H to J are similar forms from Yuanshan in Taiwan and Huangguashan in Fujian (Jiao 2007: 122), the latter possibly predating 2000 BC. Chang (1969: Plates 94-5) also illustrates several examples of stepped adzes from Yuanshan. Duff (1970:137-8) illustrates undated specimens from Luzon, and Fig. 8.5 D from Magapit has a likely antiquity of 1500-500 BC. This stepped form is therefore presumably contemporary with the grooved form, and contemporary with the widespread Neolithic use of red-slipped pottery.

Fig. 8.4 illustrates a number of other butt and blade fragments from Anaro, three identified as being of exotic metamorphic rocks by Yoshi Iizuka. Fig. 8.4 K is a broken adze blade that has been used as an awl, found on the flat summit of the next hill to Anaro, called Pivalan, today denuded of soil.

Fig. 8.5 is a compilation of special and interesting stone adze finds. It shows two complete specimens of large but untanged trapezoidal sectioned adzes, one of a local volcanic rock from the surface of Taripan cave in northwest Itbayat, another found during construction activities in Mahatao on Batan and now kept in the High School there. Neither can be dated, but the Mahatao one is likely to be from the Sunget period of occupation. The other items C to G in Fig. 8.5 have been selected to illustrate potential parallels for the Anaro assemblage within the rest of the Austronesian-speaking world. C shows a butt and blade from Anaro, from different adzes but made of the same pale grey metamorphic rock. D is a stepped adze from Magapit that appears to be of exactly the same rock; the step of this adze can be seen at the top of the right hand photograph (the adze front). Adzes of this pale grey metamorphic rock are quite common in the Cagayan Valley, so this suggests that a possible source for this raw material exists somewhere in northern Luzon.

Figure 8.3. Stepped adzes from Anaro, Taiwan and Fujian.

- A. Below Anaro 4, surface, triangular to trapezoidal in cross-section, with a shallow hammer-dressed step.
- B. Anaro surface.
- C. Found on track to Torongan Cave. Light grey metamorphic rock similar to Fig. 8.5 C and D. Sawn into shape, similar to nephrite working
- D. Below Anaro 2, surface. Thick and fairly triangular cross-section, cf. Duff 1970: sheet 32 lower right, from Taipei City (Yuanshan?).
- E. Excavated from Anaro square 7 at a depth of 5-10 cm, although this square was too shallow to give any precise idea of dating, and the adze need not have been *in situ*. Very similar to item D.
- F. Below Anaro 4, surface, fairly thin trapezoidal cross-section and sharply cut tang.
- G. Kaxanggan, similar to item F.
- H. Yuanshan, Taipei, Taiwan, redrawn from Duff 1970, sheet 32 lower left, c.1000 BC?
- I, J. Two tanged adzes with triangular and trapezoidal cross-sections from Huangguashan, Fujian Province, China, redrawn from Jiao 2007: Fig. 19. Jiao dates this site from 7 AMS C14 samples to about 2300-1500 BC.

Source: Peter Bellwood.

Figure 8.4. Broken adze butts and blades, all apparently from untanged forms, from Anaro surface collections. Three are of metamorphic rocks exotic to Batanes. Cross-sections vary from triangular to thick trapezoidal.

A, B. Below Anaro 2.

C. Kaxanggan.

D. Below Anaro 2. Grey exotic metamorphic rock that contains iron oxide, titanite, epidote, plagioclase, amphibole, quartz and garnet (pyrite), identified by Yoshiyuki Iizuka.

E. Kaxanggan.

F. Below Anaro 2. Grey exotic metamorphic rock that contains iron oxide, titanite, epidote, plagioclase, albite, amphibole, quartz and garnet (chalcopyrite), identified by Yoshiyuki Iizuka.

G. Below Anaro 2.

H. Below Anaro 2. Brown exotic metamorphic rock that contains iron oxide, titanite, plagioclase, amphibole and quartz, identified by Yoshiyuki Iizuka.

I. Kaxanggan – note small triangular cross-section (chisel?).

J. Below Anaro 2.

K. Adze bevel made into a drill, Pivalan (a limestone hill adjacent to Anaro), surface find.

Source: Peter Bellwood.

Figure 8.5. Complete (and other) adzes from the Batanes Islands and other locations.

A. Trapezoidal cross-sectioned adze without tang, possibly of local volcanic rock, from Taripan rockshelter, NW Itbayat (private collection of Mrs Faustina Cano).

B. Trapezoidal to triangular cross-sectioned untanged adze, probably of basalt or other fine grained volcanic rock, from Mahatao, Batan. Surface find, in possession of Mahatao High School – see Fig. 3.6, find place M8, for location.

C. Butt and blade of a very similar pale grey metamorphic rock from Anaro.

D. A very similar adze to the items in C, of identical metamorphic rock in appearance, from Magapit, Cagayan Valley, Luzon (c.1000 BC). This adze was either tanged or grooved.

E, F, G and H: Four chisels of very similar size, shape and rounded cross-section, but of different rocks, from the furthest limits of the Austronesian linguistic region; E, Savidug Dune Site square 29M 30-40 cm; F: Anaro surface; G, Uattamdi, Kayoa, Maluku Utara (1300-1000 BC); H, Pitcairn Island, Polynesia (courtesy of the Harry Maude collection).

Source: Peter Bellwood.

The roughly circular cross-sectioned chisels, items E to H, come respectively from Savidug Dune Site (from square 29M at a depth of 30-40 cm, thus from the upper cultural layer), Anaro (surface), Uattamdi in the northern Moluccas (c.1000 BC), and Pitcairn Island in Polynesia (undated;

see also Bellwood 2007, plate 34, top right). Because of their relative rarity, it is interesting to speculate whether chisels of this type are linked by cultural transmission, or resemble each other purely by chance. The Anaro specimen is unfortunately rather battered, and the Savidug specimen is only a butt, interestingly stepped, and perhaps not found in its original place of deposition. But the overall shapes and dimensions of all these chisels are remarkably similar. De la Torre (2000: Fig. 13 no. 12) illustrates another one, 7.1 cm long, from the lower layer with red-slipped pottery beneath the Irigayen shell midden in the Cagayan Valley, dated c.1400-1000 BC (Ogawa 2002: Table 1).

Hoe-like flaked and hammer-dressed tools

These artefacts are not especially common in Batanes, but when they do occur they resemble a large class of flaked hoe-like tools reported extensively from Neolithic sites in Taiwan, for instance by Li (1983) for Oluanbi and Tsang et al. (2006) for the Early Neolithic site of Nanganli near Tainan. The Batanes specimens are made of local volcanic rocks, rather than the finer and presumably exotic metamorphic rocks preferred for adzes. Item A in Fig. 8.6 was excavated from just above the pottery-bearing layer in Torongan Cave on Itbayat (square B, 30-35 cm), and thus has an age approaching 1500-2000 BC. The other four specimens are all surface finds from Anaro, but item D is particularly interesting and unique because of the splayed shape of its blade. Sung et al. (1992: Plate 85) illustrate two similar waisted forms with splayed blades from Lanyu (Jiranweina site), but unfortunately these are undated. As a group these artefacts have much stronger parallels in Taiwan than in the main Philippines. All show heavy use damage, consistent with hoeing rather than woodworking.

In terms of all the above-discussed categories of stone artefacts, the volcanic and metamorphic rocks identified by Yoshiyuki Iizuka are listed in the relevant figure captions. Basalts and andesites are very common in the Taiwan-Luzon Arc, particularly in eastern Taiwan, Batanes and the northern Philippines. Their geochemical fingerprints (age, trace elements and isotope compositions) might be similar in different localities, and the three specimens identified as volcanic in origin (Fig. 8.2 F and 8.6 B and D) could possibly be from Itbayat. The metamorphic specimens (Fig. 8.4 D, F and H) are not from Itbayat, but are otherwise hard to source since similar rocks occur widely in both Taiwan and Luzon.

Bark cloth beaters

Four specimens were recovered from Anaro, all broken. The most important is the working area of a “horned” beater of what appears to be a local volcanic rock from Anaro 2 (Fig. 8.7 D), recovered during excavation on the limestone bedrock, sealed below a C14 date of AD 50-240 (Wk 14643). As discussed in chapter 6, the stamped pottery from Anaro 2 agrees with a commencement date for occupation of this location around 1000 BC, so this beater could be of a similar antiquity. It is therefore significant that the handle end of a similar beater, albeit without the end that might once have carried a “horn”, was recovered during the excavations at Nanganli, an early Neolithic site dating to 2500-3000 BC in southwestern Taiwan (Tsang et al. 2006: 91). This Nanganli beater is perhaps the oldest dated specimen of its type from Island Southeast Asia, and specimens of similar antiquity occur in Guangdong (Cameron 2006).

Figure 8.6. Hoe-like tools from Anaro.

- A. Waisted hoe of volcanic rock from Torongan Cave, square A, 50-55 cm, hammer dressed and flaked into shape. The margins all show heavy wear. c.2000-1500 BC.
- B. Butt end of a hoe flaked from local Batanes volcanic rock that contains iron oxide, ilmenite, clinopyroxene, orthopyroxene and plagioclase, identified by Yoshiyuki Iizuka. From Anaro, surface find.
- C. Flaked and partially ground mid-segment of a hoe of volcanic rock, Anaro surface find.
- D. Splayed blade of a flaked and ground hoe of a local volcanic rock with the same identified composition as item B. Heavily battered on the cutting edge. Anaro surface find. Sung et al. 1992: Plate 85, show a similar but complete example from Jiranweina on Lanyu Island, off SE Taiwan.
- E. Bifacially-flaked hoe with a lenticular cross-section from Anaro (Kaxanggan).

Source: Peter Bellwood.

Figure 8.7. Bark cloth beaters from Anaro.

- A. Hammer dressed object of volcanic rock, hammer dressed into the shape of a bird's head and similar in shape to the distal end of the horned bark cloth beater illustrated as item D. The photos are of the right hand side, at two different exposures, and from the top. The left hand side has the same decoration as the right. Anaro surface find.
- B. Segment of the working area of a bark cloth beater of volcanic rock, surface find from Anaro. This is similar in shape to the corresponding portion of item D.
- C. Fragment of another beater, shape indeterminate. Anaro surface find.
- D. Distal end of a horned bark cloth beater with 8 working grooves from Anaro square 2B, found in a small pocket on the limestone bedrock below 20 cm, below a C14 sample dated to c.AD 100.

Source: Peter Bellwood.

Also from Anaro, as a surface find, is a segment of the working area of another bark cloth beater of volcanic rock (Fig. 8.7 B). This is almost identical in shape to the relevant portion of the above specimen from Anaro 2B, and presumably came from a similar beater. Another beater fragment shown as Fig. 8.7 C, also of volcanic rock, has an indeterminate original shape.

Another remarkable surface find from Anaro, shown as Fig. 8.7 A, is the hammer dressed object of volcanic rock in the apparent shape of a bird's head and similar in profile shape to the distal end of the horned bark cloth beater from Anaro 2B. The photos are of the right hand side, at two different exposures, and from the top. The left hand side has the same decoration as the right. This rather beautiful object cannot be proven to have been the end of a bark cloth beater, but this remains a possibility.

Sawn and ground Taiwan slate points

In excess of 50 fragments of Taiwan slate knives and projectile points (mostly broken butts and points), together with a few other items of siliceous rock that appear to be non-native to the

Batanes Islands, were collected as surface finds around Anaro by land owner Mr Rodobaldo Ponce and given to the research team. As with the adzes, local people find these fragments all the time so an exact total of finds is elusive. A small number of items were also recovered from the Anaro excavations (Table 8.1). As will be discussed in chapter 9, Anaro clearly served as a locus for working Taiwan nephrite using a sawing and drilling technology (Hung et al. 2007), and many of the recovered slate items clearly functioned as part of this industry for sawing stone. The remarkable site of Pinglin close to the Fengtian nephrite source in eastern Taiwan has yielded many such points and knives as surface finds, in many cases with cutting edges that actually fit into grooves in discarded nephrite slabs.

Figure 8.8. Taiwan slate points, point butts and knives from Sunget and Anaro.

Source: Peter Bellwood.

The Anaro slate items are mostly both the points and the butts of projectile points, all broken (not a single complete one was found), many with one or two surviving perforations. At least one (Fig. 8.8 S) had an unfinished perforation. All perforations are hourglass-shaped in cross-section, drilled from both sides. There are also a few knife-like specimens, usually with one or more worn and rounded edges. Fig. 8.8 D shows one of these, excavated from Anaro 3 (2004) at a depth of 85-90 cm and thus of first millennium BC date. It appears to be one end of a stone “reaping knife”, perhaps similar to the perforated complete examples illustrated by Li (1983: Plates 69-70) from Oluanbi Phase III (c.1000 BC) at the southern tip of Taiwan, also by Chang (1969: Plate 76) from his “Lungshanoid” phase at Fengbitou, and by Tsang et al. (2006:146-7) from the Niuchouzi phase (2000 BC) in the Tainan area in southwestern Taiwan. No such complete perforated knives have ever been found in Batanes.

It is interesting to note that all the points and knives were broken prior to discard. Were they imported complete into Batanes, and then broken during use? This seems unlikely, since Batanes had no large mammals that could have been hunted with the points (unless they hunted humans), and rice has never been a significant crop there, thus removing two of the suggested functions as projectile points and harvesting knives. It seems more likely that these items were all broken and discarded in Taiwan, and then brought to Batanes by people who possibly scavenged them from abandoned archaeological sites. Let us not forget that the archaeological sites that survive in Taiwan today would have loomed much larger in the landscape soon after they were occupied, when they were perhaps strewn with thousands of discarded items just lying on the surface of the ground. A use-wear study of the Anaro slate items would perhaps throw some light on questions of function, but even the naked eye can see that many have the kind of rounded edge wear that we would expect from the sawing of nephrite using quartz grit and water, exactly like the edges on many of the slate saws from the Pinglin nephrite workshop in eastern Taiwan.

The item of coarse slate shown in Fig. 8.8 G is of interest. This seems too laminated and crumbly to have served as a useful sawing tool, but this kind of coarse slate is a raw material common in sites in southeast Taiwan, such as Beinan, where it was used for architectural features including large items identified as house ladders (one is on display in the Beinan excavation park in Taidong). This is the only piece of this particular raw material from Anaro. The large diamond cross-sectioned slate rod shown in Fig. 8.8 R has a trace of a perforation at one end, and is of interest because of the evident large size of the complete original. Fig. 8.8 Z also seems to be a fragment of a relatively narrow and elongated point.

The eight most significant slate specimens (excluding tiny fragments) recovered from the Anaro excavations are as follows:

- Anaro 3, 85-90: the end of a rectangular slate knife, already discussed above (Fig. 8.8 D);
- Anaro 3, 90-95: a slate fragment with one straight ground edge (Fig. 8.8 U);
- Anaro 3B, 90-95, a knife-like fragment of siliceous rock (Fig. 8.8 V);
- Anaro 3F, 60-65, a knife-like fragment of siliceous rock (not illustrated);
- Anaro 3E, 40-50: a slate point (Fig. 8.8 Y).
- Anaro 2A, 10-15, a slate fragment with one ground and one sharp edge (not illustrated here, but see Bellwood and Dizon 2005: Fig. 17 F);
- Anaro 2A, 20-25, a siliceous fragment with one sharp but damaged edge (not illustrated here, but see Bellwood and Dizon 2005: Fig. 17 I);
- Anaro 2B, 20-25, a tip of a slate projectile point (not illustrated here, but see Bellwood and Dizon 2005: Fig. 17 G).

If we exclude the C14 dates from the disturbed square Anaro 3B, these excavated items all come from the earlier part of the Anaro sequence, prior to 2000 years ago. They equate well with the evidence for nephrite working on the site during the first millennium BC. Two slate items were also collected at Sunget on Batan, with a similar chronology, shown as G and H in Fig. 8.1. One is a small perforated pendant, the other a fragment of a slate point that seems originally to have been bi-perforated. As noted, the Sunget items also date close to 1000 BC.

Parallels for these slate points and knives in Taiwan are prolific, from the beginning of the Neolithic onwards (Dabengkeng culture) through into the first millennium BC. In specific terms they include Chang 1969: Plates 16, 23, 76, 77, 98 (Fengbitou, Dabengkeng and Yuanshan); Li 1983: Plates 69-70 (Oluanbi III); Tsang et al. 2006: 90-91, 112, 146-7 (Nanguanli and Youxianfang); and Lien and Sung 1989: Plates III, IV (Beinan). It will be noted that these parallels come from all over Taiwan, and it is impossible to point to one location as a primary source for all the slate items from Anaro.

Body ornaments of stone

Surprisingly perhaps, given the stony nature of the Batanes landscape, personal ornaments of stone were remarkably rare in all sites. Fig. 8.1 F and G are two perforated stone pendants from Sunget on Batan, item G of Taiwan slate. No stone beads were ever found in Batanes, and none of carnelian or nephrite. It would be true to say that we found very little evidence for any kind of body ornamentation in Batanes prehistory.

Side-notched pebble sinkers

This is an important artefact type that occurs in Taiwan from the earliest Neolithic onwards (e.g. Tsang et al. 2006:113 for Nanguanli, Tainan, c.2800 BC). In Batanes, they were particularly common in the lower layer of Savidug Dune Site (first millennium BC), and in the excavations at Sunget (1200 to 800 BC). Only four were ever found on Itbayat, surface finds from the vicinity of Anaro. This could reflect the nature of the Itbayat coastline, surrounded entirely by cliffs with no shallow water. Such an environment would be difficult for using nets, and indeed the only people we ever saw fishing off the coast of Itbayat were swimmers with spear guns. Net fishing, however, involving several men using boats, was observed on several occasions in sheltered bays off the western coast of Batan (Yang 2006).

The Sunget pebble sinkers were the subject of a MA thesis at ANU completed by Shawna Hsiu-ying Yang in 2006. Adding the examples collected in 1982, Sunget has produced a total of 81 of these items, averaging 3.3 cm long (range 2.1 to 5.3 cm). Fig. 8.9 shows in its upper three rows the 36 complete examples recovered from the 2002-2004 excavations, together with (next row down) a number of unworked pebbles found in the site that appear to have been carried there from nearby beach or river bed sources for manufacturing purposes.

Shawna Yang also surveyed the occurrence of sinkers of this type (A1 in her classification) in Taiwan. This was the only shape present in early Neolithic sites of the Dabengkeng culture, before 2500 BC, both in western Taiwan (e.g. Nanguanli – above) and in the Penghu Islands. Although this form continues in later sites as well, this observation opens the possibility that the initial settlement of Batanes from Taiwan might have occurred during the latter part of the Dabengkeng phase, possibly even prior to 2000 BC. If so, the first settlers brought the A1 sinker form only, and continued to use it until about 2000 years ago. No sinkers have been found in well-dated younger contexts in Batanes, for instance in Phase 3 sites such as Payaman and Naidi on Batan Island.

Figure 8.9. Side-notched pebble sinkers from Sunget, Savidug Dune Site, and Taiwan. Top left: 36 side-notched pebble sinkers from the cultural layer at Sunget (Top and Main Terraces) on Batan, together with nine unworked river pebbles, a sample of many found in the Sunget excavations that were carried up to the site, presumably to make sinkers when needed. Top right: 5 notched pebbles of the same type from Suogang, Penghu Islands, c.2500 BC; Kending, Southern Tip, c.2000 BC; and Guishan, southwestern Taiwan. Bottom: A sample of 26 side-notched volcanic rock pebble sinkers, part of a total of 59 from the lower cultural layer in Savidug Dune site.

Source: Peter Bellwood.

In Savidug Dune Site, a total of 59 of these A1 sinkers were found (Fig. 8.9, lower), identical in shape to those from Sunget, mostly in the lower cultural layer of trench QR7-9 (1100 BC to late first millennium BC; Table 8.1). A total of 29 were clustered in two small areas of trench QR7-9 between 100 and 120 cm, suggesting that one or more fishnets had been discarded there with their sinkers still tied on.

Grindstones

These occur in most sites, and form a category that is not particularly amenable to time and space sorting. Many have coarse siliceous structures and could have been used for various polishing activities (Fig. 8.10).

Figure 8.10. Grindstones and polishing stones. Upper: These 13 specimens all come from Anaro on Itbayat. A was excavated from Anaro 3C, 55-60 cm, and B from Anaro 3C, 50-55 cm. All are turned over for the right hand photograph. Scale in cm. Lower: Pitted stone anvils: (C) Savidug Dune Site, lower cultural layer; Savidug Ijang; (D) Mitangeb trench B, top of layer 5.

Source: Peter Bellwood.

Pitted anvil stones

Three of these were found, one from layer 5 at Mitangeb on Siayan Island (Fig. 8.10 D) and two from Savidug Dune site at 80 and 150 cm depth, thus within the lower cultural layer. Fig. 8.10 C shows the Savidug specimen from 80 cm, which has three additional sharpening grooves on its surface. That from 150 cm is almost identical, with an anvil pit on each side, but is not illustrated. Pitted anvils are a type of artefact that seems to have occurred across much of Island

Southeast Asia from Pleistocene times onwards, examples being found, for instance, in sites in the northern Moluccas and there termed “canarium anvils”, since local informants told us they were used for cracking *Canarium* sp. (*kenari*) nuts (Bellwood et al. 1998: Fig. 4a, Table 3, Table 5). The example from Mitangeb seems to have been modified into a fishing sinker of Shawna Yang’s (2006) type B, reported from southern China, Taiwan and Japan (Jomon Period), but not previously from Batanes. Recorded drift voyages from Japan to Batanes are discussed in chapter 1.

Metal artefacts

These were rather rare in the Batanes excavations, in accord with Dampier’s 1687 statement to the effect that iron was scarce (see chapter 1). A few pieces were found in the excavations at Savidug Dune Site and Anaro, in all cases but one (from Anaro at 80-90 cm) in upper layers, and probably dating well after AD 500. The specimens from Savidug are highly corroded and are not illustrated, but 4 pieces from Anaro together with a piece of probable iron slag are shown in Fig. 8.11. From left to right these are respectively from Anaro 5, 0-5 cm; Anaro 3C, 40-50 cm; Anaro 3A, 80-90 cm; and Anaro 6, 70-80 cm. All are clearly blade- or knife-like objects with flat thin cross-sections, all too corroded for former cutting edges to be definitely identified. The piece from Anaro 3A, 80-90 cm (Fig. 8.11 C), is particularly interesting because of its rod-like shape. Was this part of a drill used for boring holes in stone, especially nephrite?

A small piece of copper was found in the road cutting through the Savidug Dune Site. This had a lead isotope signature not consistent with a Thai origin (neither Khao Wong Prachan Valley nor Phu Lon, according to Oli Pryce, pers. comm.), but its exact source remains unknown. It almost certainly came from the Savidug lower cultural layer since the cutting passes near trench QR7-9, where the upper cultural layer was virtually absent. More interesting was the finding in the same place of one fired clay valve of a bivalve casting assembly for what appears to have been a socketed axe (Fig. 8.11 F). This demonstrates conclusively that copper/bronze casting was carried out in Batanes in prehistory, albeit probably using imported scrap metal as raw material. Another casting mould fragment, also of fired clay, was found in 1982 at Tayid, a site shown to date to about 1850 years ago when investigated in 2003 (see chapter 3 and Fig. 8.11 G). Between them, these finds suggest that cupreous metallurgy was present in Batanes by around 2000 years ago, if not before.

Artefacts of glass and bone

Glass beads from recent layers, all apparently dating within the past 1500 years, are shown in Fig. 8.11 (bottom). Most are blue, suggesting perhaps that the Batanes Islands had access mainly to only one source of beads, wherever that might have been. A few pottery examples are shown as well, but the general lack of shell beads in Batanes is interesting given their common occurrence in Neolithic sites elsewhere in Island Southeast Asia. Only two are shown in the figure.

Bone artefacts are also rather rare. The perforated pig tusk pendant from Savidug QR7-9 120 cm (c. 500 BC to AD 1: Fig. 8.11 I) is unique. Bone points and the pig canine fishing gorge (Fig. 8.11 J and K) are paralleled in southern Taiwan (Li 1983: Plate 102 for Oluanbi III at c.1000 BC; Tosca Chang pers. comm. for new excavations at Oluanbi; C-H. Tsang et al. 2006:175) and at Nagsabaran in the Cagayan Valley (also c.1500-1000 BC, Philip Piper pers. comm.). As well as the illustrated bipoint, two other bone unipoints (or broken bipoints) were found in the same general horizon at Anaro (square 3, 70-75 and 80-85), suggesting a first millennium BC date. The carved bone human ornament comes from Anaro 3C at 50-55 cm.

Figure 8.11. Metal, bone and glass artefacts from Batanes sites.

Source: Peter Bellwood.

A-E: four iron items and a piece of iron slag (A-E) from Anaro (see text for locations). F: fired clay casting valve from Savidug. G: fired clay casting mould from Tayid. H: coin of the Ming ruler Wan Li (AD 1583-1620) from Torongan Cave, 0-5 cm.

I-L: Bone artefacts, all to one scale (attached to item I). I: Perforated and carved pig tusk pendant from Savidug QR7-9 120 (500 BC to AD 1 approx.). J: bone bipoint, Anaro 3A 80-90. K: pig canine fishing gorge, Anaro 3C 60-65. L: a carved bone human ornament from Anaro 3C 50-55 cm.

Bottom: Beads (mainly glass) from Batanes sites, with a baked clay *lingling-o* hook at bottom right (see Fig. 8.12). Top row from left: Torongan Cave surface; Garayao (Itbayat) surface (2 beads); Torongan A, 0-5 cm; Anaro surface. Middle row from left: Anaro 5, 10-15; Anaro 5, 0-5 (3 beads, the white one is shell); Anaro surface; Anaro 3G, 10-20; Anaro 3E, 30-40; Anaro 9, 0-5; Anaro surface (shell). Bottom row from left: Torongan 0-5 (brown tubular glass); Anaro surface; Anaro surface, probably pottery; Savidug Dune Site KL29, 70-90 (pottery?); Anaro 3A, 0-10 (sub-spherical clay); Savidug QR7-9, 120-30, baked clay *lingling-o* hook.

Baked clay body ornaments

Fig. 8.12 A shows a pottery bracelet fragment decorated with stamped circles from Anaro 3C, 60-65 cm, set in a zig-zag motif similar to that in the bottom row of shoulder decoration in the Anaro circle-stamped type 1 vessels. Stratigraphically and stylistically, this dates between 500 BC and AD 1. Also shown in Fig. 8.12 are ten very diagnostic clay *lingling-o* ear ornaments, eight from the lower cultural layer at Savidug Dune Site (first millennium BC), and two from between 55 and 70 cm in Anaro 3C, probably also late first millennium BC.

The eight Savidug ear ornaments are so similar that they were probably made by the same artisan. All have lenticular cross-sections and are between 2 and 2.5 cm thick, and all have remnant stubs of broken-off hooks for attachment through the earlobe. A complete but broken-off hook is shown in Fig. 8.11, bottom right. The two Anaro specimens have different cross-sections, more angular and thinner than those from Savidug.

The reason why this form is so significant concerns its further distribution far beyond Batanes, in the Cagayan Valley of Luzon, the Tabon Caves on Palawan, and in central and southern coastal Vietnam. Large numbers of baked clay earrings with inner openings larger than those from Batanes come from contexts with red slipped pottery at Magapit, Nagsabaran and Lal-lo in the Cagayan Valley (Ogawa 2002:100; Thiel 1986-7a: Fig. 4). Others, closer to the Batanes specimens in shape, come from Irigayen and Arku Cave (de la Torre 2000: Fig. 13, 6-8; Thiel 1986-7b: Fig. 5). In Irigayen they occur at stratigraphically ambiguous intermediate depths in association with C14 dates that could extend earlier than 1000 BC or to as recently as AD 500 (Ogawa 2002:95 lists the Irigayen dates), but in Arku they are more tightly enclosed within the first millennium BC. As noted, a date for the Batanes type closer to 2500/2000 than 3000 years ago would perhaps be more likely, but there is no reason why the form should not be older in Cagayan. None were found at Sunget, which perhaps rules out their occurrence in Batanes in the period 1200-800 BC. The Tabon specimens come from Duyong and Pagayona Caves (Fox 1970: Fig. 43a), and were attributed by Fox to his Early and Developed Metal Ages, 500 BC to AD 200. This overlaps the likely date range for these items in Batanes.

The long-distance significance of this type of ear ornament lies in the observation that dramatically similar ones occur in sites such as Giong Ca Vo in coastal southern Vietnam, and in Sa Huynh and pre-Sa Huynh sites such as Binh Chau and Thach Lac in central Vietnam. These occurrences could date back as far as 800 BC at Binh Chau and Thach Lac, and are discussed in more detail by Hung et al. (in press) and Bellwood (in press). Given the occurrence of seemingly earlier examples of these objects in Cagayan sites such as Nagsabaran and Magapit, and their corresponding absence in Vietnam Early Neolithic (second millennium BC) sites such as An Son and Rach Nui (Long An Province) and Man Bac (Ninh Binh Province), a Philippine origin currently seems most likely. Future discoveries could of course change this, but these artefacts are carrying information that could be very important in determining the origins and cultural affinities of Malayo-Polynesian (Chamic subgroup) settlement in central Vietnam.

Figure 8.12. Baked clay ornaments from Anaro and Savidug Dune Site.

A. Pottery bracelet fragment decorated with a zigzag design of stamped circles on each side. Anaro 3C, 60-65 cm.

Main figure: baked clay ear ornaments. Top two rows from Savidug Dune Site (from top left: road cutting surface find; 2006 150 cm; L28 145 cm; QR7-9 110-120 cm; QR7-9 120 cm (2); QR7-9 120-130 cm; QR7-9 130 cm). Bottom row from Anaro (3C 65-70 cm, 3C 55-60 cm). Two sides of each specimen are shown.

Source: Peter Bellwood.

Figure 8.13. Shell artefacts from Anaro (note that B and C share a different scale from the other items).

A. Hammer dressed poll of a shell adze, from weight and appearance perhaps of fossil shell from the uplifted reef limestone at Anaro.

B. Hook-like shell ornament, possibly a pendant or ear ornament, from Anaro 3, 100-110 cm. Stratigraphically, this piece dates to c.1000 BC and it is paralleled closely by a stone example from Magapit in the Cagayan Valley (Ogawa 2002:100).

C. Shell ring or fishhook fragment, Anaro 3, 65-70 cm.

D. 16 worked sea urchin spines from Anaro. 7 of these came from excavated contexts, mostly between 20 and 65 cm, and have ground ends, sometimes with two facets. Example at left is grooved around one end and comes from Anaro 6, 110-120 cm.

E. Top row: four presumed adzes (all are damaged) that retain the dorsal surfaces of *Tridacna* shells. From left: Anaro 3B, 85-90 cm; Anaro 6, 70-80 cm; Anaro 3C, 45-50 cm; Anaro 3C, 50-55 cm. The two at left still retain possible curved cutting edges (see longitudinal sections), while the two at right appear to be broken body segments without blades. See also chapter 12 for further discussion of these items.

Middle row: 2 chipped opercula of *Turbo marmoratus* from Anaro 3B, 75-80 cm and Anaro 6, 10-20 cm respectively. At right are two pieces of *T. marmoratus* shell (external view), perhaps worked.

Bottom row: various pieces of worked shell from Anaro 3A 40-80, the round ones presumably from fishhooks (chapter 12). At right is the ornament shown above at B, and to its left a similar but less complete piece from Anaro 3A 30-40 cm.

Source: Peter Bellwood.

Shell artefacts

Anaro shell artefacts

Fig. 8.13 shows a range of shell artefacts from Anaro. These are described in the caption, but a few further comments are necessary. It is possibly that the adze butt of fossil shell (item A) could be from a large *Tridacna* adze similar to those illustrated by Fox (1970: Fig. 19) from Duyong Cave on Palawan. So far, this specimen is unique in Batanes, but the Anaro limestone massif contains a lot of fossil shell.

The perforated hook-like shell item of presumed personal decoration shown as item B in Fig. 8.13 (and again in the bottom right corner) is paralleled by a stone example from Magapit (Ogawa 2002: 100). It is also a form that can be seen in a number of nephrite ornaments from the Beinan burials in southeastern Taiwan, as shown by Lien (2002: Fig. 3, especially her forms IIIB1, IIIB2 and IV4). The precise date range for the Beinan assemblage is uncertain, but available dates fall within the period 1500 BC to AD 1.

The Anaro sea urchin spine “files” are a form widespread in Pacific archaeology, but little mentioned in Taiwan or Island Southeast Asia, presumably because their status as artefacts is not always obvious. These Anaro specimens seem to have been held and used like pencils since the faceting is on their ends.

The four *Tridacna* adzes with dorsal surface configurations come from the middle and lower parts of the Anaro sequence (Fig. 8.13 E). The two at left show signs of grinding and have cutting edges with markedly gouge-like profiles. They are rather similar to *Tridacna* adzes excavated in Golo Cave in the northern Moluccas (Bellwood 1997: Plate 25), originally dated to the late Pleistocene (Bellwood et al. 1998) because of their association with C14-dated food shells of this time period. However, direct AMS dating of Golo shell adzes has since shown that some were made of fossil shell, and they were probably also cached in holes dug in the cave floor. A date for these Golo Cave shell adzes well within the Holocene now seems very likely. The other two Anaro specimens at right are not so clearly worked and might just be debitage.

The two chipped *Turbo marmoratus* opercula are a form that is common across Southeast Asia from preceramic times onwards, being for instance quite numerous in OLP Phase I at Oluanbi in southern Taiwan (Li 1983: Plate 31). Szabo et al. (2007) note the use of *T. marmoratus* opercula for making artefacts as early as 30,000 years ago in the northern Moluccas, Indonesia. Their use presumably continued until recent times.

The worked ring-like pieces at the top right (item C) and bottom of Fig. 8.13 are presumed to be from fishhook roughouts (cf. the similar roughout pieces of one-piece bait hooks illustrated by Kirch and Yen 1982: Figs 94-95, from the Polynesian Outlier of Tikopia, Solomon Islands). Nevertheless, we found no complete shell fishhooks in Batanes. Shell one-piece bait hooks, however, do occur at Oluanbi in southern Taiwan (Li 1983: Plate 94).

The shell artefacts from Anaro, and Savidug (below), are discussed in further detail by the authors of chapter 12.

Savidug Dune Site shell artefacts

The shell artefacts shown in Fig. 8.14 are quite remarkable in the stylistic differentiation that they reveal between the two cultural layers that are separated by sterile sand in the Savidug Dune Site. As noted in chapter 4, these two layers are about one millennium apart, the older dating from the first millennium BC, the younger from the second millennium AD. Such a high level of stratigraphic separation is especially important since it lowers the chances of unnoticed mixing and disturbance that occur so commonly in shallow rock shelters and single component open sites. Batan Island has similar situations, where archaeological deposits are securely buried and protected beneath volcanic ash, as at Sunget.

Figure 8.14. Shell artefacts from Savidug Dune Site. (UCL = upper cultural layer; LCL = lower cultural layer).

A. Bracelet fragments of *Trochus niloticus*, including a large rough-out, all from the LCL (first millennium BC) in QR7-9 (110-170 cm).

B. Ring or bracelet fragments (the lower three are shown from two views each) that appear to be mostly of *Conus* sp. shell, except for the top bi-perforate example that appears to be made of *Trochus* shell. These all come from the UCL (45-100 cm).

C. At left, worked shell adze or knife, B9 70-80 cm (UCL). Next is a smooth scraper-like tool or polisher of shell from burial jar 3 in F1 (LCL). At right are two perforated sea urchin spines from QR7-9, LCL.

D. This large shell "spoon" of *Turbo marmoratus* is a remarkable piece found in the road cutting and most probably from the LCL that outcrops at this point. To top right is the distal end of another one, excavated from QR7-9 130-140 and thus firmly of LCL date (first millennium BC).

E (above scale). Various items of worked shell, including (top row from left) part of a bracelet core (UCL), *Trochus* bracelet rough-out (LCL), *Conus* shell subjected to direct percussion (LCL), and two chipped *T. marmoratus* opercula (LCL). Bottom row: 2 bi-perforate cowry shells (LCL - possibly scrapers), sawn gastropod tube, possibly *Terebra* sp. (UCL), *Conus* shell subjected to direct percussion (UCL).

F. Uni- and bi-perforate long units made of *T. marmoratus* shell, all from the UCL except for the fragment at bottom right (QR7-9 120-130), that is indeterminate in shape.

Source: Peter Bellwood. Descriptions E and F incorporate comments from Katherine Szabó.

The bracelets offer the clearest chronological separation. *Trochus* shell bracelets (Fig. 8.14 A) occur only in the lower cultural layer at Savidug. *Trochus* bracelets were also an important form in Oceania from Lapita times onwards, as was the use of *Tridacna* for making adzes, also seen at Savidug (Leach and Davidson 2008: 310). However, *Conus* rings or bracelets of smaller diameter (Fig. 8.14 B), together with uni- and bi-perforated long units of *Turbo marmoratus* (Fig. 8.14 F), occur only in the upper cultural layer. During excavation we suspected that these *Turbo* long units might have been pendants, but in fact it seems possible that they could have served as shanks for composite fishhooks, especially given the presence of large pelagic carnivores such as the dolphinfish (*Coryphaena hippurus*) amongst the fishbones in the upper Savidug layers. No obvious shell points for such hooks were found, but it might have been possible to use thorn or bone points for this purpose. The evidence for exploitation of dolphinfish at Savidug and Pamayan is discussed in detail in chapter 11.

Apart from these enigmatic long units, whether parts of ornaments or fishing equipment, other interesting shell artefacts are two “spoons” or scoops (Fig. 8.14 D), the larger one a surface find but almost certainly from the lower cultural layer, as definitely was the other fragment illustrated just above it. These artefacts have very close parallels in Oluanbi Phase III (Li 1983: Plate 93) in southern Taiwan, and in the Tabon Complex in Palawan (Fox 1970: Fig. 42). The Oluanbi specimen is better finished on its dorsal surface than that from Savidug, but appears to be made also from a *Turbo marmoratus* shell and is presumably of first millennium BC antiquity. The Tabon specimens illustrated by Fox are evidently on different shell species, but the general idea still comes through. These are also Metal Age in Fox’s terminology (500 BC to AD 200).

Non-ceramic artefacts: A review

The most remarkable point about the artefacts described above is their wide range of parallels, taking in Taiwan, Luzon, Palawan, and central Vietnam. These parallels no doubt reflect the progress of archaeological research – points of light in a vast fog of obscurity – but they are undeniable and of great import. The strongest parallels are undoubtedly with Taiwan, in nephrite, slate, stone adzes (stepped, grooved, some of Taiwan nephrite), flaked hoes, bark cloth beaters, pebble sinkers, spindle whorls, and a number of shell items. Even the possible shell lure shanks from Savidug are well-paralleled in stone from many sites in Taiwan. Many parallels occur also with Luzon, especially the Cagayan Valley, presumably because we have a good archaeological record from there. These parallels in Cagayan again include stone adzes (stepped and grooved, trapezoidal cross-sections, pale grey metamorphic raw material), bark cloth beaters, Taiwan nephrite (but apparently not Taiwan slate), baked clay ear ornaments, spindle whorls (e.g. Arku Cave; Thiel 1986-7b: Fig. 7), and some shell items, although the Cagayan sites, being inland, are not rich in shell artefacts.

Pottery connections also go both ways – the red-slipped surfaces and many vessel forms occur in both Taiwan and Cagayan, but the use of circle stamping alone (without punctate or dentate stamping) that was so specific to Batanes has only Taiwan parallels (e.g. Lanyu Island, Kending in the south, Yuanshan in the north, Yingpu near the west coast), and not Luzon as yet. The Cagayan sites, as well as those in the Mariana Islands and western Melanesia (Lapita), specialized in related but slightly different modes of decoration based on punctate and dentate stamping, with a lesser occurrence of circle stamping that was used mainly for zone boundaries rather than actual motifs (Hung et al. 2011; Carson et al. 2013). Further parallels in baked clay penannular earrings, in Palawan and central and southern (but not northern) Vietnam, are even more interesting. In the latter case they could perhaps relate to the major phenomenon in Austronesian history of Chamic colonization of the central Vietnamese portion of the Asian mainland, from somewhere in the Philippine-Borneo region during the middle or late first millennium BC (Hung et al. in press).

In recent years, many archaeologists, especially those who do not favour a role for Taiwan in the spread of Neolithic communities into Island Southeast Asia, have suggested that Taiwan to Luzon sailing would always have been impossible because of the existence of the south to north flowing Kuroshio current. In chapter 1, it was noted that although the Taiwan to Luzon route lay partly in the face of this current, there have been recorded drift voyages from Japan to Batanes, and also good reasons why longitudinal course shifts, counter currents and variations in intensity should not have allowed periodic movement to occur from Taiwan southwards. That such movement did occur is, of course, demonstrated without the slightest doubt by many of the artefacts described above. The Batanes Islands were clearly not settled only by people moving north from Luzon, unless someone can one day demonstrate the existence of unprecedentedly-large quantities of Taiwan artefacts in currently undiscovered Luzon sites. The sheer extent of the Cagayan Valley archaeological sample makes this most unlikely. Contacts with Taiwan occurred over more than 3000 years of prehistory, and they probably occurred many times. This issue is raised again for discussion in the concluding chapter, where a specific instance of contact around 2500 to 2000 years ago between the Batanes Islands and Lanyu Island, to the southeast of Taiwan, is highlighted.

Finally, attention should be drawn to the recent demonstration of very close parallels in red-slipped and decorated pottery forms between the Batanes and Cagayan Neolithic sites on the one hand, and the two sites of Minanga Sipakko and Kamassi in the Karama Valley of West Sulawesi, Indonesia, on the other (Anggraeni et al. in press). These two central Indonesian sites date to between 1500 and 500 BC, and thus fit perfectly with a model of Neolithic expansion southwards through the Philippines into central Indonesia.