

A National Cultural Treasure Revisited – Re-assessing the ‘Balangay’ Boat Discoveries

Roderick Stead¹ and Dr. E Dizon²

Abstract

The discovery of the balangay boats in the Butuan area of Northern Mindanao was arguably the most important find in pre-colonial maritime archaeology throughout island South East Asia. This class of vessel was well known from the accounts of early Spanish visitors to the Philippines, such as the Pigafetta journal of Magellan’s voyage, but no extent examples had been located until the 1970s. As a by-product of an organised excavation of a settlement at the mouth of the Agusan River, a wave of illegal pot-hunting began in the Butuan area. As these ships had no commercial value they were reported to the National Museum. A total of 11 vessels were reported as discovered between 1976 and 1998, under some 2 metres of silt. In recent years a replica of a balangay boat has been built in the Philippines and it carried out a number of trial voyages in South East Asia. This replica is due to be put on show for the public in Manila.

The first vessel discovered was conserved and is exhibited on site. A second ship was excavated and is on display in Manila in a partially reconstructed form. A third vessel and portions of a fourth have been excavated and are stored in pieces on site. The National Museum is planning to reopen the site in order to record in detail the remaining ships, to trace the stylistic developments of these vessels, and to test the dating evidence. The earlier excavations indicated a range of dates covering the millennium before the Spanish colonisation. This paper is a description of the plans for the re-excavation of this prominent site. The location is very sensitive as vessels were declared ‘National Cultural Treasures’ by Presidential Decree in 1986.

1. Introduction

The discovery of a collection of the hulks of balangay boats in Mindanao has been the most important archaeological contribution to our understanding of the maritime heritage of the Philippines in the last forty years. Many of the boats discovered were not fully excavated, dated nor recorded. This paper describes a current review being carried out to assess whether this site should be re-excavated to allow further investigation of the remaining vessels.

2. Historical References to Balangay Boats

Early European visitors to the Philippines reported and described a number of indigenous vessels and boats, constructed in accordance with a local ship building tradition. The first detailed reports were from the voyage of Ferdinand Magellan. The account of Antonio Pigafetta, the chronicler of this voyage, was translated and published by Lord Stanley of Alderley in the nineteenth century. Soon after the arrival of the expedition in the Philippines in 1521 Pigafetta records, “we came upon two long boats, which they called ballanghai, full of men. In the largest of them was the king sitting under an awning of mats” (Stanley

¹Phd student at Southampton University

² Head of Maritime Archaeology at the National Museum, Manila

1874:76). He also records a conference near Samar, “the king... led us under a place covered with canes, where there was a ballanghai, that is to say, a boat, eighty feet long or thereabouts, resembling a fusta. We sat with the king upon its poop” (Stanley 1874:78).

The fusta was a kind of light galley from this period, used mainly in the Mediterranean, with a single mast, a lateen sail and up to 18 oars. Ruy López de Villalobos certified the receipt of a fusta, the *San Martin*, as one of six vessels provided for his voyage to the Philippines in 1542 (Blair and Robertson 1903:2, 60).

The spelling of balangay took various forms in the early accounts, perhaps due to Pigafetta preparing his original account in Italian, with subsequent translations into French and Spanish. Most of the modern versions of his chronicle are based on French texts, such as the 1525 Paris imprint (which has been reproduced in facsimile by the University of Michigan). The word appears as barangay, barangai, ballanghai or balangay in various sources. There is no doubt that the etymological source of this word is linked to the expression in Tagalog and other local languages for the smallest political unit of Philippine society, which is consciously modelled on a boat crew (Scott 1994:4-6).

There is an extensive description of the balangay and the ship building techniques used to construct them in Francisco Ignacio Alcina’s unpublished text, *Historia de las Islas e Indios de Bisayas* (1668:197-213). He recorded that he had actually built and sailed a number of these craft himself. He described the vessel as follows;

barangay, llaman a la que va creciendo ya en tamaño y talle; y estas embarcaciones, llamadas así, son las mas ligeras que se usaban, y usan, por acá entre estos naturales. Lábrese sobre quilla cuadrada, añadiéndole sus tablas por banda, con que quedan bajas de bordo y a propósito para remar (Alcina 1668:200-203).³

Apart from Alcina there were frequent descriptions of these vessels in other early accounts, notably in the *Sucesos de las Islas Filipinas* of Antonio de Morga (1609:190). In the translation by Alfonso de Salvio, Norman F. Hall and James Alexander Robertson he describes the barangays as, “certain quick and light vessels that lie low in the water, put together with little wooden nails. These are as slender at the stern as at the bow and they can hold a number of rowers on both sides”. These early accounts indicate that they were general purpose cargo-carrying vessels and widely used in inter-island trade. They were propelled by rowers or paddlers and by sail. They can be contrasted with the caracoa, a swifter, lighter naval vessel used for raiding and as a people carrier (Scott 1981:5-10).

The barangay has not survived to the present day, but a number of more modern types of plank-built wooden craft show some influence from this tradition.

³ “Barangay is what they call the next larger in size and proportion. The vessels bearing this name are the lightest that were used and are still being used by these natives here. They are built upon a square keel, adding boards for the side. They are completed with low sides suitable for rowing...” translated by C.J. Kobak and L. Gutiérrez 2005:201-202.

Many of the boats used as houseboats by the sea gypsies in the Sulu Sea (between Mindanao and Borneo) have similar features to the balangay (Peralta 1980:42).



Figure 1. Map of the Philippines to illustrate site location

3. *Discovery of the Balangay Boats in Butuan*

No original examples of the balangay were known until a fortuitous discovery in Butuan City in Northern Mindanao (See Figure 1). Archaeological materials were found near the estuary of the Agusan River in 1974 by the Butuan City engineers who were draining seasonal flood water from the low-lying land near the Masao creek. Excavation of fish ponds in the local area also produced evidence of ancient burials.

These accidental discoveries were reported to Xavier University in Cagayan de Oro and a series of archaeological excavations were carried out from 1975 to 1977 by staff and students from Xavier University and Mindanao State University. A report on the earlier finds and these excavations was prepared by Linda Burton (1977:95-112). The sites revealed a number of burials with extensive grave goods, including porcelain items from the Yuan period (thirteenth to fourteenth centuries) and the Ming period (fourteenth to seventeenth centuries). A settlement area with middens was also located. The material culture excavated here included sherds, iron slag, ornaments and animal and marine remains.

The discovery of undisturbed burials, with valuable imported ceramics, caused a surge in illegal excavations to loot cemeteries in the area. The activities of the pot hunters, using sounding rods and test pits, destroyed much of the archaeological potential of the area, but turned up a number of timber boats preserved in the estuary mud and silt. As these had no commercial value they were reported to the National Museum (Cembrano 1998: 2-4).

It is not surprising that these vessels were discovered at Butuan as this was a well-known trading port in the pre-Hispanic era, and this area, called the Caraga, was an important source of gold (Scott 1994:164-165; Hontiveros 2006). The first recorded trade mission to China from the Philippines was dispatched in 1001 Common Era (CE) from Butuan (Pu-duan in the Chinese sources). The Song Shi (Sung History) describes it as a small country with regular contact with Champa. The King is named as Kiling (Qi-Ling) (Scott 1989:3 and Appendix 1).

4. *The Geophysical Environment*

The Agusan River delta is an area of extensive deposition of sand and silt. The evolution of the estuary has been traced in detail by a recent geophysical report (Javelosa, *et al.* 2002).

The site where the boats were found is a waterlogged, marshy forest, mixed with coconut, banana and nipa palm. In some areas it has been cleared for fishponds, which will have destroyed the subsurface deposits. All the boats were found buried in one to two metres of silt, within a two kilometre radius around a paleochannel which survives as the narrow Masao creek. The sites are some distance from the present channel which indicates that it was considerably wider at the date of hulking⁴, or that it has subsequently changed its course. The high water table means that this is a difficult area to excavate, but this is, of course, the key to the preservation of the timber structures.

None of the sites was marked on the ground and it is difficult to correlate the excavation sketch maps in the National Museum files to modern topographical maps. Even the memories of those who participated in the excavations are unclear given the lack of land marks in the marsh (as discussed on site with the original excavation team members).

⁴ Hulking, meaning the deliberate abandonment of the vessel

It is not clear the extent to which illegal pot hunting has disturbed and contaminated the sites as a large number of test pits have been dug.

5. *The Boat Discoveries*

A total of eleven hulks or wreck fragments have been reported in total. The first nine vessels were identified by serial numbers 1 to 9, and subsequently two further boats were reported. All these discoveries were accidental or due to the activities of illegal pot hunters.



Figure 2. Boat No 1 on display at 'Balangay Shrine' (Photo M R Stead 2011)

The first vessel was excavated in 1976 and following conservation treatment with polyethylene glycol, has been displayed in a glass case at the 'Balangay Shrine', just next to the original discovery site (see Figure 2). The plank hull has a length of approximately 15 metres and beam of approximately 4 metres (Peralta 1980: 43). The carbon dating of this hulk indicated a surprisingly early date of 320 CE, +/- 110 years (Ronquillo 1987:71-78). There is a detailed plan drawing of the surviving timbers in Joseph Peralta (1980:44-45). The ceramics associated with the excavation seem to suggest a much later date but the depredations of the pot hunters may have disrupted the stratigraphy (Peralta 1980:44).

The second vessel was discovered in 1977 (see Figure 3). This vessel is of a similar size, about 14 metres long with a comparable design. This vessel has a C¹⁴ date of 1250 CE +/- 90 years reported by Wilfredo Ronquillo (Ronquillo 1987:71-78). The vessel has been comprehensively recorded by an Australian team, including a photo mosaic and a plan drawing of the timbers derived from the photos (Clark, *et al.* 1993:143-159). The boat is now exhibited in the National Museum in Manila in a partially reconstructed state.



Figure 3. The Balangay No 2 under Excavation (Courtesy of National Museum).

The third vessel was represented by only three planks and these suggested a rather smaller boat. This vessel was reburied.

Boat no. 4 was discovered after damage from pot hunters. A few remnants of this vessel are retained on site at the 'Balangay Shrine' whilst the rest was reburied.

The 5th vessel was excavated and is retained at the 'Balangay Shrine' in pieces. It is currently the subject of further conservation efforts. This vessel was dated to 990 CE +/- 70 years (Ronquillo 1987:71-78). A plan drawing of the timbers of this vessel from the National Museum archives is reproduced by Paul Clark, Jeremy Green, Tom Vosmer and Ray Santiago (1993:145).

Vessels number 6, 7, 8 and 9 have not been excavated. Subsequently two further vessels are reported to have been discovered, but have not been formally numbered (Cembrano 1998:4).

The excavations mostly took place a generation ago and no site identification marks or landscape features are available to fix the sites exactly. Memories of the precise locations are not clear or consistent. The sites lie in three groups in three separate properties. The site maps from the original

excavations are essentially sketch maps, which are difficult to tie in to modern topographic maps. Therefore it is not always possible to identify exactly where the boats were excavated and where the unexcavated vessels lie (see Figure 4, which is a comparison of the original site map with a Google Earth image of the area today). The area is extensively scarred by pot hunter pits.



Figure 1. Google Earth image (left) and old site map (Bautista 1988). Note highway bend and forks in river for reference (indicated by red arrows). Approximate site locations retrieved from this field visit are shown on the Google Earth image, and are compared with locations marked in the old map (indicated by orange arrows and encircled).

Figure 4. Modern satellite map comparing site location to historic site map (Courtesy of Ms Ligaya Lacsina of the National Museum).

6. Vessel Construction

The balangay boats found at Butuan seem to have followed similar designs. They correspond closely to the descriptions contained in Alcina's manuscript (1668:167-195). He indicates that all the larger craft in this indigenous tradition had common construction methods. He uses a number of technical terms in Spanish and the local language, Visayan, to describe the components and construction methods. The construction began with carving a keel and stem and stern posts, "la quilla y las dos rodas de proa y popa". The strakes, "tablas", were

carved two from each tree trunk using axes and adzes. This avoided using the outer sap wood and the core of the log, neither of which gives strong, resistant timber. These strakes were carved with curved ends, “lubag”, to create the appropriate hull curvature. The strakes were always cut to the full length of the hull. The size and shape of the strakes determined the beam of the vessel and the shape of the hull. On the inside of the planks were left rounded protrusions or lugs, “tambuko”, with holes for the hull fastenings. Inner ribs called “agar” were lashed to the hull using the “tambukos” to hold the vessel together. The strakes were joined and attached to keel by wooden battens or dowels which fitted into holes carved by an auger⁵. The number of strakes determined the height of the freeboard. Oars of appropriate lengths were selected based on the height of the freeboard.

According to Alcina the ship was usually left to season for one or two months and then the dowels were checked by dismantling the hull. The strakes were caulked with a palm extract, “baruk”. The hull was then stressed by lashing, a process called “usus”. The dowels were locked in position with wooden plugs, to “cegar las junteras” called in Visayan “pamuta”. The vessel was then fitted with outrigger poles and connecting timbers, “katig”. The outriggers could support platforms especially for fighting or carrying passengers. A central hull platform, the “burutlan”, was used for working the sails or carrying passengers or freight. A temporary awning of palm leaves was often rigged to protect the passengers from the sun or rain. The ships carried either a single mast or a tripod mast, which could be raised or lowered quickly. The sails themselves were usually wider than they were high, and strung on two bamboo yards.

However, there is very little evidence from the excavations as to whether these vessels had outriggers and masts. This probably reflects the theory that they were hulks and such equipment would have been stripped. The lack of finds of shipboard equipment in the excavations would seem to support this interpretation.

Most of the vessels have not been published in detail although there is much information in the excavation reports in the files of the National Museum. The most comprehensive published account is the survey of the timbers of boat number 2 carried out in 1988 (Clark, *et al.* 1993:143-149). This vessel is about 14 metres long and the remains consist of a keel with two strakes on one side and five on the other. The dowels were not locked in this vessel, but locked dowels had been noted in the first Butuan discovery. A series of hooked scarf joints⁶ were observed on these strakes. It would clearly be very valuable to have all the vessels published to this level of detail, in order to easily compare and contrast the vessels and seek to develop a typological evolution linked to comprehensive dating evidence.

⁵ Auger, a tool for carving circular holes in wood

⁶ Hooked scarf joints are a way of fitting together strakes in a potential area of hull weakness, discussed at length (Clark, *et al.* 1993: 150).

7. The Reception of the Discoveries

This discovery is without doubt one of the most important maritime archaeological sites in Southeast Asia from the pre-colonial era. The importance of these discoveries was recognised immediately and the early moves by the National Museum to excavate and conserve the first two vessels were commendable. There are extensive displays on these vessels in the National Museum in Manila and in the Regional Museum in Butuan City. The first vessel is now, of course, the central focus of the 'Balangay Shrine'.

The importance of the discoveries was confirmed in 1986 when they were declared as 'National Cultural Treasures' by President Corazon C. Aquino under Presidential Proclamation No 86.

Since 2009 there have been three separate replicas of balangay boats built in the Philippines. A series of voyages were undertaken in Philippine and South East Asian waters with the first replica to demonstrate the seaworthiness of the design (discussed with Daniel Calo, a crew member). This vessel is to be preserved in Manila and put on permanent display. The third vessel, the *Masawa Hong Butuan*, was built in Mindanao and is currently moored in the Agusan River, close to Butuan (visited by the site visit team in 2011).

8. Proposal to Conduct Further Work on Site

In February 2011 a visit to the site was organised by Roderick Stead, one of the authors, accompanied by Ligaya Lacsina of the Archaeology Division from the National Museum in Manila. The purpose of this visit was to evaluate if further work should be undertaken on the site. The staff of the Regional Museum in Butuan were particularly helpful in seeking to identify the original sites of the boat discoveries.

To reopen the site would be feasible, but is complicated as the exact location of the boats is not always clear. The first challenge would be to locate the hulls again, which ironically would probably require the use of similar sounding rods as in the pot hunters' tool kits. The use of more sophisticated electronic devices would be complicated by the waterlogged nature of the site. The wet site is also a complication for re-excavation as the trenches would need to be shored up and kept clear of water by continuous pumping. Great care would be needed to avoid deterioration of the fragile wood of the vessels, even if the exposure was only temporary.

However such is the importance of this site that further excavations on the remaining craft is certainly justified. This would include testing the date range of all the vessels. A fairly limited number of C¹⁴ tests were undertaken on the three excavated boats and the reported results ranges over a millennium, which would seem suspiciously broad considering the very consistent range of designs.

The surviving timbers would need to be recorded accurately using photography and scanning technology. The wood species used in construction would need to be analysed. The surviving tool marks may give clues to the construction process. Computer modelling could be used to reconstitute an electronic model of each vessel. A range of environmental samples would be

needed to analyse the stratigraphic layers in which the vessels sit. Finally there could be an attempt to construct a typological evolution of the design if the time elapse period is as long as reported.

There are two precautionary considerations. We do not know how much the trial pits of the pot hunters have damaged the archaeological layers and contaminated the site. It is also important to note that these appear to be abandoned hulks, discarded at the end of their useful lives. Therefore it is likely that all reusable equipment was stripped from the hulls at the time of abandonment.

9. Conclusion

The 'balangay' boats continue to be an important symbol of the pre-colonial maritime culture of the Philippines. This project could significantly extend our knowledge of these vessels, their use and their construction. A controlled process of reburial would protect the hulls for future re-examination.

Abbreviations

IJNA International Journal of Nautical Archaeology

Bibliography

| | |
|---|---|
| Alcina, I. F., 1668 | <i>Historia de las Islas e Indios de Bisayas</i> , 1, 3, 3, re-published in Manila in 2005 by University of Santo Tomas with a translation by Kobak C.J. and Gutiérrez L. |
| Bautista, A.P., 1988 | <i>Report on Archaeological Excavation Butuan City, Agusan del Norte Province June 5 to July 5</i> , National Museum, Philippines |
| Blair, E.H., and Robertson, J.A., 1903-7 | <i>The Philippine Islands, 1493-1898</i> , 55 vols, Cleveland |
| Burton L., 1977 | "Settlement and Burial Sites in Butuan City: A Preliminary Report", in <i>Philippine Studies</i> , 25, pp.95-112. |
| Cembrano, M.R., 1998 | <i>Patterns of the Past, the Ethno Archaeology of Butuan</i> , National Museum, Manila. |
| Clark, P., Conese, E. Nicolas, N. and Green, J., 1989 | "Philippines Archaeological Site Survey, February 1988", <i>International Journal of Nautical Archaeology</i> 18, 3, pp.255-262 |
| Clark, P., Green, J., Vosmer, T., Santiago R., 1993 | "The Butuan Two boat, known as a <i>balangay</i> in the National Museum, Manila, Philippines", in <i>International Journal of Nautical Archaeology</i> , 22, 2, pp. 143-159 |
| Green, J. N., | "Interim Report on the Australian-Philippines Butuan boat |

| | |
|--|--|
| Vosmer T., Clark P., Santiago R., and Alvares M., 1995 | project", <i>IJNA</i> , 24, 3, pp. 177-188. |
| Hontiveros, G., 2006 | <i>Butuan of a Thousand Years</i> , Butuan City, Butuan City Foundation |
| de Morga, A., 1609 | <i>Sucesos de las Islas Filipinas</i> , reissued in 2006, London, Hard Press |
| Ronquillo, W.P., 1987 | "The Butuan archaeological finds: profound implications for Philippine and Southeast Asian prehistory", in <i>Man and Culture in Oceania</i> , 3, pp. 71-78. |
| Peralta, J.T., 1980 | "Ancient mariners of the Philippines", in <i>Archaeology</i> , 35, 5, pp.41-48. |
| Pigafetta, A. trans. by Stanley, J.E.H., 2010 | <i>First Voyage Round the World by Magellan: Translated from the Accounts of Pigafetta and Other Contemporary Writers</i> Cambridge. C.U.P. |
| Pigafetta, A. trans. by Page, S.P., 1969 | <i>The Voyage of Magellan, The Journal of Antonio Pigafetta</i> William I. Clements Library, University of Michigan |
| Scott, W.H., 1981 | "Boat Building and Seamanship in Classic Philippine Society", in <i>Anthropological Papers</i> No 9, National Museum, Manila, |
| Scott, W.H., 1989 | <i>Filipinos in China before 1500</i> , De La Salle, Manila. |
| Scott, W.H., 1994 | <i>Barangay, Sixteenth Century Philippine Culture and Society</i> , Ateneo de Manila U.P. , Manila. |