

The Old *Biray* in Pandan, Caoayan: An underwater cultural heritage assessment

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Abstract

This paper presents the preliminary assessment arising out of a survey of Pandan Site (NM Site Code I-2011-I1)⁴, a maritime site featuring an abandoned traditional *Biray* vessel located along the Mestizo River in Caoayan, Ilocos Sur, Northwest Luzon. The site position is perpendicular to the West Philippine Sea (formerly South China Sea) and lies under an abandoned Abra Delta. It is considered as an inland and coastal boat. The structural remains of the vessel have a length of 18 meters (m) and a width of 5m. It is visible during low tide and is characterized by flat hull with ribs, pointed bow and stern. Initial investigation did not observe any evidence of a keel. Based on local oral histories, the boat may be between 80 to 150 years old.

The role of this traditional vessel is re-examined in the Northern Luzon trade network extending as far south as Manila to as far North as the Babuyan Channel. An integral part of this research is the re-evaluation of *Biray* and its cargo that traces old *Biray* trading routes. The paper also covers “historical data” on structure and construction of the boat that can come in handy for future maritime excavation of the vessel.

The context, environment and condition of the site are also described. Moreover, it identifies the significance and vulnerability of the site. This concludes with an evaluation of the vessel and the position of the site as regards to underwater cultural heritage (UCH).

Introduction

Underwater archaeological investigations and related histories is a fairly new field that started in the 1960s as compared to terrestrial archaeology which dates back to the 14th century. As such land-based archaeology has yielded enormous information on our cultural heritage but the world’s water still retain many secrets that need to be discovered and explored.

The Philippines is one of the biggest archipelagos in Asia which features different types of bodies of water. These bodies of water namely, oceans, seas and major waterways, played an integral role in Philippine navigation and maritime prehistory.

In this paper, development of trade routes and boats used for trading is the focus of research. However, this research only confines itself to the province of Ilocos Sur located in Northern Luzon where a local boat called *biray* was reported. A *biray* or (sometimes called as virey, birey or viray) was described as an “unsteady” vessel navigated only near the shore (Galang 1941:304). This vessel is commonly found in Cagayan, Ilocos Norte, Ilocos Sur and La Union.

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⁴ the site is the 9th (letter I) archaeological site documented within the Ilocos political- administrative Region (Region I) and it was discovered in the year 2011.

The Study Area

Ilocos Sur Physical Background

The province of Ilocos Sur lies on a north-south basin bounded on the east by the provinces of Abra, Mountain Province and Benguet provinces within the Grand Cordillera Mountains. The basin is divided into three main regions, namely: the Laoag embayment, the Vigan- Abra high, and the coastal folded belt. Folding and faulting are active in the region.

It is said that the Ilocos plain is actually an uplifted deep marine sedimentary basin. This was caused by the active subduction of the West Philippine Sea seafloor under the Philippine plate (Dado 1997:3). This in turn resulted in active volcanism in the Western flank of Northern Luzon, wherein Ilocos served as the forearc basin.

The coastal Ilocos plain measures almost 300 kilometers north to south with notable variance only in width. Some places are as wide as 120 kilometers. The Abra River breaking through the steep and high mountain chain is perhaps the grandest scenery in Ilocos - aptly called the Banaoang Gap.

The West Philippine Sea puffs this plains area with the summer or southwestern monsoon from the West. Fortunately it is shielded on the east by the Grand Cordillera Mounts. This is the reason why the region is occasionally spared from the wrath of fully developed Pacific formed typhoons.

Monsoon climate has also maintained the interchange of extremely rainy from May to October, and extremely droughty from November to April. Drought increases as one moves from Ilocos Sur to Ilocos Norte (Wernstedt and Spencer 1967:328-342). The Ilocos plain is not as agriculturally viable as the central Luzon plain mainly due to this extreme climate and the fact that stream-wash deposition causes a discontinuum in the agricultural cycle. Only hardy field crops like tobacco and corn can withstand such conditions.

It has been said that the physical setting of Ilocos largely contributed to the hardiness and resilience of the Ilocano.

Steep slopes, thin soils, strongly seasonal precipitation, and limited arable land have required maximum labors for survival. The Ilocano is well known, both in the Philippines and abroad for his willingness to work and his work capacity... An overcrowded homeland has encouraged out migration into other areas where his presence is quickly evidenced by his hardwork and attendant economic success (Wernstedt and Spencer 1967:332)

Ilocos Sur Cultural Background, Ethnohistory and the Trading Routes

Ilocos Sur has been straddled with ancient coastal maritime trading centers and secondary maritime trading centers long before the Spanish Contact period (16th c). This was further elucidated by Grace Estela Mateo talking about the history of Ilocos Sur:

Geography favored Ilocos as a site for a trading entrepot. It's location in the far north meant that it was the gateway to the Philippines for traders from Eastern Asia... the irregular coastline of Ilocos Sur and La Union formed fine harbors... it is not surprising then that it became a center of a regional and international trading network in the 16th c (Mateo 2004:43)

The Vigan- Caoayan trading center was probably the most sizeable entrepot to have developed in the area. Secondary centers may have included Santa Lucia, Salomague, Candon, Tagudin, and Sinait among others (Keesing 1962:97-98, 123-124).

In the pre-Hispanic Ilocano-Itneg epic *Biag ni Lam-ang* (The Life of Lam-ang), one of the earliest recorded oral literatures in the Philippines, one may get an idea of the close connections between the peoples of Ilocos and China as linked by trading routes (AA, Manila). The hero Lam-ang boasts:

*Dua pay ti sasakayan
a balitok a bulawan
nga agbubunag ti pinggan
idiay ili a Kasanglayan,
ta nalpas met a naikamang
iti ari idiay Puanpuan.*

I have two gold tradeships
plying between here and the
Chinese country trading in
porcelain. I have commercial
connections with the
king of Puanpuan,

*Isu ti partesko ken kabagian
idiay ili a Kasanglayan,
isu ti napanna nagbiahian
tay barangayko a sampan;
pamayak adda itan,
ta napan nagkarga ti pinggan.
(Yabes 1935: 38)*

My relative in that Chinese
land. My boat sampan has gone
there on a voyage, and probably
now it has returned with its
cargo of porcelain.

The existence of pre-Hispanic trading entrepots in Ilocos was also confirmed in the documented initial Spanish incursion in the area led by the conquistador Juan de Salcedo (de San Agustin 1572 in delos Reyes 1890). The Historical or Contact period in Ilocos was, in fact, ushered in by the entry of this youthful Spanish conquistador when his ship hugged the Ilocos coastline as he sailed around the northern tip of Luzon. Juan de Salcedo moved up North the coast of Ilocos Sur in 1572. He left Dumanquaque (present day Santa Lucia) in early June that year then landed on Caoayan by nightfall. He sailed inland and reached the pre-Hispanic trading settlement of Vigan, where he was engaged by the Ilocanos in combat. Aside from the pueblo of Vigan, he also mentions that the very old neighboring pueblo called Bantay had a well protected port (Keesing 1962:123).

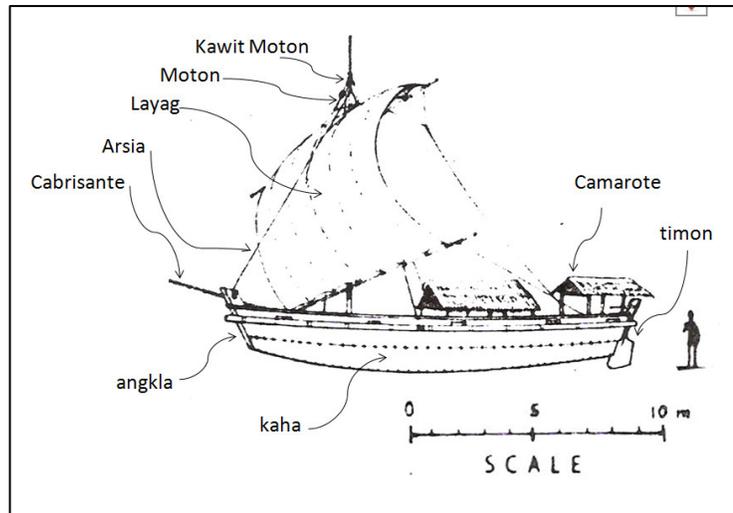
The Ilocos shipping tradition probably paralleled the opening of port- entrepots in Ilocos Sur. The ports of Caoayan (Vigan), and Cagayan traded with Manila from as early as the 16th century (c). This exchange was mentioned in *Description of the Philippine Islands*, an unsigned document dated 1618. Cargo coming from Ilocos included agricultural products notably surplus rice and cotton. This surplus Iloko rice became an annual export to Manila during the dry season, when the northeast winds were favourable for sea travel between Ilocos and Manila.

The Biray in Ilocos Sur ***Biray in the Know***

The vessels used to facilitate the Manila- Iloko- Cagayan exchange were the Biray. Such vessels usually docked in Manila between February and March (Scott 1982:88). Maharlika Cuevas and Rey Santiago also give a brief description of the *biray*:

(Biray) is a very light boat with two or three tiers of rowers per band, when they have people for it sitting down. It has counterweights made of bamboos and placed outside the body of the vessel on both sides. This boat is manufactured in the Ilocos region, while *garay* is used in Manila Bay and Laguna Lake areas. (Cuevas and Santiago 2004:8)

Figure 1: Parts of a *Biray* (after Cuevas and Santiago 2004; C.Q. Caoayan)



There are local terms for the different parts of an Iloko *biray* (see Figure 1). The vessel shell is called the *kaha*. The anchor is called *angkla*. The rudder is called the *timon*. The cabin is called the *camarote*. The two biray masts are called *palo*. The sail which is supported by the *palo* is called the *layag*, made of *abel Ilocos*, the thick and sturdy handwoven cloth of the region. Abacca rope or *arsia* is generally used as vessel rigging especially for the *palo* and *layag*. The pulley suspended in the *palo* is called the *moton*, which is itself suspended on a *kawit moton*. The bowsprit is called the *cabrisante* (CQ, Caoayan).

The Site of Biray

The Occular of the *Biray* in Pandan

The remains of *biray* vessel are located in Brgy. Pandan in the coastal plain of Caoayan, Ilocos Sur (see Figure 2). It is located in the former delta of Abra with Global Positioning System (GPS) bearings of N 17.534266°, E 120.373916° with the bow oriented at 21° N-NE (stern at 201°). Further inland of the coastal plain are the ridges of Mount Binitalo and Mount Gusing. The *biray* is within the shore sands of Barangay Pandan. It is interesting to note that the vessel is visible only during low tides this indicates that the area has an active marine and land milieu.

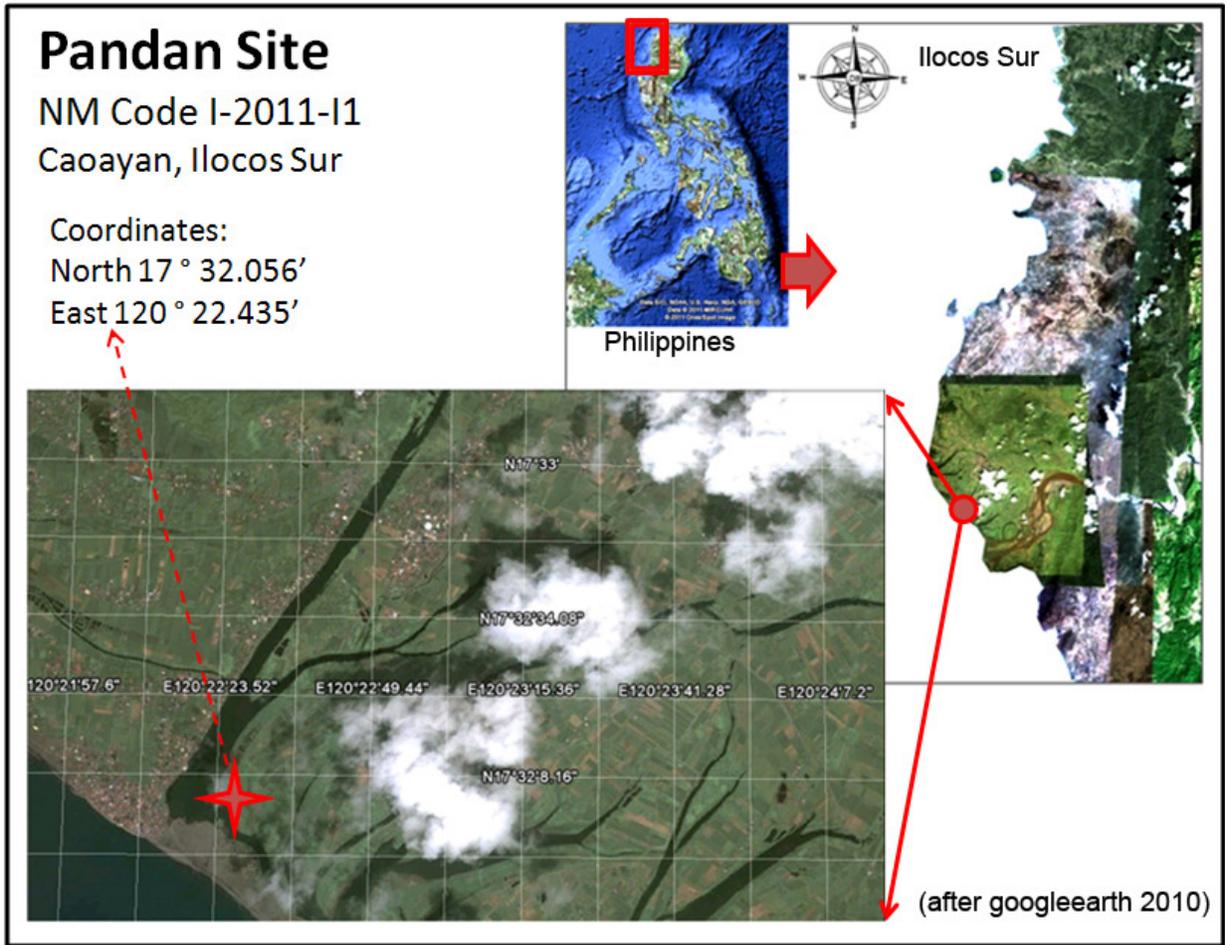


Figure 2. Location map of the biray (after Googleearth 2010)

The *biray* was observed to be leaning on its Starboard side. In fact, the stem post tilts starboard at 48° from upright position. Vessel dimension based on exposed ribs shows an overall length of approximately 18 m, and a widest possible width of between 4.5 to 5 m.



Figure 3: Photo of the Biray at Pandan site in situ circa 1980s
(courtesy of G.S., Caoayan)

The vessel is conclusively identified as a *biray* because oral historical accounts of Caoayan locals indicate that this *biray* is within living memory of the locals. In fact a maximum possible age of 100 was suggested (MI, Vigan). A photo of the Biray *in situ* was even made available by Mayor Goulart for reference (see Figure 3).



Figure 4: Biray in situ at Pandan Site with stem post at foreground (by Michael Canilao)

Surveys Conducted in the Site

Two surveys of the *biray* at Pandan site (NM site code I-2011-I1) were conducted in the second quarter of 2011. The first survey was initiated by the Provincial Government of Ilocos Sur through Vice Governor DV Savellano in coordination with the Municipal Government of Caoayan through Mayor Germelina Goulart. An authority for archaeological exploration of Caoayan Municipality was secured from the Director of the National Museum (CPD-SA-2011-05) by National Museum (NM) Research Associate Michael P. Canilao. The survey was, in fact, a component activity of a province-wide undertaking dubbed the Ilocos Sur Archaeological Project (ISAP). The Pandan survey

was done in conjunction with archaeological excavations done at Sapilang Site (NM site code I-2011-H1) in Sinait Municipality from late May to early June 2011. Caoayan Barangay officials have suggested that the survey be conducted at low tide in order to maximize visibility of the *biray*. Working closely with Eliza Agabin, the Heritage Consultant of the Province of Ilocos Sur, a survey was implemented in the first of May 2011 after due consultation with the San Fernando, La Union tide chart. A *rakit* (bamboo raft) was boarded for transit to the site.

A second survey was led by a Museum Researcher Pamela G. Faylona of the Archaeology Division NM together with Barangay Captain John Subrano and Padre Burgos Museum personnel, Efren Vista in mid-June. Besides noting the vessel's provenance, they also observe the geomorphology of the area. The vessel was located in a former delta and within the small to medium river channel. This shows that the present coastline is dynamic. The coastline is fed by a river and backed by a coastal plain with more than 5 km width. Moreover, it presents the shoreline change and coastal landscape development in Caoayan and neighboring coastlines.

Observed *in situ*, what remains of the *biray* are boat ribs partially protruding out of the murky and brackish water. These ribs are visibly joined or fastened with what appears to be metal pegs. It can be surmised that most of the *biray* structure laid buried in sand since water depth at the time of survey was barely two feet. This indicates that there is a good chance that the buried part is still well-preserved. However, the exposed ribbing is also in tact because it is afforded protection from the elements by brackish water shells/ barnacles that have completely adhered to the exposed wood.

Significance

The Biray

The *biray* played a very important role to the people of Ilocos, Cagayan, and Manila. Its operation brought in valuable goods to the Christianized population in the Cagayan valley (starting from the 16th c) which remained isolated for the most part of the Spanish- Contact Period. The *birays* travelling *via* the Babuyan Channel, north of the valley, were the only means of bringing in supplies to the valley which was bordered by the Sierra Madre to the east and the Cordillera Mountains to the west, both of which intersect to the south.

For the local coastal communities in Northern Luzon, the cargo-carrying *biray* was central to traditional product exchange system from the pre-Spanish-contact (14th to 15th c) until the American contact period (late 19th to early 20th c). To Cagayan went rice, salt, garlic, onions, tobacco, *damili* earthenware, stoneware *burnay*, raw maguey fibers, and fish nets from Ilocos, as well as salt and *bagoong* (fermented fish paste) from Pangasinan (MI, Vigan). To Ilocos the *biray* carried forest items such as lumber and palm leaves from Cagayan (JL, Manila). The *biray* also served as a vessel not only facilitating the exchange of goods, but as well as people, technologies, ideas, and cultural communications among Ilocos and Cagayan. A significant number of the population of Cagayan are of Ilocano-descent.

During the Spanish contact period its route to Manila was considered noteworthy, so much so that the vessel was defined as “Embarcacion pequeña que costeando llega hasta Manila” (Carro 1888:58). The *biray* was also important for Manila because Iloko

and Chinese products that were to be loaded on the Manila- Acapulco galleons (see Junco this volume) had to be transported to Manila through these highly dependable vessels. *Birays* eventually started to fade away from the Iloko scene with the advent of modern ships in the area during the post-World War 2 period (1950's- 70s).

The site and the 2001 UNESCO Convention

Based from the preliminary surveys and study conducted in Pandan, the *biray* remains holds intrinsic value and is significant in terms of archaeological, historical and scientific value. The vessel remains are archaeologically and scientifically significant because, at present, it is considered rare and a representative of a particular trading vessel for the Ilocos region. It has historic value, for though it is relatively young (tentatively dated at 100 years), the technology and development of the traditional boat building is preserved with the *biray* remains. Moreover, the site is a historic port having been part of a local maritime trading route from c 1300 to 1950s. The vessel and the site demonstrate a way of life, particularly, maritime culture and traditional trading activities that transpired in the area that had influenced the Ilocos region and the greater area of Luzon island.

The Biray as an Underwater Cultural Heritage: Issues, Challenges, and Recommendations

The *biray* in Pandan site has archaeological, scientific and historic significance and thus may be considered an UCH site. An in-depth archaeological study has yet to be undertaken for the site and the current conservation plan is to keep the vessel in situ. The local oral history (MI, Vigan) and the 1980s picture of the *biray* (G.G. Caoayan) indicate that the vessel is not more than 100 years old. Even so, a study in the future can provide information on vessel structure.

The surrounding environs of the vessel is highly unstable with an imminent threat of alluvial deposition and erosion as it is located in the deltaic floodplain of the mighty Abra River. This threat is magnified whenever the typhoon season sets in the Philippines from as early as May to December. Should a systematic archaeological excavation of the *biray* vessel be undertaken, the first task will be to secure the immediate vicinity of the vessel with a cofferdam structure that will protect the vessel from the Abra River. It is recommended that steel cofferdam be utilized for the site. A series of water pumps will then be used to remove the water prior to the systematic archaeological excavation of the vessel.

It is fortunate that the Provincial Government of Ilocos Sur upon having learned of the significance of the underwater archaeological site, have pledged support in terms of funding for future archaeological studies on the site. There is a need to raise awareness and appreciation of the *biray*, to keep the memory, history, and linkages alive not only among the last generation *biray* sailors and builders but especially among the youth.

The local municipal government is keen on establishing a small maritime museum featuring a replica of a *biray* to raise awareness among locals and tourists. However, along with the museum, it is being proposed as well to develop the banks of the Pandan port into a tourism area comprising of floating restaurants. While this may be viewed as an opportunity as it may mean income generation, on the conservation side, it may be considered as a threat to the *biray* remains and the site. The area

becomes more vulnerable and at-risk, without an in-depth archaeological study, appropriate legislation, and a comprehensive management plan in place yet. Thus first and foremost, the conservation of the *biray* should be undertaken to ensure protection of the *biray* prior to the area being utilized as a tourist site. A close coordination among the National Museum, academe University of the Philippines- Archaeological Studies Program (UP-ASP), with the local and provincial government is crucial to conserve the *biray* of the Ilocos, its adventures, and its memory alive for the present and the future generations to come.

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