

Reconstructing Philippine history before 1521: the Kalaga Putuan Crescent and the Austronesian maritime trade network

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ABSTRACT

Using a novel combination of archeological and textual evidence, ceramic analysis and recent genetic studies, we propose the existence of a lost Austronesian Kingdom, the Kalaga Putuan Crescent (KPC) in the Southeastern Philippine Archipelago, a kingdom which apparently existed as a coherent Austronesian cultural and political entity for over 13 centuries. Recent evidence suggests that the KPC was an early site of innovation in the development of Austronesian maritime technology, leading to the emergence of the Central Maritime Triangle (comprising the KPC, Champa and Srivijaya), a trade network that was central to the exchange of goods between the Spice Islands, China, India, the Middle East and Europe. At its cultural and political height, the previously unrecognized KPC was a sophisticated and influential center of Austronesian culture and maritime trade.

INTRODUCTION

The history of the Philippines has traditionally been taught from a geopolitical perspective, starting with the arrival of Magellan

on the Island of Homonhon in 1521; anything earlier was regarded as prehistoric. Because all written records of the native population were systematically destroyed by the Spaniards in their efforts to achieve dominance and establish Catholicism, and because archeological evidence is scanty, we have little information about the economic and cultural character of early Filipino communities and of their physical distribution, scale, and connections with other regional communities.

Our purpose in this article is to describe in detail recent genetic studies and ceramic evidence and to integrate these with textual evidence and archeological findings to better understand the pre-colonial Philippine culture. Taken together, these various sources of information build a preliminary understanding of the scope and regional significance of an “early historic period” in Philippine history that predates 1521. The combined impact of these diverse studies points to the existence of a distinctive and highly successful maritime culture, which we refer to as the *Kalaga Putuan Crescent* or *KPC*, that existed in the Southeastern Philippines, primarily on the large islands of Mindanao, Samar, and Leyte, over a millennium before the arrival of Magellan. The term KPC references Caraga, the Northeastern region of Mindanao which contains its principal settlement Butuan, using historical spellings (see Inset 1).

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At the end of the first millennium CE, the KPC was at the height of its prosperity and geographic extent, similar in many respects to the other two contemporaneous Austronesian maritime kingdoms, Srivijaya and Champa. The evidence of trade links between the three Austronesian kingdoms is compelling and their histories are intertwined. Earlier evidence for this trade connection comes from the spectacular horde of exquisite golden objects found in the 20th century, collectively known as the "Surigao Treasure", indicating that a sophisticated culture which produced remarkable personal adornments and ritual figurines flourished in Northeastern Mindanao. There is extensive archeological evidence that sophisticated goldsmithing was part of the pre-colonial culture in the Kalaga region of Mindanao (Capistrano-Baker, 2015).

These golden objects, though not precisely dateable, provide evidence for cultural exchange with the Hindu-Buddhist influenced areas of Sumatra, Java and the Malay peninsula controlled by another Austronesian kingdom, Srivijaya. One of the exquisite objects recovered was a golden Kinnari (Figure

1A), a celestial female with the legs and wings of a bird from the Hindu-Buddhist pantheon; the most similar Kinnari is a Javanese bronze lamp, believed to be from the 9th-10th century in the Metropolitan Museum of Art (Capistrano-Baker, 2015). An earlier discovery, the Agusan Golden Tara (Figure 1B) is further evidence for the cultural link to Srivijaya; the closest iconography to the Agusan goddess is the bronze statuette of the tantric sects that flourished in the 9th-12th centuries in Western Indonesia and in Champa, an Austronesian Kingdom on the coast of Vietnam. A more recent discovery (Orlina, 2013) is a gold amulet inscribed with a prayer to protect a specific individual named Angoy from harm. The prayer is from the Mahapratisara Tantric sect, and was found in the same general area as the Golden Tara. Although the evidence is fragmentary, these discoveries establish that a sophisticated culture flourished in the Kalaga-Putuan area with strong Hindu-Buddhist influences, which would be expected given the long-established maritime links between the KPC, Champa and Srivijaya.



Figure 1: Gold figurines with Hindu-Buddhist influence from the KPC.

A (left): Kinnari from the Surigao Treasure – a mythical half-bird, half-woman deity from Indian mythology; the Metropolitan Museum in New York has a lamp made in Java in the 9th-10th century with a similar deity, but that object is bronze, not gold. **B (right):** This image known as the Golden Tara, now in the Field Museum in Chicago, was found along the Agusan River near Esperanza in the early 20th century. It represents one of the inner goddesses in a mandala, and was likely made for adherents of a Tantric Buddhist sect; similar images in bronze from the 10th century have been found in Java. These images show that in the Caraga region of Mindanao there were highly skilled goldsmiths with wealthy patrons who were adherents of Hindu/Buddhist practices that permeated other sophisticated cultures of Southeast Asia at the time, including the Khmer Empire, Champa, Java and Bali. Image Credits: Asia Society, New York, and Ayala Museum, Philippines; John Weinstein, The Field Museum, Image No. A114678d_006A, Cat. No. 109928

Later in this article, we present evidence indicating that high-end Chinese ceramics were brought to the same region of Mindanao from the 9th to the early 11th century. Thus, there is diverse and robust evidence for an Austronesian kingdom in the Southeastern Philippines with strong trade links to Champa and Srivijaya, access to the Chinese domestic ceramic markets and a shared Hindu-Buddhist cultural influence. The three tightly-linked Austronesian kingdoms form a triangle geographically that encompasses the Sulu Sea and part of the South China Sea; we refer to this as the "Central Maritime Trade Triangle" (see map in Figure 2).

The KPC continued as a recognizable political and cultural entity until the Spanish colonization, but in parallel with Champa and Srivijaya, by the 16th century the three kingdoms were no longer preeminent among Southeast Asian Austronesian polities, being overshadowed by other centers

(Madjapahit in the case of Srivijaya and by Cebu and the Sultanate of Jolo in the case of the KPC; Champa was defeated and largely absorbed by an expanding Vietnamese state). One thesis of this article is that the three Austronesian kingdoms were the essential core of the first truly maritime global trade network in the first millennium of the common era.

The KPC and Austronesian Maritime Trade

The strongest evidence for the existence of the KPC is from Song Dynasty records at the beginning of the second millennium CE (Scott, 1984). These texts describe four tribute missions to the Northern Song Imperial Court at Kaifeng between 1003-1011 from Putuan (Yang, 2021), which most likely corresponds to what is now Agusan and Surigao in the Caraga region of Northern Mindanao. The records describe and specify the exchange of gifts between the emperor and the emissaries of Puduan or Putuan (the latter is used in this document). The

records specifically record that cloves were presented as tribute to the Song dynasty court. Thus, there appeared to be an active trading relationship between China and the kingdom called Putuan, a kingdom that apparently wielded significant political and cultural influence on Austronesian communities across Northern Mindanao and in the Eastern Visayas from the 9th to

the 12th century. The late 1970's discovery of nine balangay watercraft buried on the banks of the Agusan river near Butuan City, and their subsequent 4th - 13th century carbon dating results, provide archeological support for an active maritime culture with a high level of technological capability.

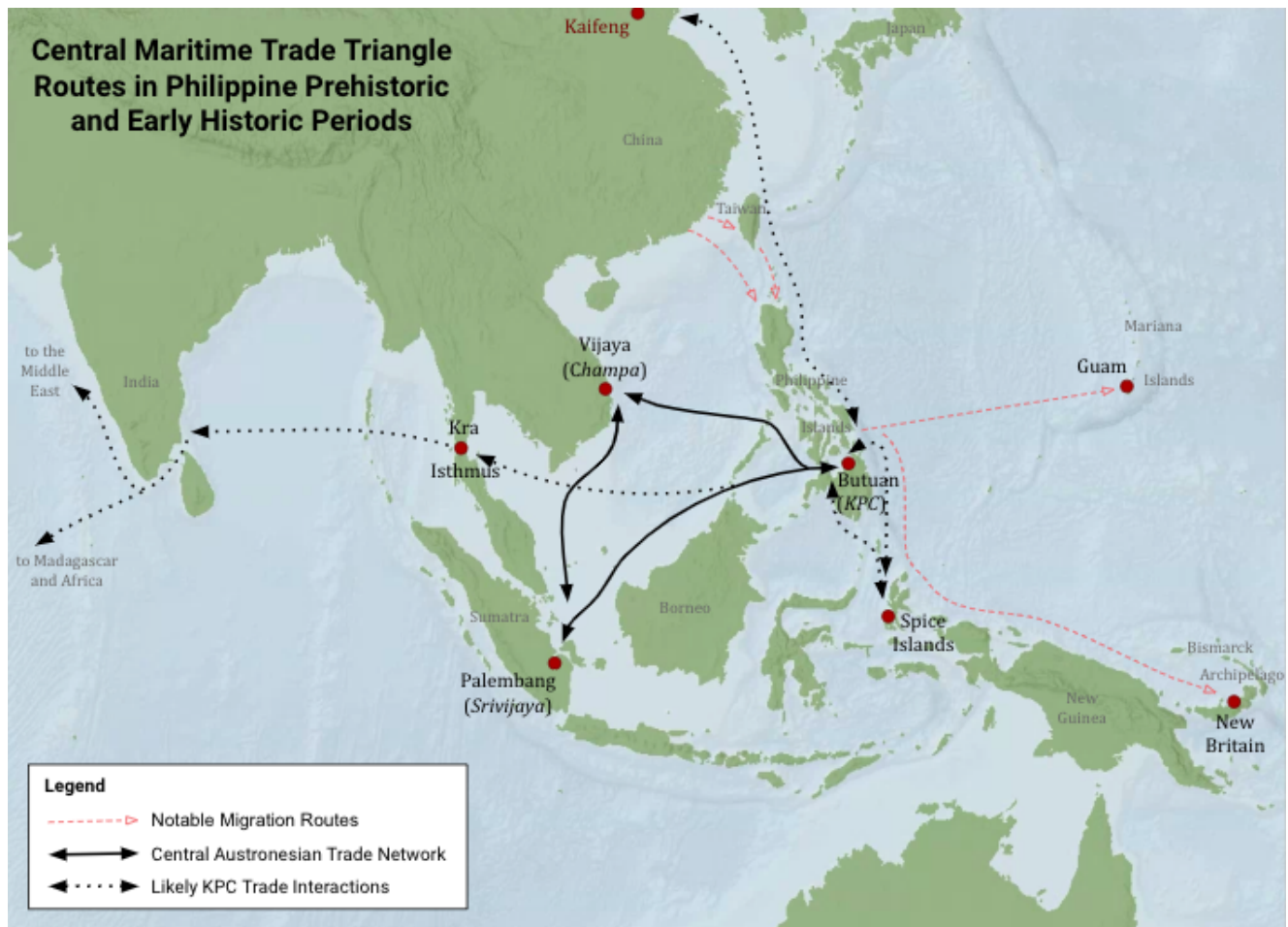


Figure 2: Central Maritime Trade Triangle

The three Austronesian kingdoms are labeled by their best-known maritime centers: (Butuan, the KPC kingdom; Vijaya, Champa; Palembang, Srivijaya, on the island of Sumatra); maritime routes between them are indicated by the solid lines. The KPC kingdom was trading for cloves with the Austronesian maritime centers in the Spice Islands; two potential routes between the Spice Islands and the KPC kingdom are shown. Earlier trade routes and voyages of colonization are also represented; trade to the west is believed to have been carried out initially through the Kra Isthmus; presumably, goods from Butuan were transferred by watercraft to the Kra Isthmus, taken overland, and then brought to India and other points further west, including sites in the Middle East where cloves were recovered from archeological sites which have been dated as early as 1500 BC. At about this time, Guam was colonized from the Philippine Archipelago, requiring an open-ocean voyage of greater than 2000 kilometers. The Austronesian culture in Butuan was ultimately derived from a migration out of South China to Luzon, a migration that is now believed to have taken place before 5000 BC.

The Origins of Maritime Culture in the Philippines

A growing volume of evidence thus supports a robust period for the KPC corresponding with the Song Dynasty at the turn of the millennium; additional evidence supports KPC trade connections with China that go back further, at least to the 3rd century CE. Physical evidence for this conclusion is provided in the form of Six Dynasties period Chinese ceramics recovered in the Philippines, as well as genetic research and other cultural evidence that supports the maritime technology and expertise necessary for sustained trade relations across the South China Sea and beyond.

There is new genetic information which provides insight into the origins of maritime culture and the economic and cultural development of the earliest populations of the Philippines. Recent advances in molecular genetic technology have made it possible to specify the genetic characteristics of human populations at different places and at different times in history, thus tracing the historic migration of populations from one place to another. With respect to the Philippines, genetic data now make it possible to provide a provisional timeline for the migration of modern humans into the Philippine Archipelago and for their emigration to other destinations (Larena 2021¹ and Pugach 2021).

¹ A reviewer has requested that we address a minor controversy that has arisen within the Philippine academic community regarding this work. Some of the issues are summarized in Rodriguez et al. (2022). These issues are primarily social, cultural and legal-ethical, but no data has been presented

that would lead to any qualifications regarding the scientific validity of the Larena et. al. study. We regard the scientific evidence presented in Larena et al as meeting the highest scientific standards, and of groundbreaking significance.

Australasian migrations

Data from two recent genetic studies supports a new framework for the origin and evolution of the diverse cultures in the Philippine Archipelago. These show that the Philippines were populated by five major waves of migration, of which the most important were the first and last. The first modern humans to arrive in the Philippines were *Australasians*, part of an ancient out-of-Africa migration that ultimately established the aboriginal populations in Australia, and the Papuan cultures of New Guinea (Larena, 2021). The first Australasian colonization of the Philippines likely took place more than 40,000 years ago when an Australasian branch that had diverged from the Papuan/Australian Aboriginal groups migrated from Sundaland to Luzon via an exposed land bridge connecting by way of present-day Palawan and Mindoro. Somewhat later, a second Australasian migration into the Southern Philippines occurred, likely from Sundaland via the Sulu Archipelago which could also be traversed due to lower sea levels. Descendant communities of these first Australasian colonizers, commonly known by the historical Spanish colonial term "negritos," are found in pockets of Luzon and Mindanao.

Austronesian expansion into the Philippines

The last major migration into the Philippines occurred 7-10,000 years ago when a group originally from the South China area (the "Cordillerans") moved to the Philippines. The landmark study of Larena et al (2021) reveals that a contemporary *Austronesian* population indigenous to the mountains of Northern Luzon have experienced the least admixture with other groups and thus have a genotype that closely resembles that of the original settlers. In contrast, their extensive genetic analysis reveals that all lowland Austronesian Philippine populations exhibit a complex genetic pattern consistent with later admixture with other groups. As additional genetic data are collected and analyzed, our understanding of the origins of these diverse genetically-mixed groups is certain to become increasingly refined.

The innovative assessment of admixture in diverse populations in the Philippine archipelago has provided groundbreaking insights; the most surprising is the large Denisovan component in some Luzon Negrito populations. The early divergence of the Cordilleran tribes from the ancestors of the indigenous Taiwanese Austronesians (all of whom have a characteristic admixture with Northeast Asian populations) suggests that the initial Austronesian migration to Luzon was both much earlier than conventionally estimated, and more complex. This migration clearly predated the introduction of paddy field rice agriculture, suggesting that the initial Austronesian colonizers that came to Luzon were mobile hunter-gatherers.

In the Philippine Archipelago, although the Austronesian arrivals intermixed with the indigenous populations they encountered, all languages that survive today are largely Austronesian. Although there may be elements from the original Australasian languages, the majority of words are related to the other languages of the Austronesian family.

A Maritime Benchmark: From the Philippines to the Marianas

A second significant genetic discovery for understanding prehistoric Philippine culture arises from an analysis of ancient DNA in skeletal remains from a cave in Guam (Pugach 2021). Previous archeological evidence had demonstrated that this cave had been continuously occupied by the initial colonizers of the Marianas Islands that had arrived around 1500 BCE. The DNA sequence analysis provided strong evidence that this ancient Guam DNA was derived from an Austronesian population in the Philippine Archipelago, rather than from other sources as had been previously postulated. Together with complementary archeological evidence, particularly pottery, it has thus been

convincingly established that an open ocean voyage from the Philippines to Guam (see map in Figure 2) must have occurred at around 1500 BCE, a singular maritime feat not equaled for over 2000 years (Carson 2014). Further genetic studies may allow identification of the specific region of the Philippines from which the migration to the Marianas originated.

The importance of this timeline of Philippine prehistory cannot be overemphasized: it shows that by 1500 BCE, the Austronesians in the Philippine Archipelago had developed a mature maritime technology with sufficiently sophisticated watercraft to colonize the Marianas Islands over 2000 kilometers away. Thus, as the Austronesian expansion was taking place, a major transformation occurred – a distinctive maritime culture had developed, with watercraft technology more advanced than that of any other known culture at that time. By 1500 BCE, one can infer that the seafarers from the Philippines could easily have crossed to any land mass within Island Southeast Asia, which provides a rationale for how the Austronesian expansion took place so rapidly across all of Island Southeast Asia and beyond.

The Lapita Culture

The establishment of the Lapita culture in the Bismarck archipelago close to New Guinea, now dated to between 1400-1300 BCE, provides additional evidence for Austronesian maritime migration. This culture expanded to Western Polynesia, including Tonga, Samoa and Fiji over the next four centuries, and ultimately (over 1000 years later) colonized all of remote Oceania, from Rapa Nui to Hawaii and New Zealand. A genetic analysis of the earliest Lapita skeletons revealed that they had little Papuan admixture, and that they are in fact closely related to the ancient DNA sequences from Guam (Skoglund 2016). Thus, the advanced maritime technology of 1500 BCE apparently made the voyages to the Marianas and Bismarck archipelagos possible (leading to the ancestral Chamorro and Lapita cultures), as well as trade in cloves and nutmeg from the Spice Islands to India and the Middle East (see next section). The genetic evidence regarding the Lapita culture in the Bismarcks, and the origins of Chamorro culture in the Marianas Islands are fully consistent with an emerging consensus based on archeological and other diverse evidence (Carson 2014).

Spices and Gold

The evidence that an advanced maritime culture was well established by 1500 BCE is supported by other less tangible evidence. The scholarly literature on the use of spices suggests, almost as a footnote, that two spices, nutmeg and cloves, had reached India and the Middle East during this era. Nutmeg has been reported from a site in Israel dated to 1600 - 1400 BCE, while cloves were recorded in a small jar at Terqa, in the Euphrates, dated to 1600 BCE (Amar and Lev, 2017). Cloves and nutmeg are only known to have grown at that time on a few volcanic islands on the eastern end of Indonesia. The presence of these spices in the Middle East by the second millennium BCE raises a question that has not been directly addressed: how would the spices have been transported across the Indian Ocean in sufficient quantities to allow their widespread use? An obvious possibility is that the same maritime technology that supported eastward Austronesian colonization of the Marianas was also used for regular trade to the far west, a maritime trade route which extended all the way from Eastern Indonesia to the Middle East. Although not a direct open ocean voyage over its entire extent, this impressively-long maritime route has at least some segments that require the kind of highly-advanced watercraft known to have been available during this period only to the Austronesian maritime civilization (Hoogervorst 2017). Transport by KPC watercraft is likely to have accounted for at least one leg of this long journey. Textual evidence for the early trade in spices in the Indian Ocean is provided by the Vedas,

Hindu scriptures written between 1500-1000 BCE, which refer to the many uses of nutmeg in India (Hancock 2021).

There is a similarly diffuse set of historical records consistent with an early maritime gold trade. Island Southeast Asia is often referred to in the ancient Hindu literature as “Suvarnadvipa or Swarnadvipa”, which literally means “Island of Gold”. Many historians believe that the dissemination of Hindu-Buddhist culture into Southeast Asia was greatly accelerated when India was cut off from its traditional gold sources in Siberia in the 1st Century BCE. As a result, the flow of gold from Southeast Asia rapidly increased; this trade would have required ocean-going Austronesian ships. The core KPC region in Northeastern Mindanao has famous, long-established gold mines and commercial mining for base and precious metals continues extensively in this region today. Pigafetta recorded the large amount of gold worn by KPC natives, and wrote that in some areas of Northern Mindanao, there was an abundance of gold nuggets: “in the island belonging to the king who came to the ship there are mines of gold, which they find in pieces as big as a walnut or an egg, by seeking in the ground. All the vessels which he makes use of are made of it, and also some parts of his

house (Pigafetta 1523).” The increasing export of spices and gold from KPC entrepôts to India and beyond may be a major factor for the wealth of the KPC kingdom in the 1st millennium CE.

The Sa Huynh/Kalanay Period: Jade, Glass and Pottery

Archeological evidence has established the dissemination of jade objects, like those shown in Figure 3, that were mined in Taiwan, worked in Philippine workshops, and traded to sites in mainland Southeast Asia including Sa Huynh in Vietnam and the Kra Peninsula in Southern Thailand (Bellina 2016). In addition, characteristic pottery defined by a type found in the Kalanay Cave, Masbate Island in the central Philippines was also widely circulated. The movement of these objects to far-off destinations would have been accomplished by large ocean-going watercraft. This archeological evidence defines a period between 500 BCE and 200 CE known as the Sa Huynh/Kalanay period (of the “South China Sea network culture”), referring to a maritime cultural network in which various goods were routinely traded as documented at multiple archeological sites (Hung 2013 and Bellina 2014).



Figure 3: Jade ornaments from Tabon Cave, Palawan, Philippines

The lingling-o (A) and bicephalous ornament (B) are widely distributed across maritime sites in the South China Sea. The jade is from a site in Taiwan; these idiosyncratic objects are dated from 500 BCE to 200 CE.

Image credits: Philippine Cultural Center (<https://epa.culturalcenter.gov.ph/3/82/2204/>) and National Museum of the Philippines (<https://www.facebook.com/nationalmuseumofthephilippines/photos/a.195151237175869/4214333651924254/>).

Recent archeological work in Vietnam has produced persuasive evidence for the Sa Huynh culture being an important link between Indian Ocean cultures and Austronesian maritime networks (Thang 2019). A flood in 2009 unearthed a glass kiln complex in Phu Yen province that used glass processing technology with striking similarities to that of Papanaidupet in India to make glass versions of the Austronesian lingling-o and bicephalous jade ornaments illustrated in Figure 3. The Sa Huynh culture is the cultural precursor of Champa, and the glass lingling-o and bicephalous jewelry, shown in Figure 4 are the embodiment of cross-cultural hybridization of Austronesian and Indian Ocean cultures before the common era, evidence for regular maritime traffic between early Austronesian kingdoms and commercial entrepôts in the Indian Ocean. Finally, by the second half of the first millennium of the common era, Austronesian seafarers, the first colonizers of Madagascar and the Comoro Islands, arrived in the far Southwestern Indian Ocean.

Additional evidence for extensive trade reliant on advanced maritime technology during this period is provided by Chinese texts. As one example, during the Western Han Dynasty (206 BCE - 9 CE), courtiers were required to have cloves in their mouths before an audience with the Chinese emperor; thus, a regular trade network from the Spice Islands to the Han capital must have been in place at that time.

In summary, new genetic and archeological data provide evidence for early Austronesian expansion and cultural development. The divergence between the Cordilleran and Taiwanese ancestral group before 5000 BCE suggests a timeline for the Austronesian colonizations of Taiwan and Northern Luzon from the mainland of Asia. During the earliest period, Austronesian culture was not primarily maritime – both the indigenous Taiwanese and the Cordillerans were hunter-gatherers, although they may have likely had some technology for coastal fishing that facilitated short distance island-to-island

settlement. If by 1500 BC, the Marianas were colonized from the Philippine archipelago, and regular trade had been established from Eastern Indonesia to India and the Middle East, then in the intervening millennia, there clearly had been a

dramatic transformation to a maritime culture with advanced watercraft technology. Where and how did this transformation occur?



Figure 4: Sa Huynh glass jewelry

Cross-cultural objects found in Vietnam that blend Indian material technology with Austronesian iconography, and in combination with the jade ornaments in Figure 3, provide concrete evidence for maritime links between the Philippines and early Austronesian chiefdoms in Vietnam (Dung, 2017). *Private collection.*

It seems most plausible for this to have been initiated during the Austronesian expansion from the original Island homelands of Taiwan and Luzon into the Central and Southern Philippines, the first archipelagic habitat that the ancestral Austronesians would have encountered. The development of the outrigger and other increasingly-advanced sailing technology would have facilitated communication and trade between neighboring islands. As the maritime technology developed further to larger, more advanced watercraft, regular communication over longer distances would become possible, leading to the establishment of trade networks, and an accelerating Austronesian expansion to islands further afield. Thus, the transformation of Austronesian culture into a maritime civilization, a key event in the Austronesian historical narrative, seems to have taken place before 1500 BC, most likely in the Southern Philippine archipelago, and around the Sulu Sea. This would explain the rapid Austronesian expansion from the Philippines to Samoa in Western Polynesia and into the Indian ocean. If key innovations in maritime technology were indeed developed by Austronesians as they reached the Southern Philippine Archipelago, then the early emergence of a major maritime kingdom there seems eminently predictable.

The Kalaga Putuan Crescent: Correlating Song Dynasty Records with Ceramic Ritual Vessels

Together, the Song Dynasty Imperial Court records of the 11th century, later Chinese Imperial records and the observations documented during Magellan's expedition (particularly from the diary of Antonio Pigafetta) in the 16th century provide an initial textual basis for reconstructing a narrative thread of pre-16th century Philippine History. Other key discoveries of the late 20th century were the Surigao Gold Treasure and the wooden Balangay watercraft; together with the textual material, these provided concrete evidence for an Austronesian maritime kingdom in the Southeastern Philippine archipelago, the Kalaga

Putuan Crescent. The kingdom referred to in both the Song chronicles and Pigafetta's description (as "Putuan" or "Butuan" transliterated in Chinese either as Puduan in pinyin, or P'u-tuan in older literature) in the Caraga region of Northern Mindanao appears to have wielded considerable political and cultural influence on Austronesian communities across Northern Mindanao from the 9th to the 12th centuries, as well as in the Eastern Visayas facing the Pacific. The available evidence is multi-faceted, but interlocking.

A formal maritime trade connection was established in 1011 between the Chinese empire and the kingdom of Putuan, which official Song Documents record. This was the result of the advanced sailing technology developed at least two and a half millennia earlier in the Philippine archipelago (as described above). The balangays uncovered in the Butuan area, dated to before 1140 CE, are direct evidence for the maritime culture. Although these balangays are a significant archeological discovery, Chinese textual sources suggest that the maritime trade used much larger watercraft (that the Chinese called Kunlunpo) that carried 600-700 passengers and 900 tons of cargo (Hall 2011). Furthermore, the Surigao Treasure and other gold objects show that Hindu-Buddhist iconography permeated this culture, the same Hindu-Buddhist cultural influences found in contemporaneous Austronesian kingdoms, Champa and Srivijaya, providing a cultural link between this Philippine kingdom and Srivijaya/Champa.

The Song chronicles provide further textual evidence for a trade network between KPC, Champa and Srivijaya. The trade between Champa and the KPC is explicitly described. The name of the ruler of Putuan that had sent envoys to the celestial court in the year 1011 was Sri Bata Haji; the Indianized title Haji was also used by the kings of Srivijaya. The Song chronicles

recorded tribute missions from Sanfoqi (Srivijaya) in 980 and 983 CE sent by kings referred to as Haji and the Xu Zizhi Tongjian Changbian records a mission in 1017 CE from Haji Samudrabhumi, "King of the Ocean Lands". These shared royal titles indicate a cultural connection to Srivijaya. Later in the Song Chronicles, there is reference to a mission from Champa in which a lion was presented to the Chinese Emperor. The lion was not directly from Champa, but had been obtained by the King of Champa from Srivijaya, providing evidence that large commercial vessels must have regularly connected the two Austronesian kingdoms, vessels large enough to transport a lion to Champa, and on to the Chinese court in Kaifeng. Thus, the three Austronesian kingdoms that sent missions to the Chinese court, Champa, Srivijaya and Putuan must have had regular traffic through maritime communication links that also serviced the Chinese empire.

There is specific mention of cloves being presented by the formal tribute missions to the Song Dynasty court. Tribute missions were a mechanism for the elite of China to obtain rare luxury items they desired that were otherwise not widely available. The watercraft used to bring tribute missions to Kaifeng were presumably massive, capable of carrying hundreds of people. The quantity of cloves delivered by the missions was likely to have been considerable; cloves were traditionally used by the Song Imperial court and the Kaifeng elite. The prominent Song Dynasty reference to cloves (the first item mentioned in the record of the tribute brought by the Putuan mission of 1011) suggests that the KPC was an important maritime center for trade in spices grown in the Maluku region of Indonesia, which had been used in China, India and the Middle East for millennia. The international trade in spices may have been one source of the wealth of the Kalaga Putuan Crescent; the total volume of cloves sent to India and further west to the Middle East and Europe must have been considerable during the 11th century; the geographic proximity of the KPC kingdom to the Spice Islands makes it likely that a significant fraction of the spice trade went

through the KPC and its merchant ships could have brought these spices to Srivijaya and China. The Srivijayan ports were global markets where Indian, Arab and Persian merchants came to buy spices, silks and ceramics, ultimately reaching distant ports such as Constantinople and Venice.

Ceramic Ritual Vessels

The Song Dynasty textual sources make it clear that members of the tribute missions in the 11th century were enthusiastic consumers of products available in the domestic market of Kaifeng. The chronicles note that the Putuan delegates were so excessive in what they purchased from private vendors that an edict was issued that restricted further sales. In addition, they were given both silk and metal and ceramic objects (referred to as "ritual vessels") by the court as gifts. The silk would not have survived, but there is increasing evidence that the ceramic "ritual vessels" brought home by the tribute mission may potentially be preserved in the KPC cultural area.

Ceramic vessels made in the form of bronze ritual vessels of more ancient periods are consistently featured in the records of the Northern Song Court. This antiquarian interest permeated all levels of government. Local authority was given to officials that had passed examinations which required the study of Confucian classics; a culture of venerating ancient dynastic accomplishments was promoted. By the late Northern Song Dynasty, the emperor himself had accumulated a vast collection of ancient bronze vessels from the Shang and Zhou Dynasty that had been made thousands of years earlier; these were ceremoniously displayed to visiting officials from all over the empire. Making ceramics based on the earlier forms of Shang and Zhou bronze ritual vessels (see examples in Figure 5) were a major task of official kilns. The Song emperors used such ritual ceramics to promote the dissemination of classical Chinese culture throughout the empire. Political motives promoted this scholarly antiquarian interest.



Figure 5: Shang dynasty bronze hu and bo (bell) emulated in Song dynasty ceramics

Image credits: bronze hu, Christie's (www.christies.com/en/lot/lot-5348188); bronze bo, Art Institute of Chicago (<https://api.artic.edu/api/v1/artworks/27925/manifest.json>); ceramics, private collection.

The Song Dynasty Imperial records of the 1007 CE tribute mission specifically note that the delegation from Putuan received ritual vessels as gifts from the emperor, and that careful consideration was given to the rank of each individual. The highest-ranking individuals presumably got more, and/or perhaps ritual vessels of higher quality and importance. The gifts from the emperor to tribute missions could be quite substantial; there is a record of gifts of two caparisoned horses to the envoy from Champa (the emissary from Putuan requested a similar gift,

a request that was denied, since at the time, Champa, was considered the more important trade partner). Thus, a large bulk volume of ceramics in the form of Shang ritual bronzes similar to those given to the Putuan ambassadors in the year 1007 CE, are likely to have been brought back to the KPC by tribute and trade missions during the Northern Song. Examples are documented here for the first time, a small sample of the remarkable variety of ceramics that have been recovered from KPC privileged sites (Figures 6 and 7).



Figure 6: Song dynasty ritual vessel ceramics recovered from KPC sites

Ancient bronze ritual vessels from the Shang and Zhou Dynasties were recovered from tombs in China during the Song Dynasty and the forms of these bronzes were replicated in a diverse variety of ceramics. Ritual vessel forms shown are: jue (A), li (B), gu (C), yan (D), hu (E), zun (F), cong (G) and gui (H). All of these were ancient bronzes, except the cong, which was an even more ancient ritual jade form. Ceramic gui and li examples are well represented in KPC sites (see Figure 7), but other types such as the jue and yan are very rare. *Private collection.*



Figure 7: Song dynasty ceramics in gui and li ritual vessel forms recovered from KPC

Sites Shang bronze forms were imitated in a variety of ceramic traditions from the Northern Song period, including Guan, Jun, and Qingbai. *Private collection.*

Thus, the historically recorded gift of ritual vessels by the emperor to members of the delegation provides a specific documented rationale for why high-quality ceramics in the shape of ritual bronze vessels have been recovered from sites in the Southeastern Philippines. These vessels from the KPC with their very distinctive shapes and sophisticated glazes are a striking contrast to the range of Chinese export ceramics found in Island Southeast Asia. The recovery of Southern Song Guan ware (see Figure 6E) suggests that missions from Putuan to the new capital at Hangchow continued to be carried out after the Northern Song capital of Kaifeng fell to the Jurchens in 1126. It is important to emphasize that these high-end "non-exportware" ceramics have only been found in a geographically-restricted sector of the Philippine archipelago, and are absent from the numerous other

sites of ceramic recoveries which yield only the standard maritime silk road merchandise.

The explanation that we offer for the presence of high end non-tradeware Chinese ceramics in the Southeastern Philippine archipelago would also predict that similar ceramics should be found at sites in Champa, and in Srivijaya; both kingdoms sent tribute missions regularly to the Northern Song court at Kaifeng. There are no reports of such finds from Champa, despite the rich shipwreck archaeology that has been carried out off the Vietnamese coast. Although it seems likely that tribute missions from Champa to the Northern Song Imperial court were also given gifts of ceramic ritual vessels, a difference in funerary customs between the two Austronesian kingdoms may explain

the lack of recoveries in Champa. By the Northern Song Dynasty, the Hindu influence in Champa was extremely strong, making it likely that the traditional Austronesian practice of burying prestige goods with their owners had been displaced by Hindu cremation rituals. This would, of course, greatly affect the preservation of any ceramics that tribute missions might have brought back. The recovery of ancient ceramics is therefore a function of not only how many were present at a particular geographical area, but also of how likely they were to have been buried. These considerations might also apply to their preservation in China; the rich trove of 7th or 8th century lead glaze ceramics that have been recovered compared to those few 10th to 11th century Northern Song ceramics may also be explained by the difference in funerary customs in China during the two periods.

Geographic Extent and Chronology of the KPC Kingdom
Given the generally decentralized and flexible organization of Austronesian maritime polities, a definition of the geographic

extent of their political and cultural influence and an accurate historical chronological reconstruction of even relatively well-defined polities such as Champa and Srivijaya have been a challenge to historians. At the height of their power and influence, the geographic extent of the Srivijayan kingdom and Champa and how this fluctuated over time still remains uncertain. In this section, an attempt will be made to address these issues for the KPC. As we detail below, the KPC kingdom appears to have had influence over a crescent-shaped geographic sector of the Southeastern Philippine Archipelago, from the southern tip of Luzon, through the core Kalaga Putuan area, continuing further west to the present Northern Lanao region of Mindanao. This sector of the Philippine Archipelago is what we will broadly refer to as the KPC kingdom (illustrated in the map showing privileged ceramic sites and major archeological sites in Figure 8).



Figure 8: The Kalaga-Putuan Crescent geographic area

Sites where ceramics from the 3rd to the 8th century have been recovered are shown. Six Dynasties sites are in blue, with the large circles being the major sources of Old Yüeh ceramics of this period. Sites shown in red are those in which early Tang Dynasty ceramics from the 7th to 8th centuries have been found. Larger circles are those with more diverse recoveries. The Tang Dynasty Ceramics found in Balabac suggest that it may have been an intermediate point in the maritime route for the transfer of goods between the KPC and Champa and Srivijaya.

The evidence for the existence of the KPC kingdom from the 9th to the 12th century CE based on the archeological discoveries in the present-day Caraga area of Northeastern Mindanao was presented in the preceding sections. That this society was well

established more than half a millennium earlier is suggested by ceramics recovered from privileged KPC sites. The crescent-shaped sector of the Philippine Archipelago from which remarkably high-quality vessels from Northern Song kilns have

been recovered have also yielded an unprecedented variety of Chinese ceramics from the 3rd to the 6th centuries (*i.e.*, the Six Dynasties period). This unique trove is unequaled anywhere outside China. Following Austronesian custom, these prestige goods were presumably interred with their owners; as a result, many have been remarkably well-preserved.

The most unexpected of the Six Dynasties recoveries in the Philippines are the soul vases (Figure 9A); these large funerary ceramics are heavy and would have been a challenge to transport; how the Philippine customers of the 3rd century used these is unclear. Perhaps they served as a decorative prestige item in the dwellings of high-ranking nobles. The intricate architectural construction of the top of these large jars may represent fortifications in the Chinese outposts of the time, or alternatively, may represent the Daoist ideal of Heaven. There is a small hole within the top that apparently was used to add grains into the jar for the use of the departed in the afterlife. Whether these had any utilitarian purposes for the customers in the Philippine Archipelago is an unanswered question.

The vessel in Figure 9B is a distinctive 4th century vessel that is called an incense burner or perfumer in the ceramic literature. It was used to generate pleasant aromas; some of the resins used for this purpose in China came from trees native to the Philippine archipelago (Ren 2022).

Probably the first ceramic vessel that became a widely successful consumer product all over China was a celadon bixie (Figure 9C) made for scholars' desks, either to contain water to mix with ink, to hold incense, candles or brushes, or to hold flags for good luck. The bixie was a mythical animal that looked like a crouching lion, generally represented with wings. During the Han Dynasty, bixies were widely used to ward off evil spirits. This is one of the most easily recognizable Old Yüeh Six Dynasties ceramics, generally assigned to the 3rd and 4th century. The bixies that have been recovered from the Philippines are comparable to examples in the collections of the Nanjing Museum and in the Palace Museum in Beijing.

One of the largest classes and most well-characterized Chinese ceramic vessels made between the 3rd to the 6th century CE are chicken-headed ewers, a large diversity of which have been recovered from the Philippines. The Philippine recoveries represent all stages in the evolution of this distinctive ceramic form. In the 3rd century CE, jarlets with animal heads, including frogs, bears and chicken heads were made by the Old Yüeh kilns. In the 4th century CE, the chicken heads became spouts, and a fair number of such ewers have been found at different sites in Northern Mindanao and the Eastern Visayas (an example is shown in Figure 9D). The recovery of chicken-headed ewers in different styles provide a basis for an increasingly precise dating of the KPC sites where they have been recovered.



Figure 9: Four distinctive Old Yüeh 3rd-4th century CE celadon vessels found in the Southeastern Philippines.

A. Soul vase (hunping); **B.** Incense burner or 'censer'; **C.** Bixie (pi-xie), resembling a winged lion; and **D.** Chicken-headed ewer. *Private collection.*

The corpus of ceramics from the 3rd to the 8th century CE comprise a far-richer series of these early Chinese ceramics than have been described from any other site outside China. These will be documented in separate publications. The KPC ceramic recoveries establish that the continuous trade between a culture in the Southeastern Philippine Archipelago and China predated the maritime silk road in export ceramics. The major sites from which these early ceramics have been recovered are shown in Figure 8. All of the diverse types of Chinese ceramics indicated in Figure 10 have been recovered from the KPC, suggesting that the KPC was a stable, continuous cultural complex for at least 1300 years.

DISCUSSION

The picture that emerges is of a wealthy, technologically advanced and culturally sophisticated center of maritime trade that existed for over 13 centuries in the Southeastern Philippine Archipelago, which we refer to as the Kalaga Putuan Crescent (KPC). We suggest that the KPC occupied a critical role, along with Champa and Srivijaya, in an extensive Austronesian trade network that was ultimately connected to early trade routes to the Mediterranean and Europe.

Chinese Dynasties, Ceramic Wares, and KPC Kingdom Periods

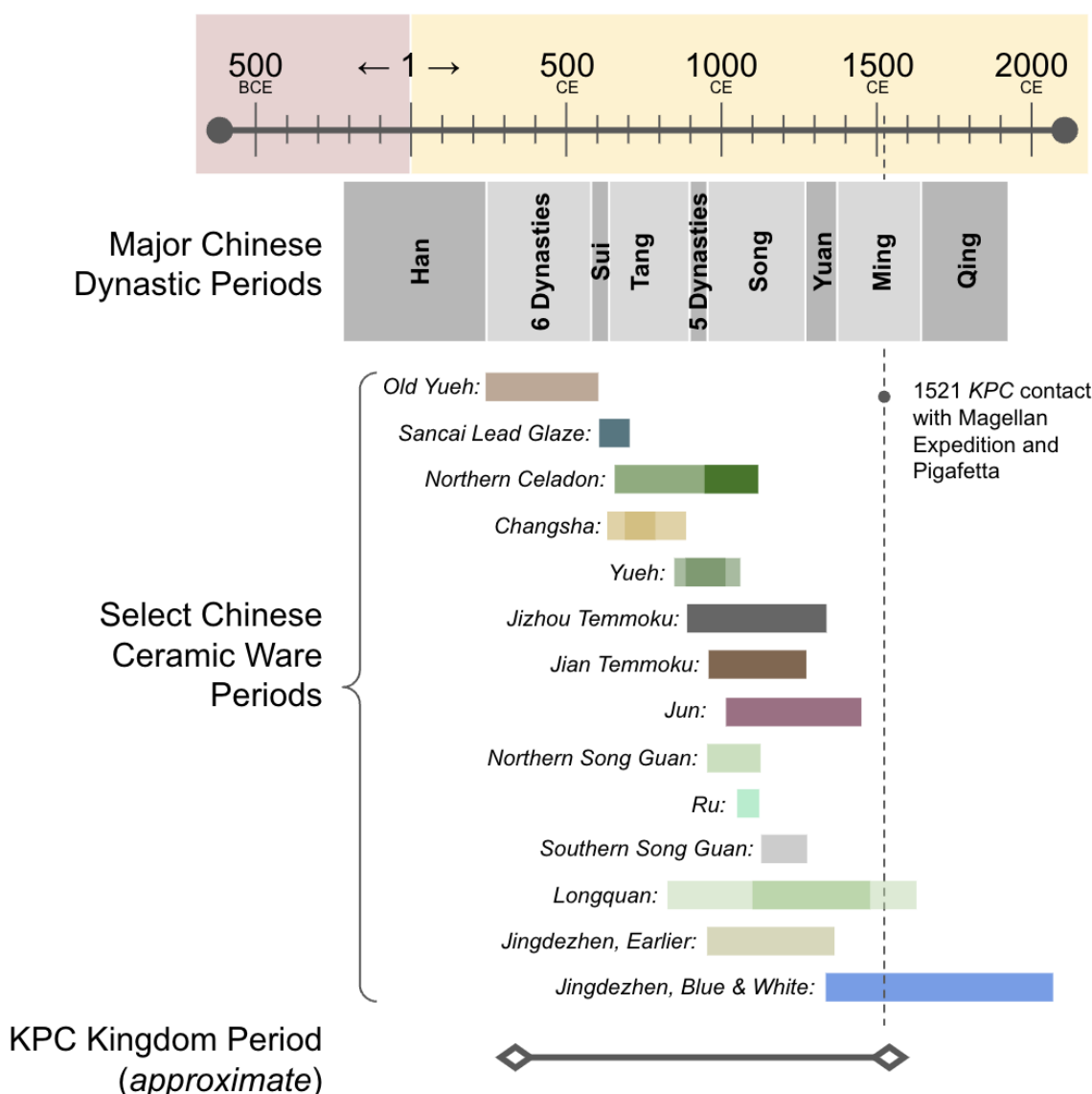


Figure 10: Timeline for the period during which Chinese Ceramics were imported by the KPC Kingdom

Each dynastic period in China, and when key types of Chinese Ceramics were produced, is indicated, in some cases with more intense coloring approximating the primary activity for each tradition. As an example, kilns ascribed to the Yüeh ware tradition operated continuously from the end of the Six Dynasties until the Northern Song period, but were most active in and around the 10th century CE.

KPC Cultural Inferences

The evidence for the existence of the KPC also provides some insights into the culture of this Austronesian polity. The Surigao Gold Treasure demonstrates that the KPC must have been a sophisticated culture with strong affinities for Hindu and Buddhist iconography. The gold can be closely linked to objects from the Indianized kingdoms under the cultural sway of Srivijaya, a center of Buddhist scholarship with a large monastic community that was regularly visited by Chinese pilgrims. The three vertices of the central triangle of the Austronesian maritime network comprise distribution trade links through which goods could have been efficiently transferred; one likely major role of the KPC in this globalized trade was to collect natural products from sources around the Sulu Sea area and further east, including tortoise shell and camphor, exotic items such as bird of paradise feathers, pearls and trepang (sea cucumber) and birds' nests. Most significant of all were spices from the small volcanic islands of Eastern Indonesia, the Maluku

Islands (in later historical times, referred to by Europeans as the Spice Islands). At the end of the first millennium, spices such as cloves and nutmeg could have flowed from the Spice Islands to the KPC, which then shipped these to China, as well as to Srivijaya. From Srivijaya, these were brought to India where they had been used for culinary and medicinal purposes for many centuries, and ultimately to the Middle East and to Europe where they became an increasingly prized luxury item. At the end of the Middle Ages, cloves were literally more valuable than gold in Europe. A few centuries later, this became the driving force for the classic voyages of discovery, including those of Columbus and of Magellan that first circumnavigated the Earth. A specific incident recorded by Pigafetta, the scribe in Magellan's voyage, provides additional insight into the Austronesian maritime trade network and the continuing participation of the Kalaga Putuan culture in the 16th century in such a network. Although the KPC was no longer as influential and powerful as it was in the 11th century, it was still a coherent

cultural entity in the 16th century. Pigafetta observed that when the fleet of Magellan arrived off Mazaua, the first significant urban settlement that they encountered in the Philippine archipelago, the King of Mazaua eventually came to greet them. Onboard the Spanish ship was Magellan's slave, Enrique (this slave had been with Magellan since his voyage to Malacca). To the astonishment of the Spaniards, Enrique was able to speak directly to the King of Mazaua, and they clearly understood each other very well. This suggests that up to the 16th century, a common trade vernacular was used between Austronesian maritime centers, presumably, a remnant from the networks of earlier periods.

In many ways, Pigafetta's account can be viewed as a description of a first encounter between two civilizations, the Mediterranean civilization of Renaissance Italy, and the maritime Austronesian civilization of the KPC Kingdom which had existed continuously for 13 centuries. The encounter with KPC natives not only provides information on the social mores of the KPC, but had unintended comedic aspects. Pigafetta had a wide-ranging curiosity and injected his observations with trenchant details. The account of what he did on Good Friday, 1521, is a classic of how two long-established, but separately-evolved cultural traditions can lead to miscommunication.

Pigafetta describes in detail how the King of Mazaua hosted him when he first came ashore as Magellan's representative. It was Good Friday, 1521, and as a practicing Catholic, he was supposed to be fasting, but he was welcomed with toasts of wine and two courses of pork upon his arrival, and afterwards a full dinner served on porcelain platters, continuously accompanied by coconut wine. The following day, he met the King's brother, whom he identified as "the King of Butuan and Caraga". Pigafetta (1523) found him a striking figure, "the most handsome man we saw", "very grandly decked out". He detailed what the King wore, "a silk veil on his head" and "a cotton cloth all embroidered with silk". He described all of the gold on his person, including a dagger "the handle of which was very long and all gold", "two large golden earrings fastened on his ears", "three spots of gold on every tooth and his teeth appeared as if bound with gold". He describes further that the king was "olive skinned and tattooed all over" and "perfumed with storax and benzoin". This first-hand account of a high-ranking KPC individual of the 16th century is direct evidence for the sophistication of a vanished cosmopolitan culture.

In some ways, Pigafetta's warm description of the fishermen that he encountered earlier from Suluan is even more revealing. The description of how the villagers of Suluan lived off coconuts was recorded by Pigafetta in great detail. This is a very isolated small island, and would always have been at the outer edge of the KPC cultural sphere, and yet in the encounter with the Spaniards, there clearly was mutual respect built between the two groups. Furthermore, the Suluan islanders were acculturated to meeting strangers; although initially cautious when they first encountered the Spanish ships. They soon demonstrated a warm hospitality, and carried out a mutually beneficial exchange of goods. These records provide a unique and intimate view into social interactions and mores of the KPC culture in its final stages.

The Future of Scientific Archeology in the Philippines

An effective interdisciplinary effort for the reconstruction of Philippine history and prehistory has exciting potential in the coming decades. The accelerating pace in understanding the Lapita culture, the ancient Austronesian network that extended from the Bismarck Archipelago north of New Guinea, to New Caledonia, Tonga and Samoa, ultimately giving rise to the entire Polynesian cultural complex, serves as a useful model. In the last two decades, a very rapid advance in the reconstruction of the

Lapita culture has become possible; a key element in the systematic analysis of Lapita sites has been the presence of characteristic dentate-marked red-slipped Lapita pottery, related to contemporaneous Philippine pottery recovered from such sites as Nagsarban in Northern Luzon and in cave sites in Masbate. From the few random sites discovered initially, over 200 specific Lapita sites marked by this pottery have now been systematically analyzed, clarifying how Lapita culture evolved and providing a detailed historical chronology of the Austronesian expansion in the Lapita area.

With respect to the KPC Kingdom, although we are at a similar point as the early stages of Lapita archaeology, there are a number of advantages for future efforts to understand early Philippine history. Several sites that have unusual Chinese ceramics ("privileged sites") have already been identified though not precisely enough to carry out a comprehensive archeological analysis. The use of distinctive Chinese ceramics as markers has the advantage of providing a date of origin and increasingly detailed information regarding the kiln. Thus, the presence of specific ceramics at a KPC site should provide an *a priori* dating for that site. Further stratigraphic analysis can be carried out by experienced archaeologists; the availability of such information from individual sites would be an enormous step forward for pre-colonial Philippine archaeology. In addition, wooden objects can be dated by C-14 and DNA technology can provide information on plant, animal and human remains. Also, recent improvements in technology even make it feasible to analyze the plaques in ancient teeth and infer what the individual had eaten. A single coffin from a chief, with its associated prestige goods buried within the coffin, should provide a large correlated archeological dataset that would shed light on the quality of life at that time and in that place. Thus, scientific advances in many disciplines make it possible for archaeology in the near future to yield increasingly detailed information about the lost cultures that evolved in the Philippine Archipelago before the Islamic and Spanish Catholic intrusions.

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CONFLICT OF INTEREST

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CONTRIBUTIONS OF INDIVIDUAL AUTHORS

The original conception of this article was formulated and drafted by Dr. Olivera. The final paper is the result of many discussions and revisions contributed by Dr. Olivera, Dr. Hall, and Mr. Granberg. Original maps and graphics were created by Mr. Granberg.

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Inset 1: Austronesians and the Kalaga Putuan Crescent

The word Austronesian, originally used to describe a set of related languages, has also been used to refer to the human groups that spoke these languages. Common cultural threads and shared innovations have also been referred to as "Austronesian". There is an ongoing scholarly debate about the terminology that is optimum, but for this article, we have made a pragmatic choice. The complication is that the diverse people who speak these languages today differ in the proportion of the original genetic "Austronesian" signature they retain; most are an admixture with various other groups, in widely different proportions. Should Polynesians be regarded as Austronesians? Should the Malagasy be regarded as Austronesians? In this article, we will use the term Austronesian to describe peoples whose original descendants primarily spoke a language in the Austronesian family. This means that even the Malagasy groups in Madagascar, where the genetic admixture actually makes the "Austronesian" genetic component a minority contribution, shall be regarded as "Austronesians" in the discussion that follows (the majority contribution in this case is from Bantu descended Africans). In the case of Polynesians, depending on which island group is being referred to, there is clearly an admixture of Australasians (primarily Papuans from New Guinea), but we regard these cultures as well-within the Austronesian umbrella. Thus, the definition of Austronesian languages, Austronesian genetics, Austronesian civilization and culture is an expansive one, which is useful in that variations do not need to be repeatedly defined. We note that in the recent genetic literature, the term Austronesian has been avoided; Larena *et al.*, (2021) refer to the Austronesian genetic component as "East Asian" or "Cordilleran" which may be appropriate for specialists in human genetics, but confusing if adopted for general use.

In addition to the ambiguity in using the word Austronesian, another problem is how to refer to distinctive political and cultural units of Austronesian maritime civilization. Just as there are scholarly debates about applying the term Austronesian, there are similar pitfalls in describing the Austronesian political and cultural organization. There is general agreement that the Austronesian maritime culture has strikingly divergent characteristics that distinguish it from the conventional cultures used as the standard framework for writing history. Thus, two important Austronesian polities, Champa and Srivijaya have been referred to using a diversity of terminology. One suggestion has been to use the term "Mandala", to emphasize how distinctly different these are from conventional western political units. The autonomous units within Champa or Srivijaya have generally been called chiefdoms, and these can be identified because each chiefdom is normally geographically associated with a river system that opens up into a productive marine environment. In her book, Junker (1999) refers to larger

political units such as Champa and Srivijaya as "paramount chiefdoms", to emphasize the relative autonomy of each unit, and the shifting confederation of the chiefdoms that comprise the larger political entities such as Champa or Srivijaya. In this article however, we will refer to larger political units of Austronesian maritime civilization simply as kingdoms, fully recognizing that these are not at all similar to western kingdoms. This loose political organization of Austronesian societies presents an additional problem: what should an Austronesian kingdom that continuously existed, but in an ever shifting social and geographical form be called? Even after there has been a consensus, such as the use of Champa to describe the Austronesian polity on the coast of Vietnam in the last half of the first millennium CE, uncertainties still remain. Thus, after the Vietnamese conquest in the 15th century, there was part of Champa that retained its culture; before the major rise of Champa, there was a community referred to by the Chinese as Linyu; despite much scholarly research, whether this was the beginning of Champa or a different kingdom remains uncertain. The Austronesian kingdom in the Southeastern Philippines has similar problems; it was referred to as Putuan in the Song Dynasty Chronicles. Whether the term Putuan refers to a geographic identity, and whether or not it is related to the present-day urban center called Butuan (there is a lively scholarly debate about this) is unclear. In any case, in this study we use KPC to refer to the Austronesian culture that persisted in the Southeastern Philippines that produced the Surigao Treasure. As we demonstrate, the influence of this culture extended from the tip of Southern Luzon along the Pacific coast of the Islands of Samar and Leyte, though Northeastern Mindanao all the way west to the present-day Province of Lanao del Norte. Furthermore, the culture persisted for over a millennium, from the 3rd century to the Spanish colonization. Like Champa, it may well have fluctuated greatly, but it appears that the KPC culture was centered around the present-day administrative region known as Caraga in Northeastern Mindanao. Clearly even in the 16th century, Caraga and Butuan were major polities in Mindanao, and Pigafetta referred to the Island of Mindanao as "the Island of Caraga and Butuan". We have chosen to refer to the Austronesian kingdom in the Philippines as the Kalaga Putuan Crescent, since the geographic center of this culture (and probably its political center as well) was in the Northeastern region of Mindanao, now known as the Caraga administrative region (but would have been known as Kalaga in pre-Spanish times), and clearly included what the Song Dynasty Chronicles recognized as the Putuan Kingdom. Because of the crescent shape of the geographic extent of this culture, the name Kalaga Putuan Crescent seems appropriate, and will be referred to as "the KPC kingdom". This Austronesian kingdom can, in some ways, be better defined with respect to its geographic reach and the time during which it persisted, than is the case for either Champa or Srivijaya, largely because of the recovery of Chinese ceramics at specific sites within the KPC cultural sphere.

Inset 1 Included Figure: Present-day Caraga region and Butuan City

