Uncovering the Maritime Silk Road

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In 2013, archaeologists at Oxford University who are involved in the Sealinks Project hosted a conference on "Proto-globalisation in the Indian Ocean world." One hundred scholars from around the world met to explore the early connectivity of the Indian Ocean world, including the movement of goods, people, species, and ideas. One of the missions of the conference and the Sealinks Project coordinators is to transform "Eurocentric notions of globalisation and the ways that studies of the past might inform our understanding of contemporary globalisation."

An article published in *Science* earlier this year calls the intercontinental trade network that crossed the Indian Ocean a "Maritime Silk Road" that once powered more East-West commerce than the famous land route. However, a lack of archaeological and historical research in the region has resulted in a focus generally placed on the 6,000-kilometre-long Silk Road, traveled and recorded by Marco Polo in the thirteenth century. Researchers have largely ignored the fact that Polo returned to Europe by means of the Indian Ocean, and one twentieth century scholar even called the Indian Ocean "scarcely more than an extension of the eastern Mediterranean."

In recent years, archaeologists have sought to dispel this idea by surveying Southeast Asian swamps, Sri Lankan reefs, and African beaches. They have already found artifacts including glass beads, potsherds, seeds, and animal bones that bring to life the real history of a vast cultural movement and trade network that lasted for several thousand years within and around the Indian Ocean. While this work is only in its infancy, it is already shifting the focus away from Rome and China as the two ends of the Silk Road by demonstrating that many rich cultures existed in between. Many of these societies relied on the oceans as their primary means of exchange and, therefore, of interaction with other people and ideas.

Historians long assumed that Roman consumption of luxury goods was the primary force driving trade between Europe and eastern Asia. Evidence of an expansive economy found off the coasts of Sri Lanka suggest that Roman merchants were likely drawn to an already booming international trade system. J.D. Hill, an archaeologist at the British Museum in London, has stated that what they are finding is unexpectedly modern. "The surprise is that the world was interconnected long ago," he states.

New evidence being uncovered by researchers shows that between 2000 BCE and 1498 CE, the year that Europeans arrived in the Indian Ocean, this maritime network created bonds between a diverse array of societies on three different continents, connecting industrialisation and cultural changes from prehistoric Southeast Asia to the eastern coasts of Africa.

Archaeologist Nicole Boivin of the University of Oxford in the UK was given $1.5 million in 2008 in the form of a five-year grant to uncover the unexplored history of this maritime world and its people. Her team is tracking how plants, animals, trade goods, people, and ideas moved between cultures and societies throughout a very large portion of the world over a span of 3,000 years.

One of the most important findings has been the identification of a large number of African crops including sorghum, pennisetum, and eleusine, grown throughout the first millennium CE. These discoveries show significant evidence for both early agriculture and trade. Similarly, recent surveys being performed in the eastern half of the Indian Ocean are shedding new light onto what was once considered "rural" and "backwater" areas of the world.

Previous scholars believed that Southeast Asia remained undeveloped until the rise of the Khmer empire at Angkor Wat, but we now find that by 400 BCE, approximately 2,000 years earlier, Southeast Asian residents were making iron and building large moated settlements of a unique design. Local excavations have brought forth evidence of social stratification within these societies, where luxury goods were prized by elites who received them through trade with communities in north India.

A French-Thai expedition between 2005 and 2009 uncovered what is currently the oldest-known city in Southeast Asia, Khao Sam Kaeo, which rested on the narrowest point of the Malay Peninsula, the place where the Indian Ocean and the South China Sea nearly meet. According to the leaders of this project, Khao Sam Kaeo was both an early and important link in maritime trade moving between India and Southeast Asia (Bérénice Bellina-Pryce, an archaeologist from CNRS in Paris). A prehistoric trip through this port city would have helped traders avoid a longer, more perilous voyage through the Strait of Malacca, an area plagued with piracy.

The team has found metal vessels and stone and glass beads that link the site to material cultures previously discovered in India, Vietnam, and China. The beads were crafted using Indian technologies and imported glass. Charles Higham, of the University of Otago, Dunedin, in New Zealand, has stated that "the work at Khao Sam Kaeo has revealed beyond reasonable doubt that Indian craft workers were settling coastal port towns in the [Malay] peninsula by the 4th century BCE, and fashioning beads there for local tastes."

The team also found iron biconical spindle whorls used exclusively for cotton weaving and transported from India and Vietnam. According to Judith Cameron of the Australian National University in Canberra, "There's no reason to transport a spindle whorl unless you're creating a textile yourself. These are hard to

use without knowledge and have intrinsic value."

These artifacts reveal new evidence of both migration and interaction of artisans and merchants. We can now see that Indian people and their material culture spread throughout Southeast Asia. Additionally, Pierre-Yves Manguin, an archaeologist at the National University of Singapore, has stated that a wealthy class of influential ship owners had come to prominence by the tenth century CE. Records show that a Javanese shipmaster served as an ambassador for his kingdom to a Chinese court in 993 CE. Manguin believes that "they played a big role as cultural diplomats."

Northwest of Khao Sam Kaeo, a team of Sri Lankan and American researchers have been surveying a wreck lying 34 metres under water just off the coast. Radiocarbon dates have shown that the materials found in the wreck, including glass ingots likely made in India and solid masses of iron and rock, come from between 200 and 100 BCE.

Deborah Carlson of Texas A&M University points out that iron and steel production facilities existed as long ago as 1500 BCE on the Indian subcontinent, predating European production by several centuries. A massive slag heap found in Sri Lanka's interior has been dated to between 400 and 200 BCE. Archaeologists claim that this single site had the capability to produce thousands of tons of finished iron and high-carbon steel, using 2-metre-high furnaces and monsoon-powered windmills.

Mat Mogren of the Swedish National Heritage Board in Lund said, "The technological knowledge is very high. This has fantastic implications" for long-distance trade in metals. The wreck shows that these metals were made for exportation, not just domestic consumption, casting Sri Lanka as much more than a rural society. Mogren notes that the word "Hinduwane," Arabic for steel, may come from the Sinhalese word "Wane," which also means steel. Sinhalese is one of the languages spoken in Sri Lanka today.

Cultural remnants also hint at the exuberant trade passing through the Indian Ocean. Archaeologist Veerasamy Selvakumar of Tamil University in Thanjavur claims that Tamil poetry coming from Southern India during the third century CE warns young men not to wander away from home in search of wealth in distant ports. Selvakumar explains that this poetry can be taken as a sign of societal stress resulting from the transition from agricultural to mercantile pursuits.

New genetic research methods are similarly changing our knowledge of history when we examine the East African coast. Historians have traditionally used medieval texts that describe slave exports from Africa to the Middle East to date the birth of the Swahili culture to the eighth and ninth centuries, when Persians and Arabs arrived on the East African coast. However the preliminary results of an unpublished genetic study suggests that these foreigners were only a small portion of the population, while the majority overwhelmingly came from an African lineage.

Ryan Raaum, a biologist at Lehman College in New York City, sampled 150 men in 13 individual coastal communities and examined their X and Y chromosomes as well as their genome-wide DNA. Only half of the paternal genes resembled those found amongst Arabs and Iranians, and even fewer of the maternal genes appeared foreign. The genome-wide data are also primarily African. Raaum is currently sequencing entire genomes in order to create a clearer representation of the Swahili population, which undoubtedly sprang up much earlier than scholars previously believed.

Studies of the plants and animals that were introduced to East Africa also demonstrate the early reach of Indian Ocean trade. Archaeobotanical finds have shown that cultivation of crops such as rice began in this region around 800 CE, whereas these foods did not spread inland until much later. The same is true of animals such as cats, chickens, and rats. This evidence not only suggests that East Africa's inhabitants turned more toward the Indian Ocean for trade, rather than the interior of their own continent, but that this maritime trade spanned three continents two centuries before Marco Polo made his famous journey.

This system would have dominated Indian Ocean trade until the sixteenth century CE, when both European and Chinese fleets began sailing around the Middle East and Africa in an effort to bypass the land merchants. It was finally the Europeans who came to dominate the coasts and carve up the waters of the Indian Ocean, eliminating the historic trade network.

While reviewing all of this material, we must understand the relationships we are looking at. James Lankton of University College London has explained that "this is not about the materials, but about the links formed by people."

Centuries and even millennia before Europeans colonised Africa and the southern coasts of Asia, millions of people interacted through their regionalised labour structure to provide an entire range of societies with food, tools, jewelry, raw materials, domesticated animals, and ideas. These connections linked workforces across vast continents and even across treacherous oceans.

Archaeologists have only uncovered the very pinnacle of a vast iceberg of prehistoric knowledge concerning a complex interconnection of societies, not only in Africa, Europe, and Asia, but also in the New World.