WA shipwreck reveals secrets of 17th -century Dutch seafaring domination

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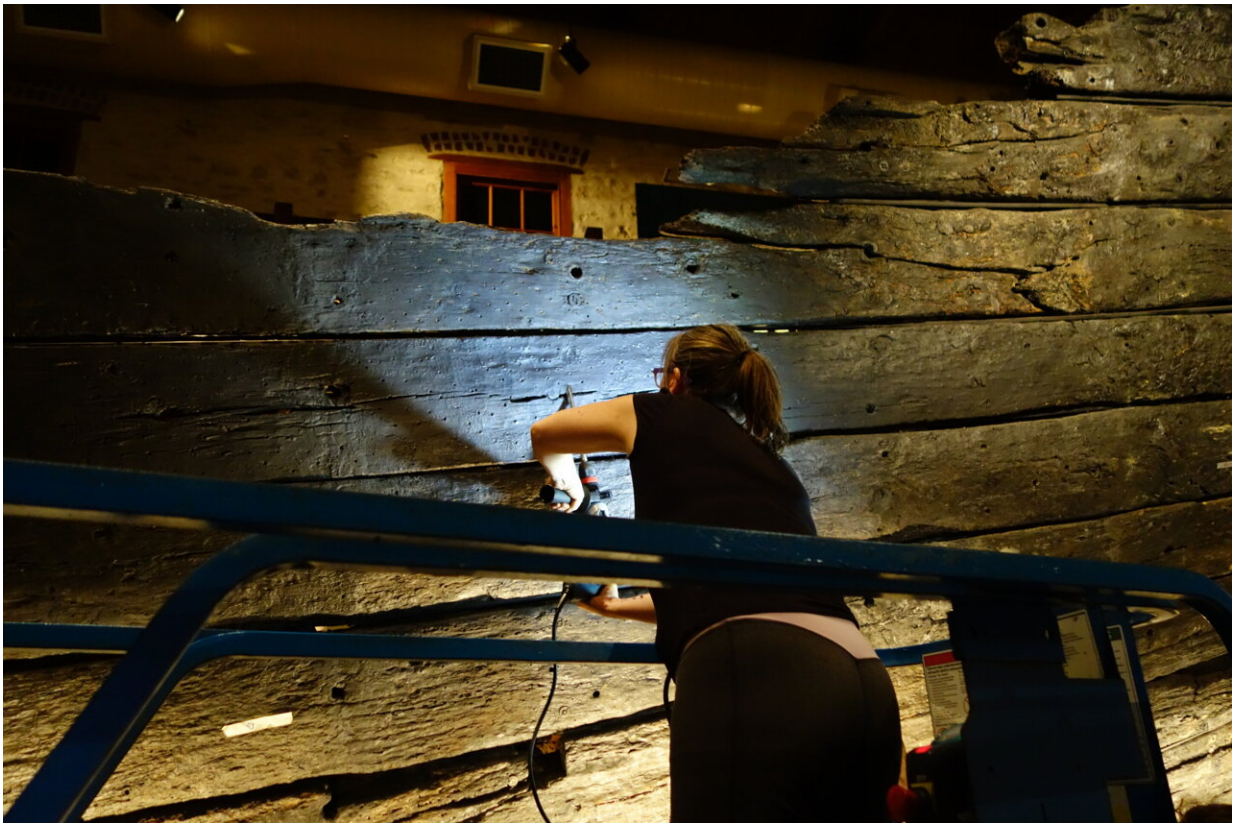


Aoife Daly extracting a tree-ring sample from the Batavia ship's hull planking in strake 14. Credit: W. van Duivenvoorde

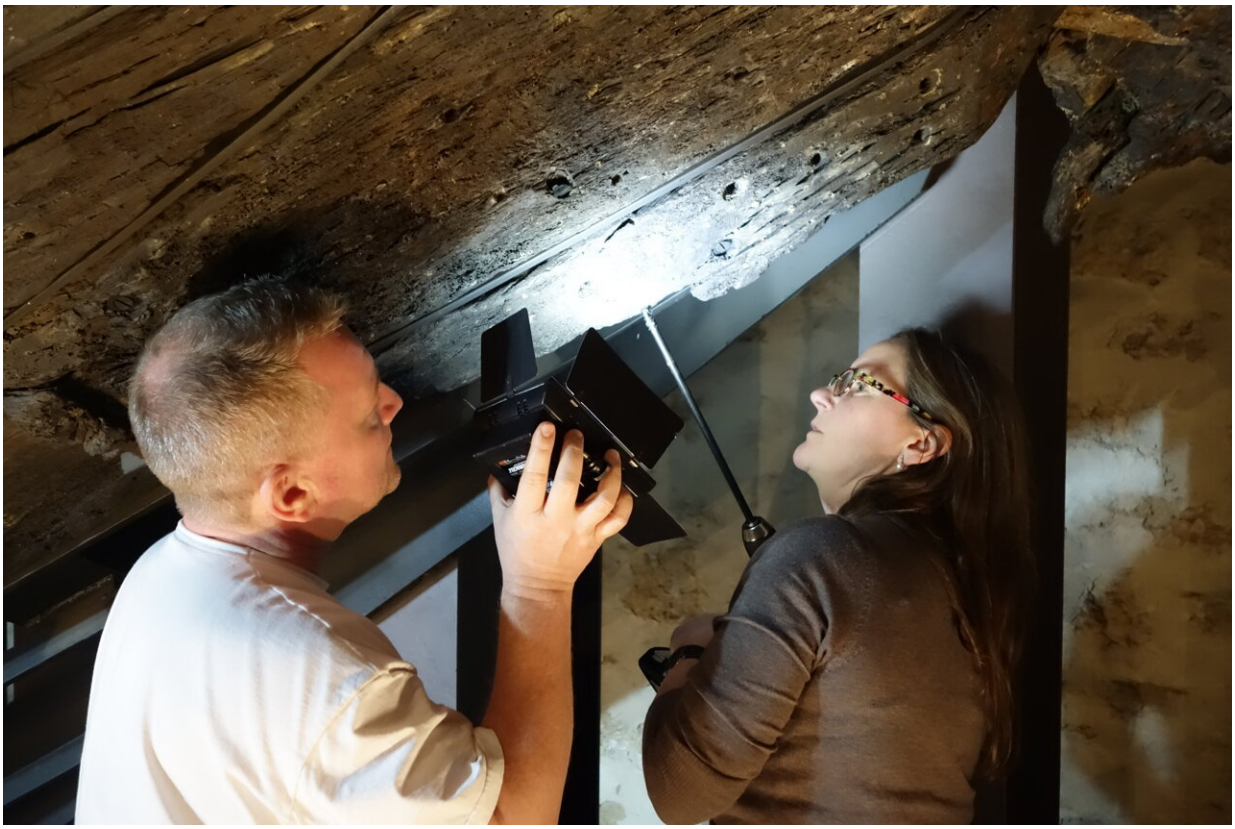
Many Dutch ships passed the West Australian coast while enroute to Southeast Asia in the 1600s—and the national heritage listed shipwreck,

Batavia, has revealed through its timbers the history of the shipbuilding materials that enabled Dutch East India Company (VOC) to flourish against major European rivals for the first time.

Built in Amsterdam in 1626-1628 and wrecked on its maiden voyage in June 1629 on Morning Reef off Beacon Island (Houtman Abrolhos Archipelago), *Batavia* epitomises Dutch East India (VOC) shipbuilding at its finest in a Golden Age, experts reveal in a study led by Flinders University archaeologist Associate Professor Wendy van Duivenvoorde with co-authors, Associate Professor and ERC grantee Aoife Daly at the University of Copenhagen and Marta Domínguez-Delmás, Research Associate and VENI Fellow at the University of Amsterdam.

"The use of wind-powered sawmills became common place in the Dutch republic towards the mid-17th century, allowing the Dutch to produce unprecedented numbers of ocean-going ships for long-distance voyaging and interregional trade in Asia, but how did they organise the supply of such an intensive shipbuilding activity? The Dutch Republic and its hinterland certainly lacked domestic resources" says Wendy van Duivenvoorde.

In-depth sampling of *Batavia*'s hull timbers for dendrochronological research, published in open-access journal PLOS ONE, offers a piece of the puzzle of early Dutch 17th century shipbuilding and global seafaring that was still missing.



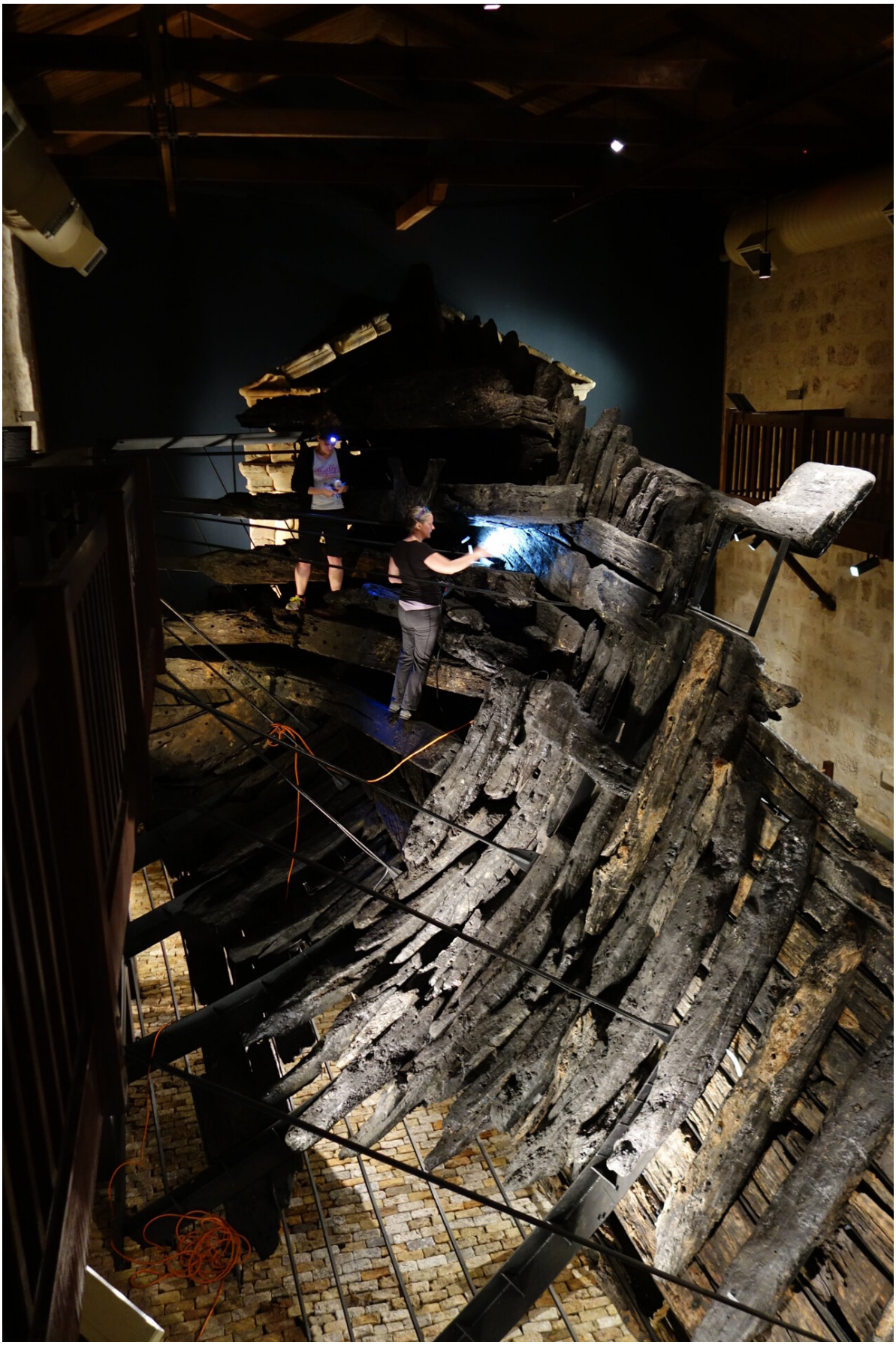
Aoife Daly extracting a dendrochronology or tree-ring sample from the Batavia ship's transom planking with a 16 mm diameter dry-wood borer driven by a power-drill. Credit: Wendy van Duivenvoorde

In the 17th century, the VOC grew to become the first multinational trading enterprise, prompting the rise of the stock market and modern capitalism. During this century, a total of 706 ships were built on the VOC shipyards in the Dutch Republic and 75 of these were shipwrecked and 23 captured by enemy forces or pirates.

However, little is understood about the timber materials that enabled the Dutch to build their ocean-going vessels and dominate international trade against competitors in France, Portugal, and continental Europe.

"Oak was the preferred material for shipbuilding in northern and western Europe, and maritime nations struggled to ensure sufficient supplies to meet their needs and sustain their ever-growing fleets. Our results demonstrate that the VOC successfully coped with timber shortages in the early 17th century through diversification of timber sources" explains Marta Domínguez Delmás."

The 1629 Batavia ship remains on display at the Western Australian Shipwrecks Museum in Fremantle. Credit: Patrick E. Baker, Western Australian Museum



Marta Domínguez-Delmás and Aoife Daly working to extract a tree-ring samples from the Batavia ship's transom beams at. Credit: the Western Australian Shipwrecks Museum in Fremantle (Photo: Wendy van Duivenvoorde).

Fortunately, the *Batavia* ship remains were raised in the 1970s and are on display at the Western Australian Shipwrecks Museum in Fremantle.

This allowed archaeologists and dendrochronologists from Flinders University, the University of Amsterdam, and University of Copenhagen to undertake the sampling and analysis of the hull timbers.

"The preference for specific timber products from selected regions demonstrates that the choice of timber was far from arbitrary. Our results illustrate the variety of timber sources supplying the VOC Amsterdam shipyard in the 1620s and demonstrate the builders' careful timber selection and skilled craftsmanship" says Aoife Daly.

Cross section of oak hull plank from 1629 Batavia ship showing its tree-rings. This sample was extracted from a loose hull plank in 2007 before the research team came up with a much less destructive method of sampling. Credit: Patrick E. Baker, Western Australian Museum

"Our results contribute to the collective knowledge about north European timber trade and illustrate the geographical extent of areas supplying timber for shipbuilding in the Dutch Republic in the 17th century" concludes Wendy van Duivenvoorde.

More information: Aoife Daly et al, Batavia shipwreck timbers reveal a key to Dutch success in 17th-century world trade, *PLOS ONE* (2021). DOI: 10.1371/journal.pone.0259391

Provided by Flinders University