Experiencias de intervención e investigación: buenas prácticas, alianzas y amenazas I

Especialización en Patrimonio Cultural Sumergido
Cohorte 2021

Universidad Externado de Colombia

Filipe Castro

Bogotá, April 2021

história territórios comunidades

CENTRE FOR FUNCTIONAL ECOLOGY
SCIENCE FOR PEOPLE & THE PLANET

INSTITUTO DE HISTÓRIA CONTEMPORÂNEA

FACULDADE DE CIÊNCIAS SOCIAIS E HUMANAS
UNIVERSIDADE NOVA DE LISBOA

INSTITUTO DE ARQUEOLOGIA E PALEOCIÊNCIAS
IAP

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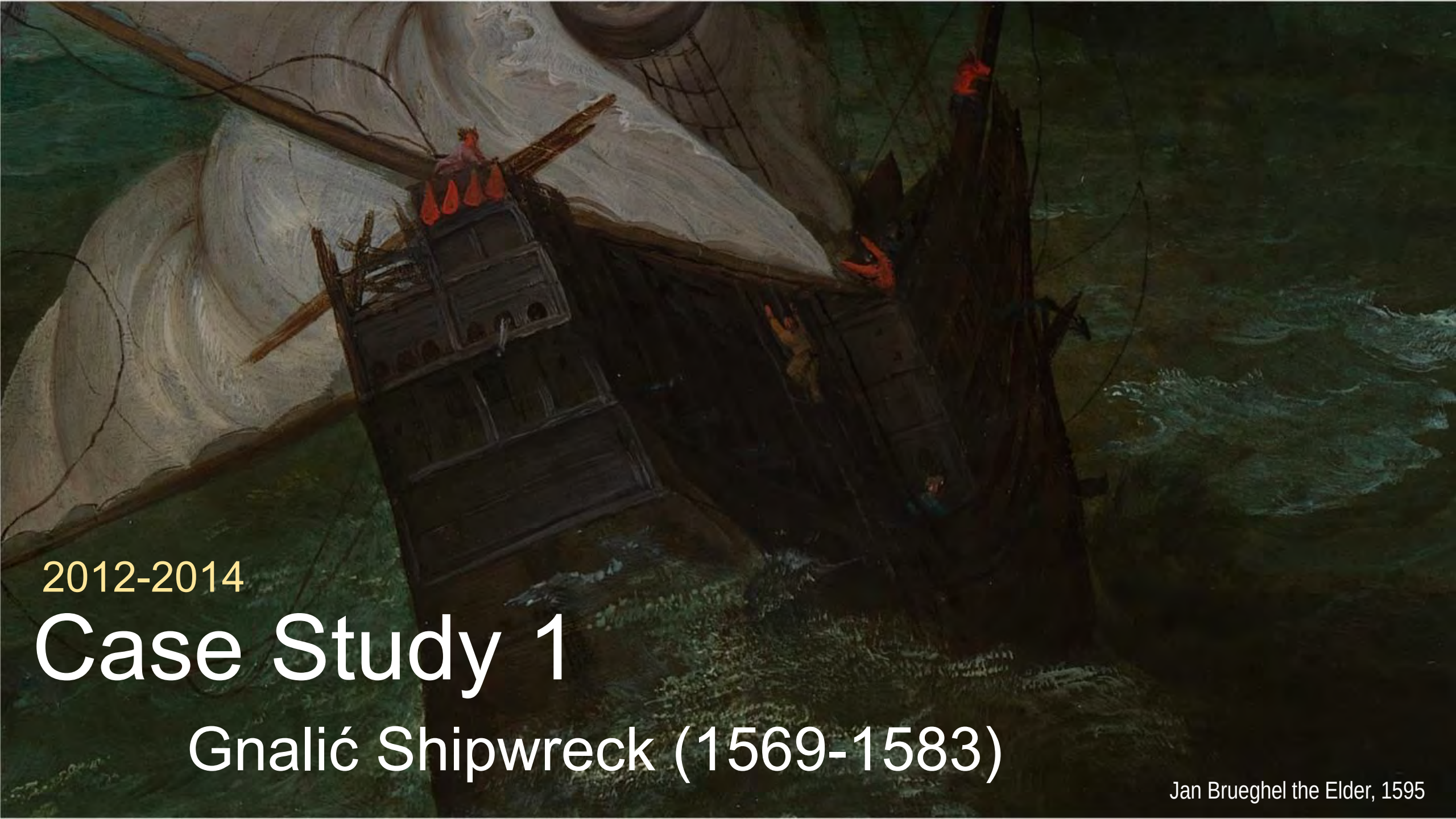
TEXAS A&M UNIVERSITY



2012-2014

Case Study 1

Gnalić Shipwreck (1569-1583)

Jan Brueghel the Elder, 1595

The Gnalić ship was a large cargo ship built in Venice for the merchants Benedetto da Lezze, Piero Basadonna and Lazzaro Mocenigo.

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Suleiman I (1494-1566)
Selim II (1524-1574
Murad III (1546-1595)
Mehmed III (1566-1603)

It was launched in 1569 and rated at 1,000 *botti*, a capacity equivalent to around 629 t, which corresponds to a length overall close to 40 m (Bondioli and Nicolardi 2012).

Early in 1570, the Gnalić ship transported troops to Cyprus (which fell to the Ottomans in July).

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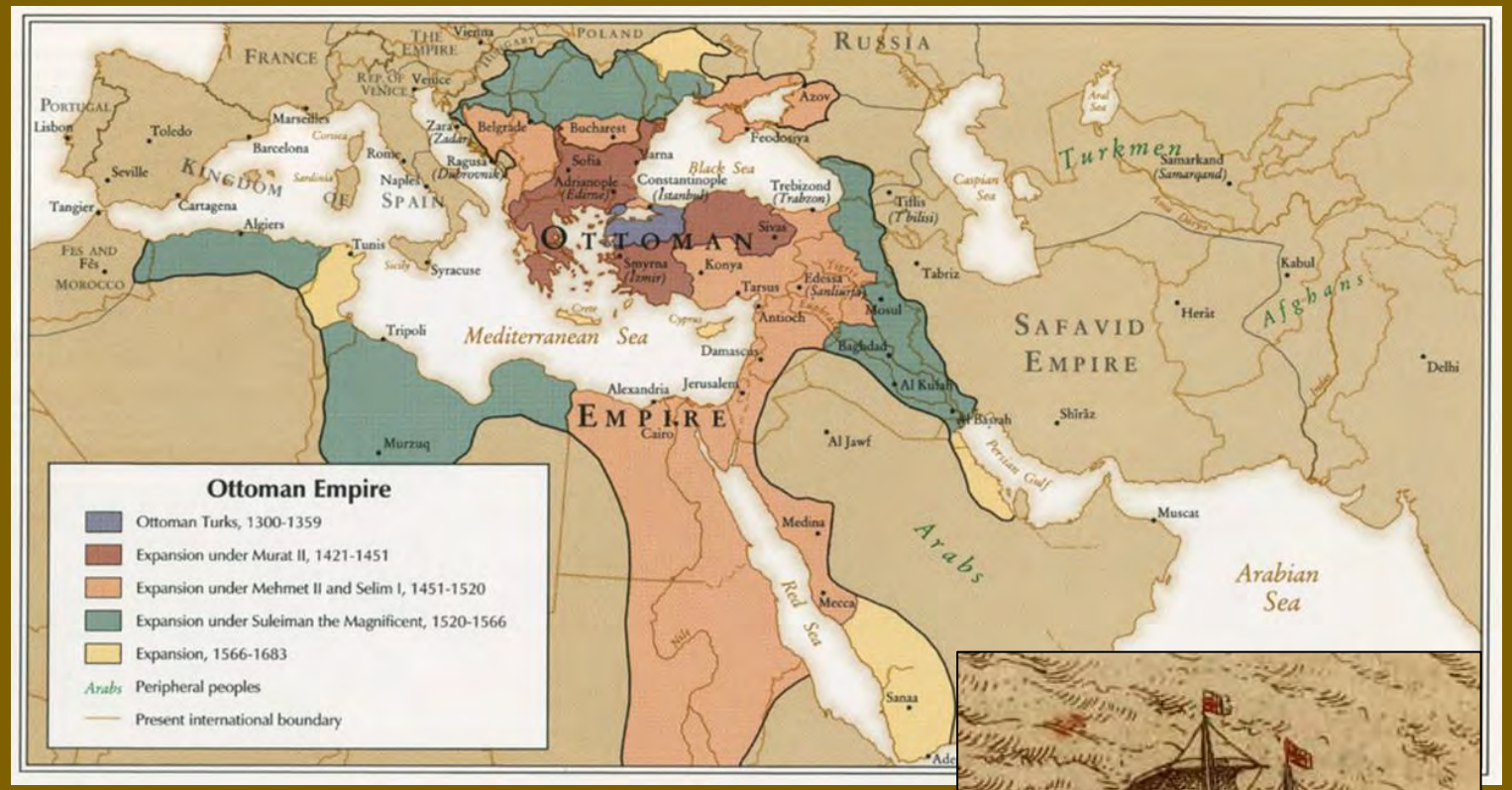
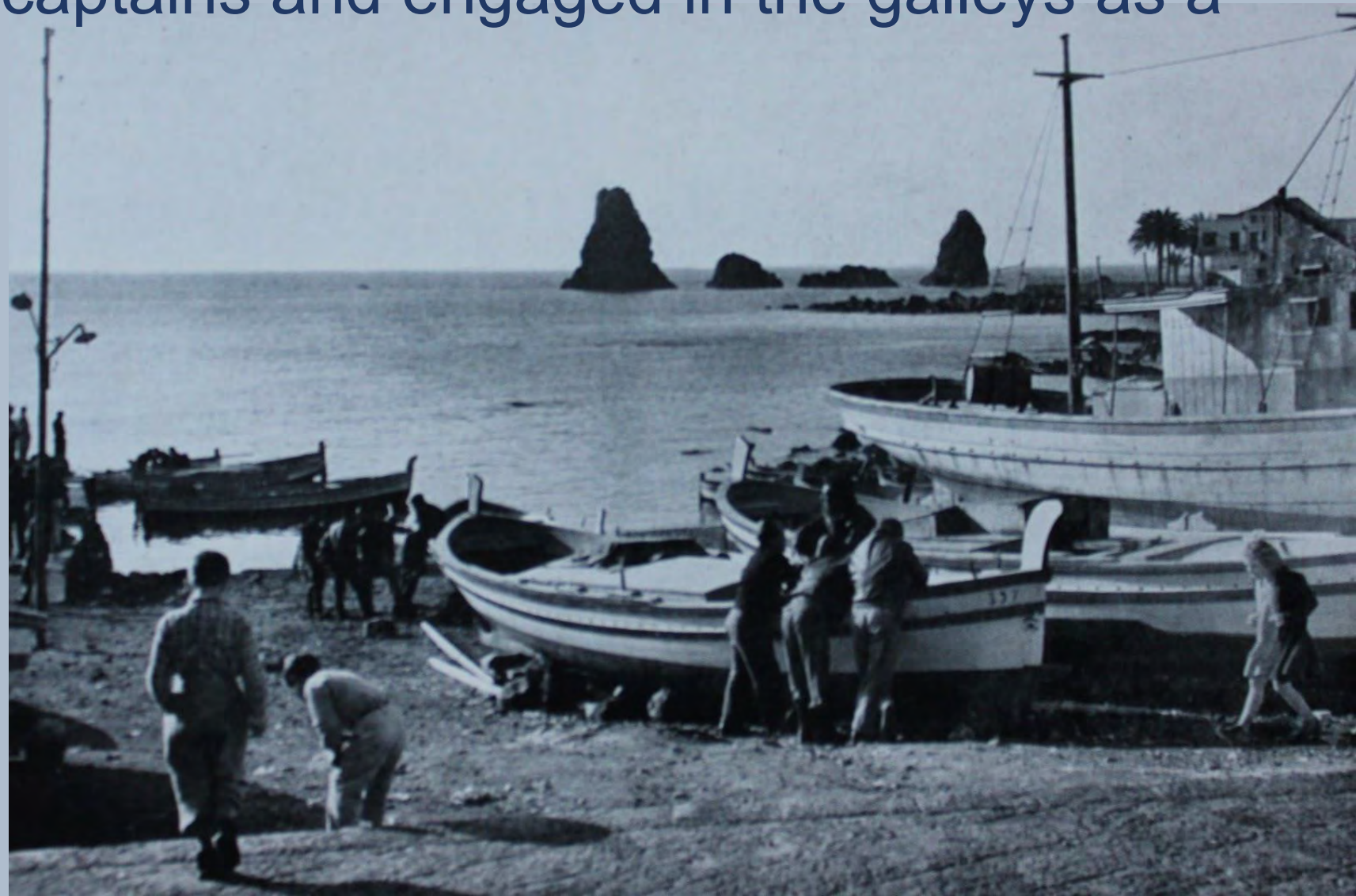
War of Cyprus (1570-1573): in spite of losing the Battle of Lepanto (Oct 7 1571), Sultan Selim II won Cyprus, a large ransom, and a part of Dalmatia.

In 1571 the Gnalić ship fell into Ottoman hands.



Sultan Selim II (1566-1574), son of Suleiman the Magnificent, expanded the Ottoman Empire and won the War of Cyprus (1570-1573).

Giovanni Dionigi Galeni was born in Calabria, southern Italy, in 1519. In 1536 he was captured by one of Barbarossa Hayreddin Pasha's captains and engaged in the galleys as a slave.



In 1541 Giovanni Galeni converted to Islam and became a corsair. His skills and leadership capacity eventually made him Bey of Algiers and later Grand Admiral in the Ottoman fleet, with the name Uluç Ali Reis. He died in 1587.

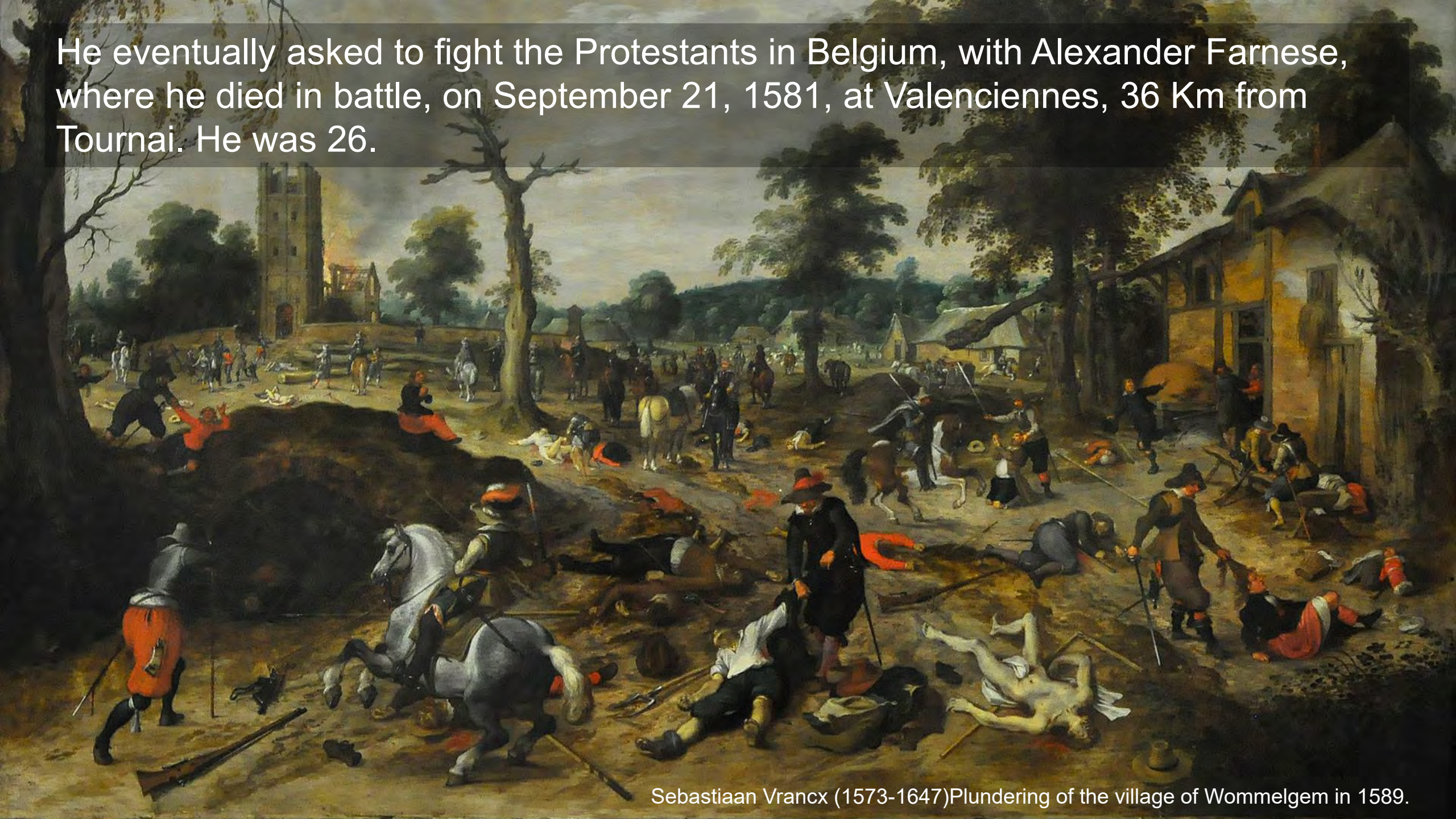
In late July 1571 Uluç Ali encountered a large armed merchantman near Corfu: it was the *Moceniga, Leze, & Basadonna*, captained by Giovanni Tomaso Costanzo (1554-1581), a 16 years old Venetian *condottiere* (captain of a mercenary army), descendent from a famous 14th century *condottiere* named Iacomo Spadainfaccia Costanzo, and from Francesco Donato, who was Doge of Venice from 1545 to 1553.

Uluç Ali captured the ship and imprisoned Giovanni Tomaso Costanzo.

Costanzo was circumcised but refused to convert to Islam and was imprisoned in the Black Sea for four years.

Giovanni Costanzo was held prisoner until 1574, when he was exchanged against Ottoman prisoners and given a captaincy of a fortress at Corfu.

He eventually asked to fight the Protestants in Belgium, with Alexander Farnese, where he died in battle, on September 21, 1581, at Valenciennes, 36 Km from Tournai. He was 26.



Sebastiaan Vrancx (1573-1647)Plundering of the village of Wommelgem in 1589.

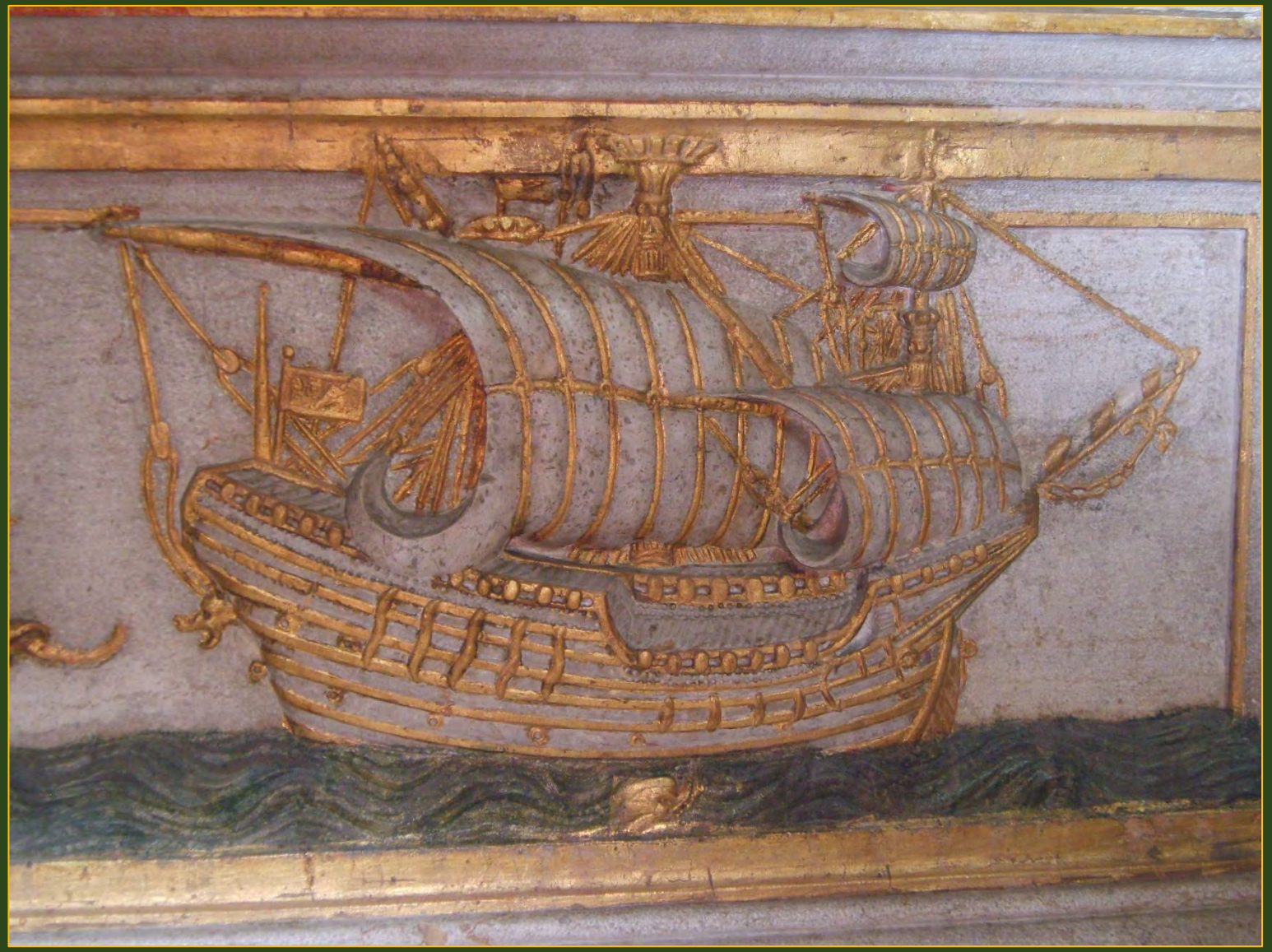
Coat of Arms of the Costanzo family

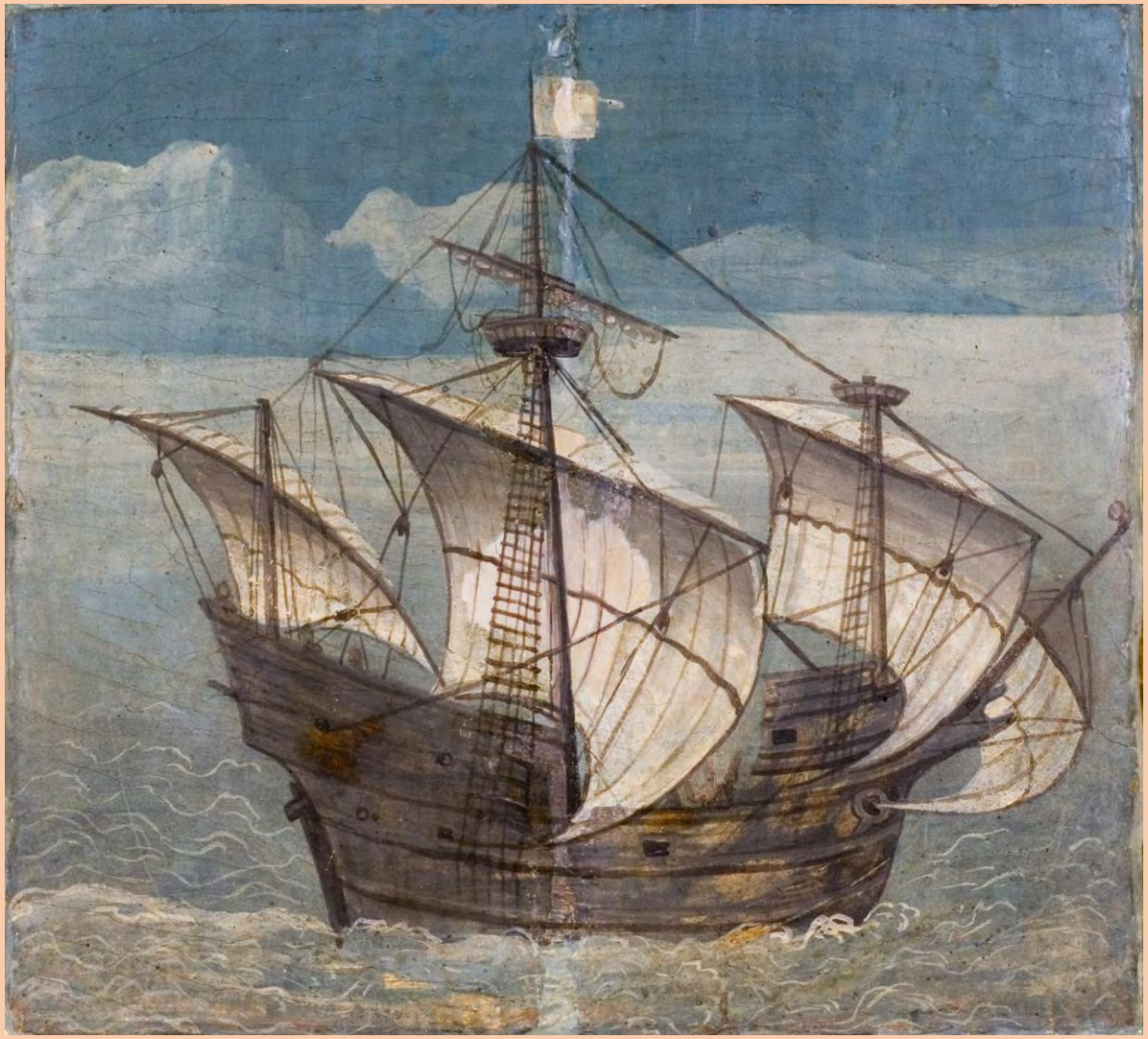
Giovanni Costanzo was buried in the basilica pontificia di Sant'Antonio (de Lisboa) in Padova.

Torquato Tasso (1544-1595), the author of *La Gerusalemme liberata* (1580) wrote an elegy to Giovanni Tomaso Costanzo.

Two months later, on October 7, Uluç Ali joined the Ottoman forces in the Battle of Lepanto.

We have no information about the life of the *Moceniga, Leze, & Basadonna* from 1571 to 1581.

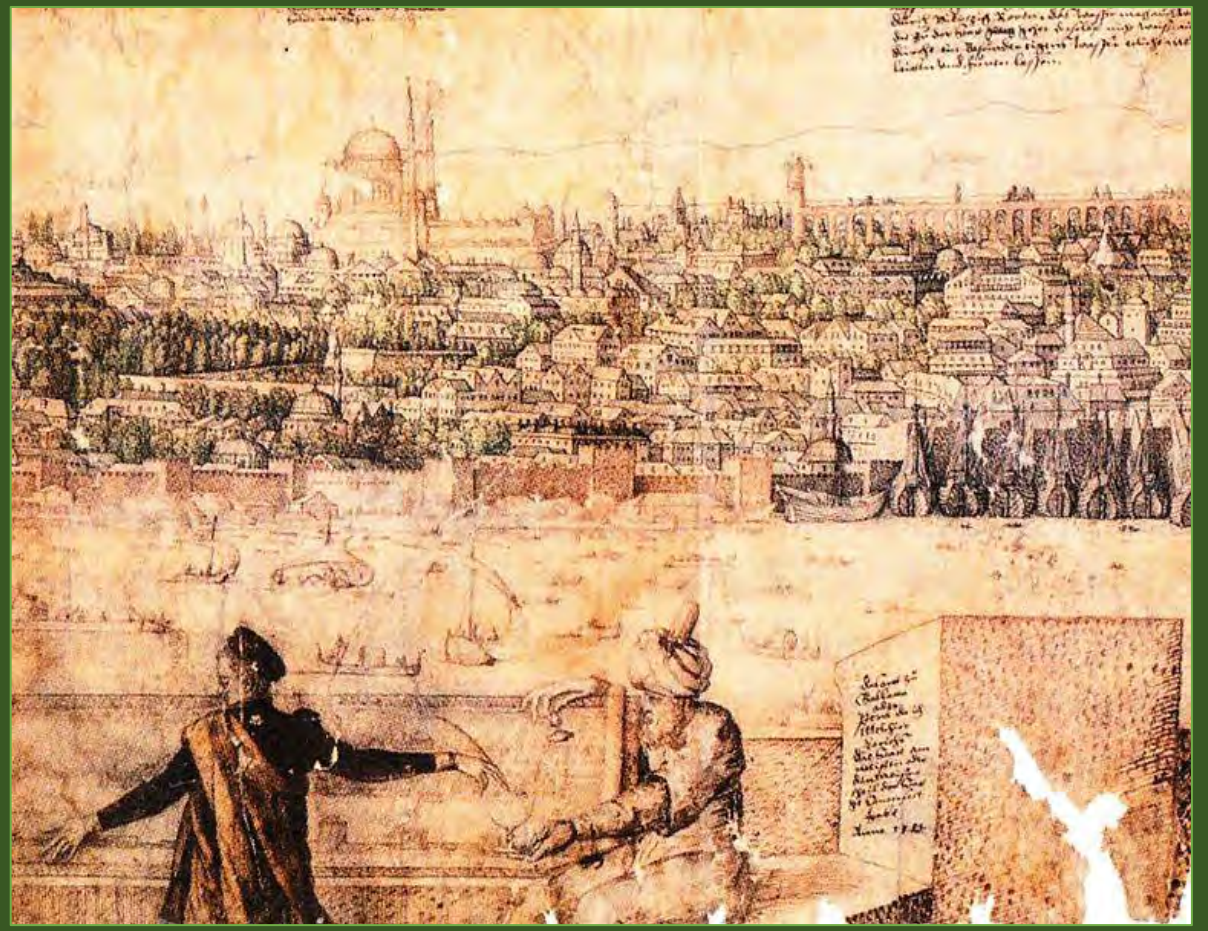




We do not have a proper iconographic study of the late 16th century Italian merchant ships…

Ten years later, in 1581, the old Ottoman merchant ship was sold in Constantinople to an Italian merchant named Odoardo da Gagliano.

The Gagliano family is believed to have been originally from Ragusa. Sometime during the 16th century Antonio da Gagliano settled in Pera, the European merchant section of Constantinople.



Melchior Lorck (c. 1526-a. 1583)

His son Benedetto remained in Pera, while his other son Domenico moved to Venice.

Melchior Lorck (c. 1526-a. 1583) – View of Constantinople over the roof tops.

Odoardo, the buyer of the ship, was Benedetto's son and lived in Pera, while his brother Domenico joined his uncle with the same name in Venice.

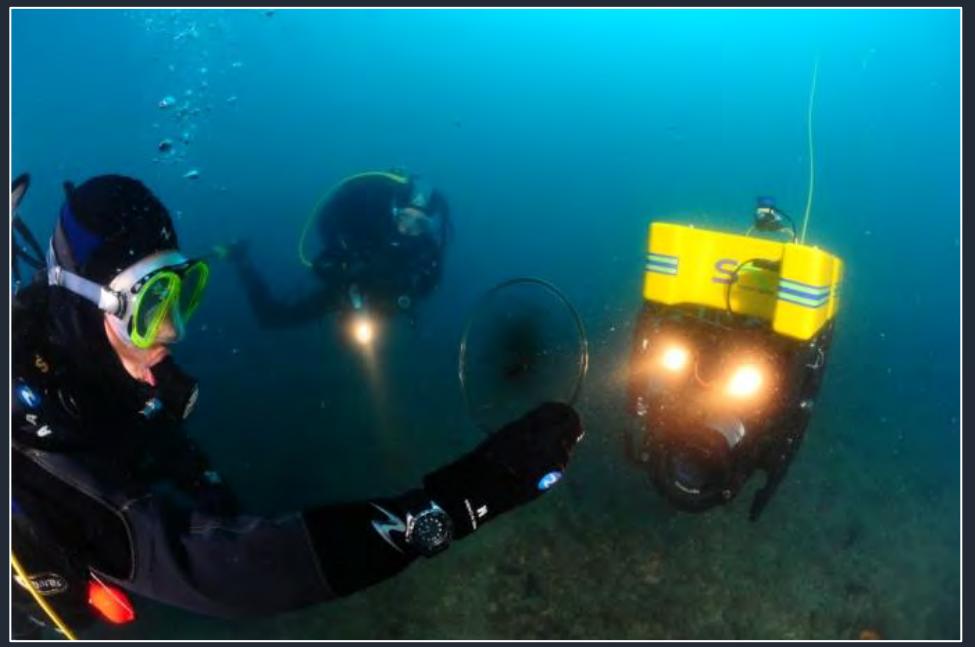
Odoardo probably gave a name to this ship, but we only know it from its nickname: *Gagliana grossa*.

Italian costumes, c. 1580

Venice, 1580

Following a fire in the Topkapi Palace, early in 1583 Sultan Murad III (1574-1595), the powerful Ottoman ruler, son of Selim II, ordered a consignment of 5,000 round windowpanes from Venice, to rebuild a part of the harem quarters, damaged by the fire.

Man at a Window, 1653
Samuel van Hoogstraten, 1627-1678

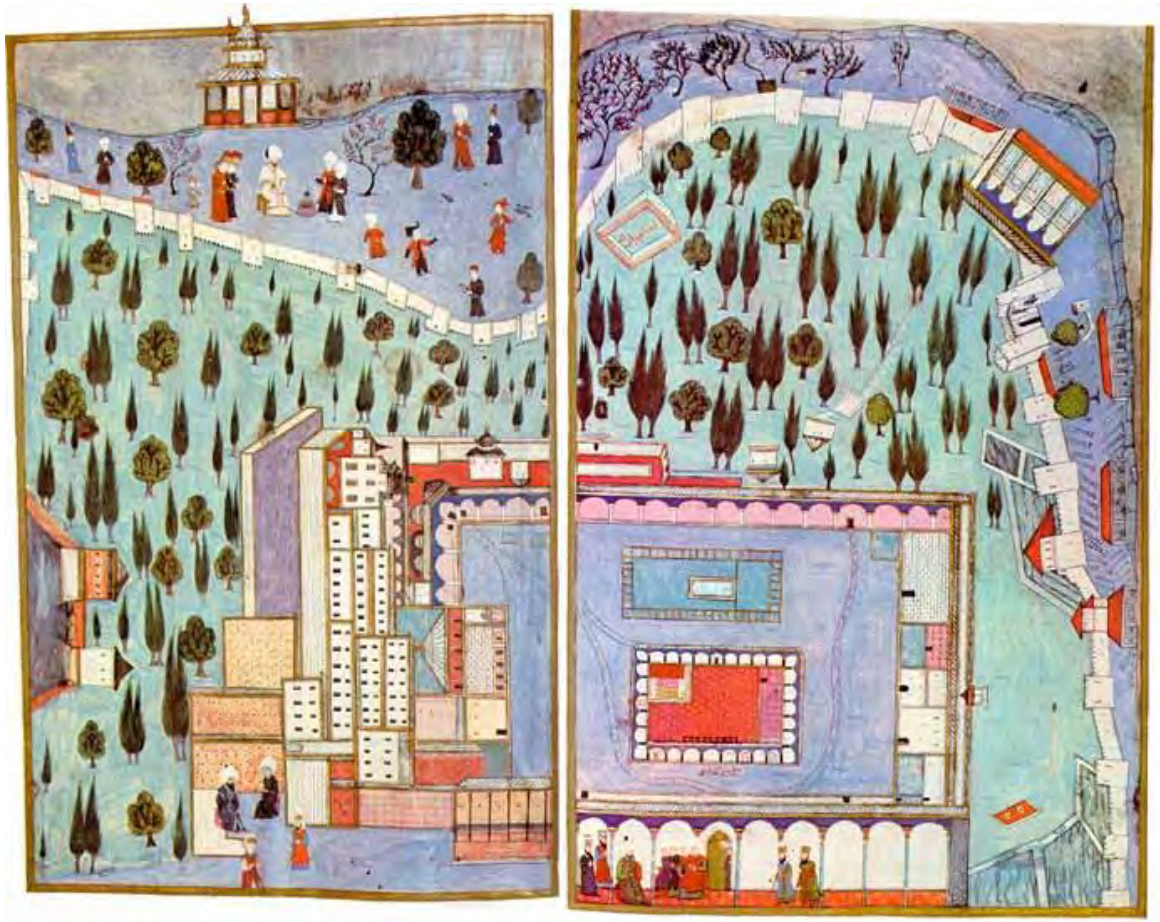


The merchantman *Gagliana grossa* was selected by the Venetian senate to carry the cargo between Venice and Constantinople.

As it was the practice, a number of other merchandises were loaded on this large ship during the months of August through October.

Jan Brueghel the Elder, 1596

Historians found an international group of merchants involved in this trip, such as a Portuguese named Zorzi Lopes Vas, three Greeks, named Nicolò Studognoti, Dimitri Colauro and Antonio Platipodi, and five Italians: Giovanni di Battista, Giovanni and Stefano di Silvestri, Tranquillo Coletti and Battista della Bella.



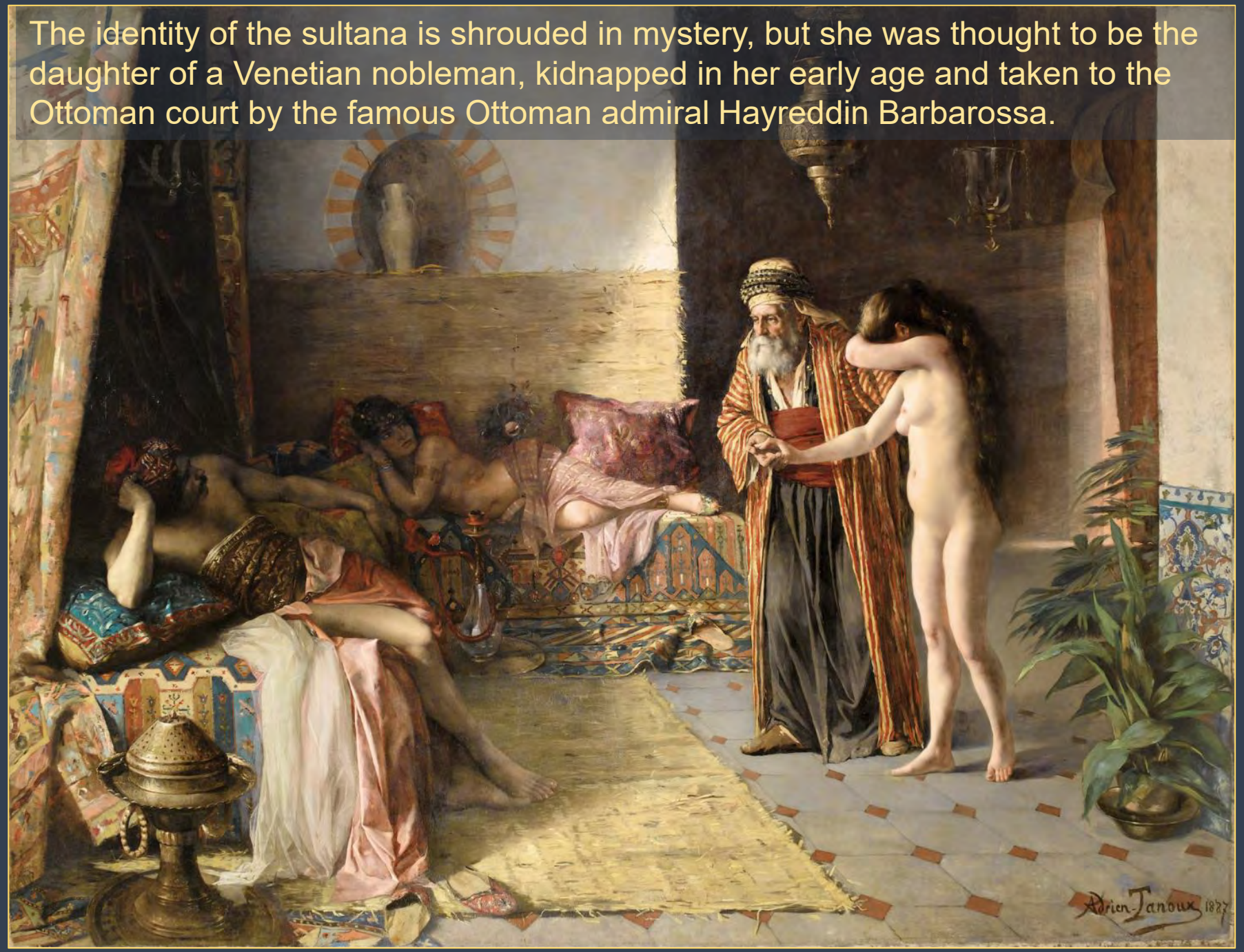
A Flemish merchant of named Wilhelm Helman, loaded two valuable packages on the ship: a small iron chest containing jewels and a sealed linen roll.

A group of Venetian noblemen sent three bales of the finest silk to the sultan's mother, Nūr Bānū, co-ruler of the Ottoman Empire during the last nine years of her life (1574-1583).

Barbarossa fleet in Tolon, 1543

Barbarossa Hayreddin Pasha (1478-1546)

The identity of the sultana is shrouded in mystery, but she was thought to be the daughter of a Venetian nobleman, kidnapped in her early age and taken to the Ottoman court by the famous Ottoman admiral Hayreddin Barbarossa.



Loaded and carrying all the permits necessary for the voyage, *Gagliana grossa* left Venice for Constantinople in the last days of October 1583, a few weeks before the winter ban on sailing, which according to Venetian law started November 15 and ended on January 20.

The ship's captain was Alvise Finardo and the clerk Šimun Fazanić.

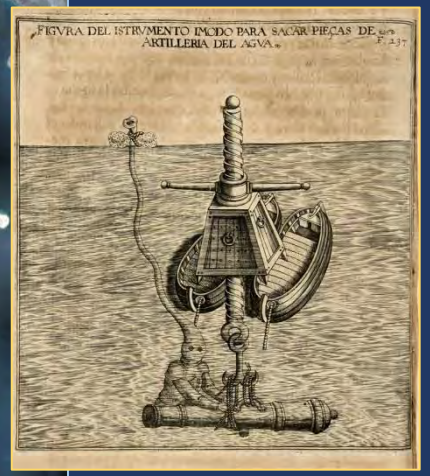
In 16th century Venice ships had religious names but were generally referred to by their nicknames, derived from their owner's names: when it was launched, in 1569, the Gnalić ship was known as *Moceniga Lezza & Basadona*, and when it was bought by Odoardo da Gagliano, it became known as the *Gagliana grossa*.

Jan Brueghel the Elder, 1595/6

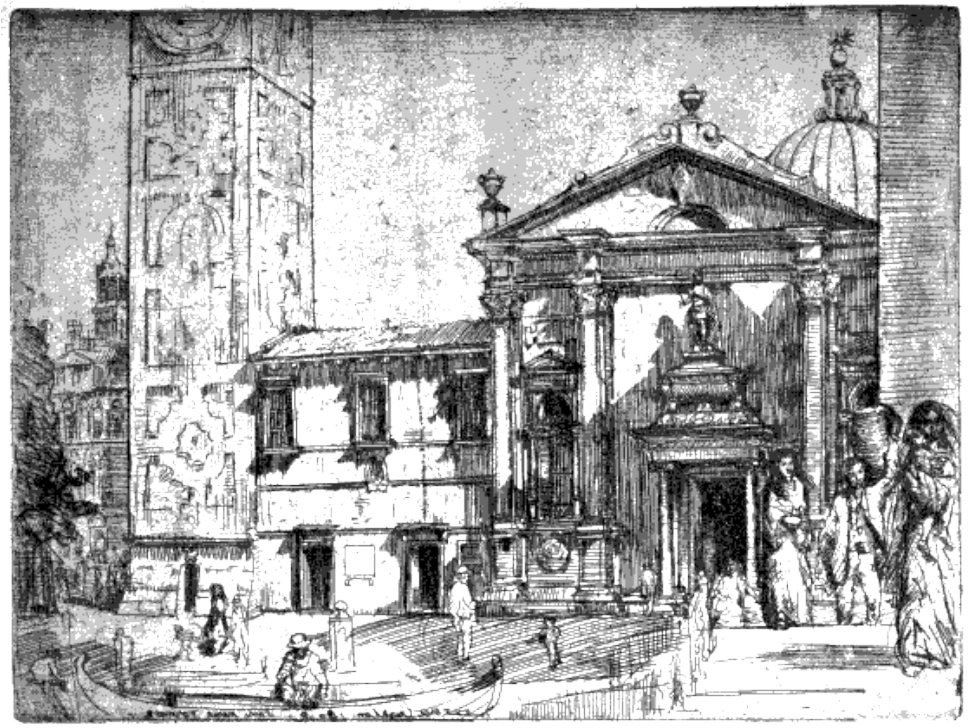
A few weeks later, news of its loss reached Venice. It sunk near the little Islet of Gnalić, not far from Zara Vecchia, today Biograd na Moru.


Gnalić is a small rocky islet situated at the entrance of the Pašman channel, on the Dalmatian coast, about around 17 nautical miles to the south of Zadar, in Croatia.

A party of salvagers was sent in December, under the direction of a certain Manolo ‘Fregata’ originally from Crete. By January he had retrieved the two volumes with jewels sent by Willem Helman to Constantinople, and on January 7 the senate approved the deployment of a galley or a *fusta* to protect the goods, probably piled up on the island.



Willem Helman's packages were brought to Venice and opened before a notary. They contained pearls, diamonds, and emeralds, both mounted and uncut, and appraised at 7,243 ducats, well above the 3,600 ducats for which they were insured.



The Santa Maria Formosa Church in Venice, where the brothers Anton (d. 1582) and Willem (d. 1593) Helman (Hellemans) are buried.

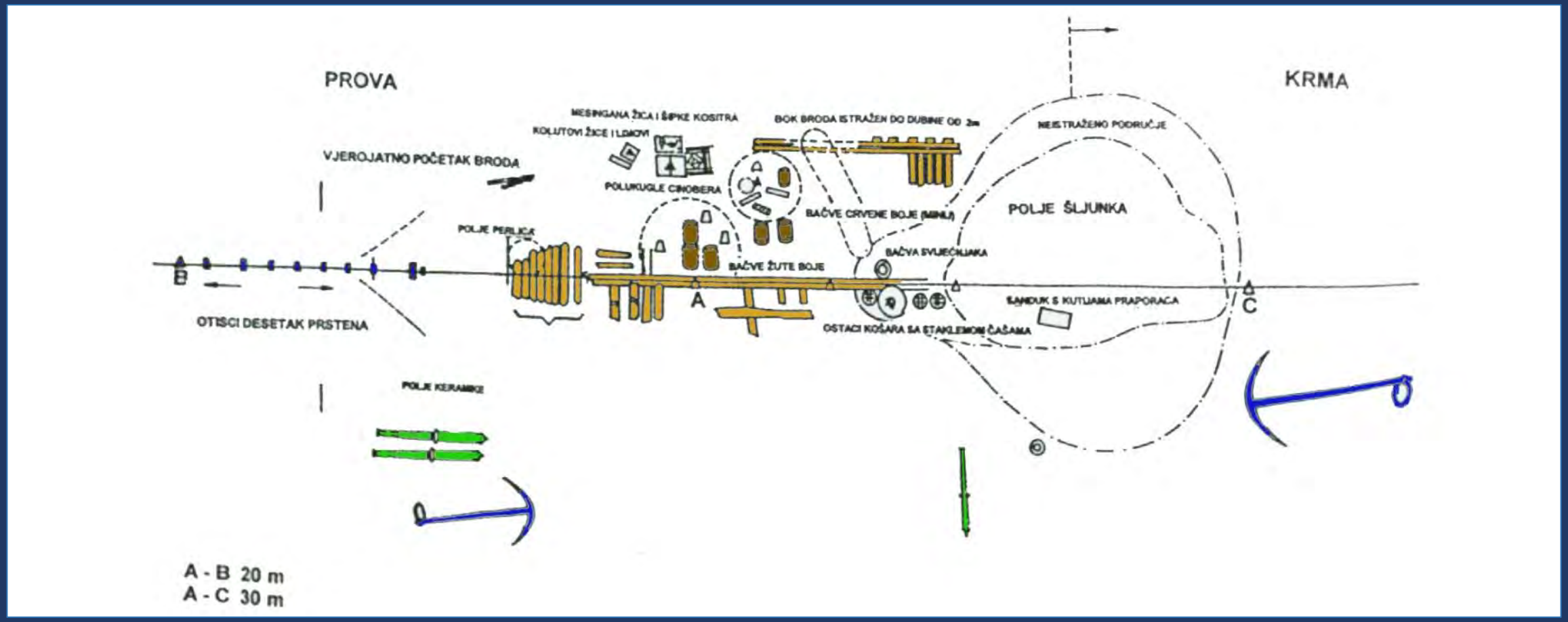
It is probable that the masts stood out of the water after the shipwreck and the event must have been remembered for a few generations, and then forgotten.

It seems to have been discovered by sport divers in the early 1960s, lying at a depth of between 25 to 32 meters.

The site was reported to the authorities by sponge divers in 1967 and was the object of several archaeological interventions since then. The earliest work was carried out by the Organization for the Preservation of Cultural Monuments and the National Museum of Zadar, with the help of divers from the Navy and a local diving club, under the direction of Ksenija Radulić and Sofija and Ivo Petricioli, in the late 1960s and early 1970s.

The site was mapped in 1972 and 1973, and part of its cargo, in particular a large quantity of drinking glasses, was found spread over a large area located to the SW of the shipwreck site (Radulić 1970; Brusić 2006).

In 1996 another archaeological campaign was carried out under the direction of Dr. Zdenko Brusić (1996), entailing the excavation of new trenches to assess the extension of the hull remains, which were found to be significant and preserved to a depth of 1.5 m below the sediment.



A large collection of artifacts was recovered from the Gnalić site over the years, and although some of the artifacts have been salvaged by sport divers, a large collection remains, its interest tied to the amazing story of this ship (Mileusnić 2004, Lazar and Willmott 2006b, Radic-Rossi et al., 2013).

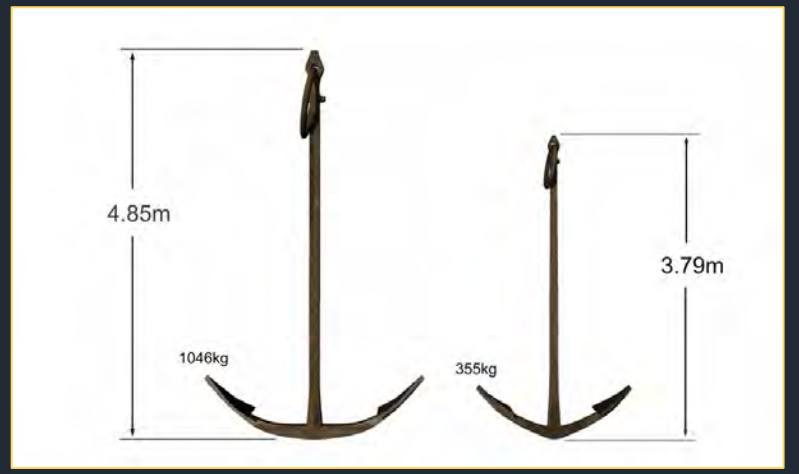


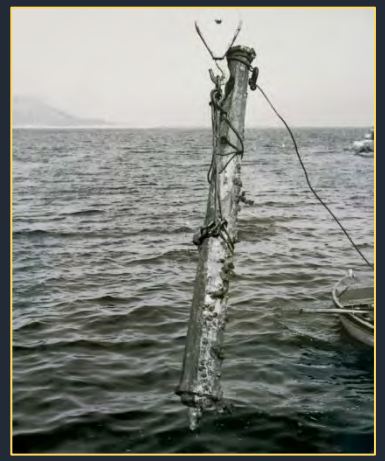


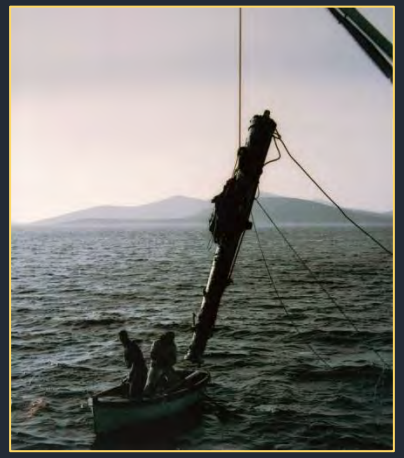




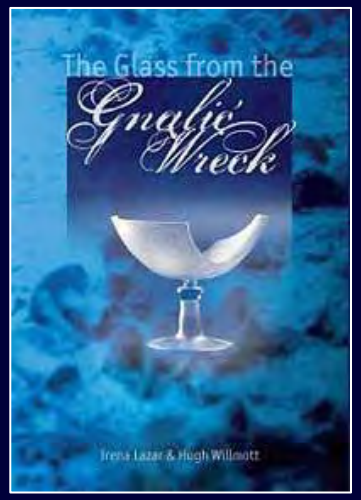
Two anchors and eight bronze guns were retrieved, together with a rich assortment of glass vessels, mirrors, windowpanes, brass chandeliers, silk, cotton shirts, hats, shaving razors, pins, needles, candle snuffers, brass bells, spectacles, and raw materials, such as cinnabar, lead carbonate, mercury, antimony, sulfur, brass wire, and brass sheet. In 1970 a museum was established in Biograd na moru to conserve, store, curate, and exhibit the Gnalić shipwreck material.







The glass collection was studied by Sofija Petricioli (1970b and 1973), Robert Brill (1973), and Irena Lazar and Hugh Willmott (2006a and 2006b).







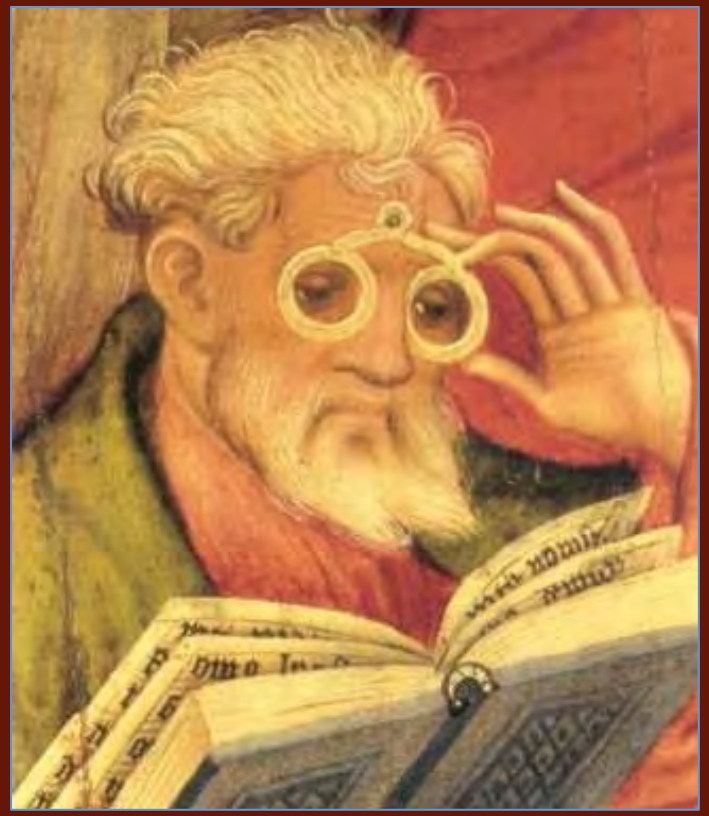









Its importance is unique, as it constitutes a coherent sample of late 16th century Venetian export production. It encompasses a wide variety of forms and a large range of qualities, some of which have parallels in contemporary land excavations in the region (Pešić 2006).



Preliminary studies on some classes of artifacts were published in 2006 by Mitja Guštin, Sauro Gelichi, and Konrad Spindler. The guns, initially studied by Ivo Petricioli (1970) were later studied by Marco Morin (2003 and 2006) and consist of eight pieces of which three seem to be French, three breech loaders are possibly Italian, and two sakers were undoubtedly made in Venice by Giovanni II (Zuan) Alberghetti in 1582.

The ceramics were studied by Zrinca Mileusnić and found to be typical of the late 16th century, probably produced in Venice (Mileusnić 2006).

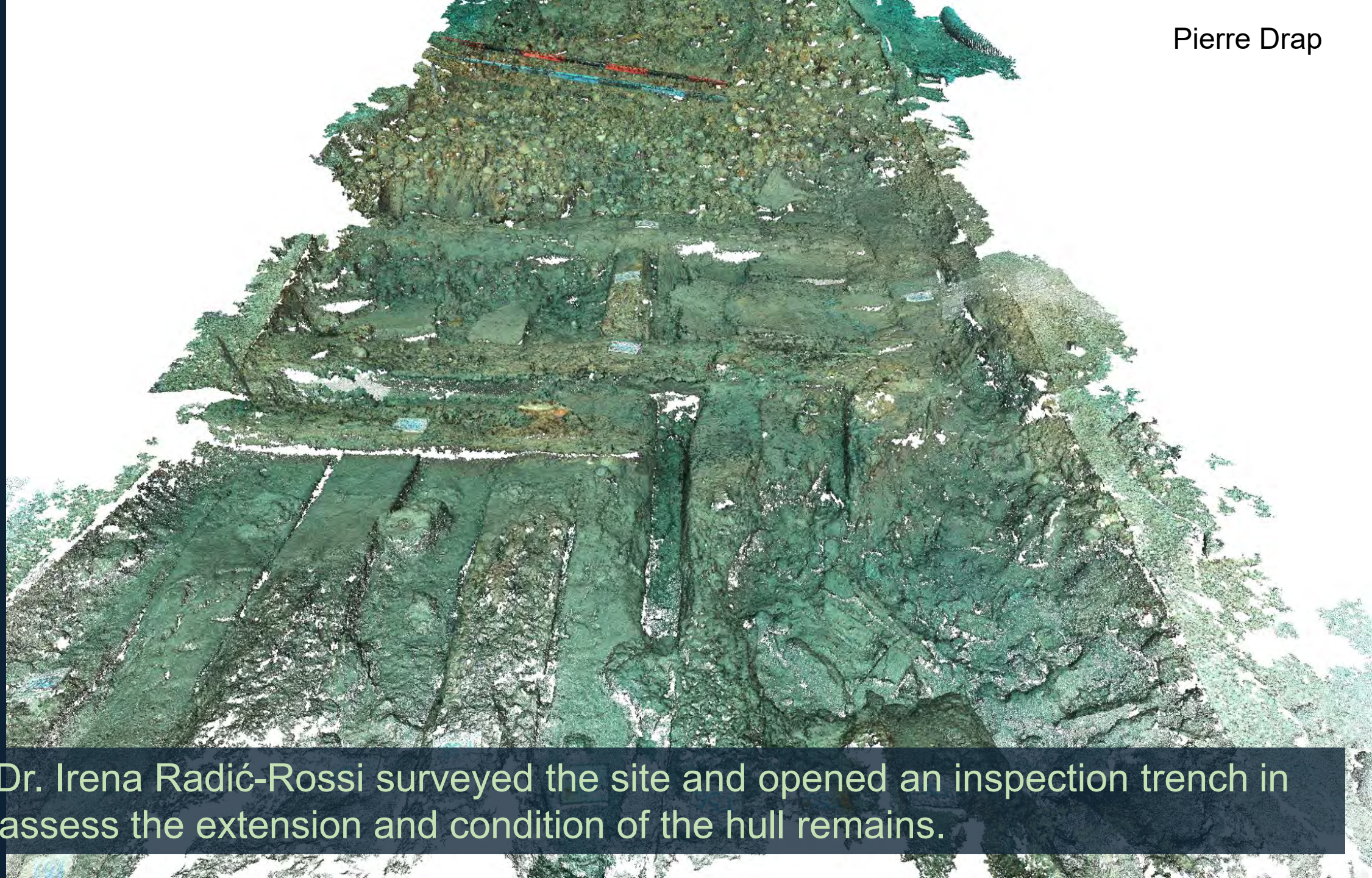
The textiles, including a 54 m long and 62 cm wide roll of damask cloth, were studied by Doretta Poli (2006).

A collection of little hawk bells was studied by Michael Schick (2006).

The brass chandeliers, sconces, and candlesticks were studied by Harald Stadler (2006).

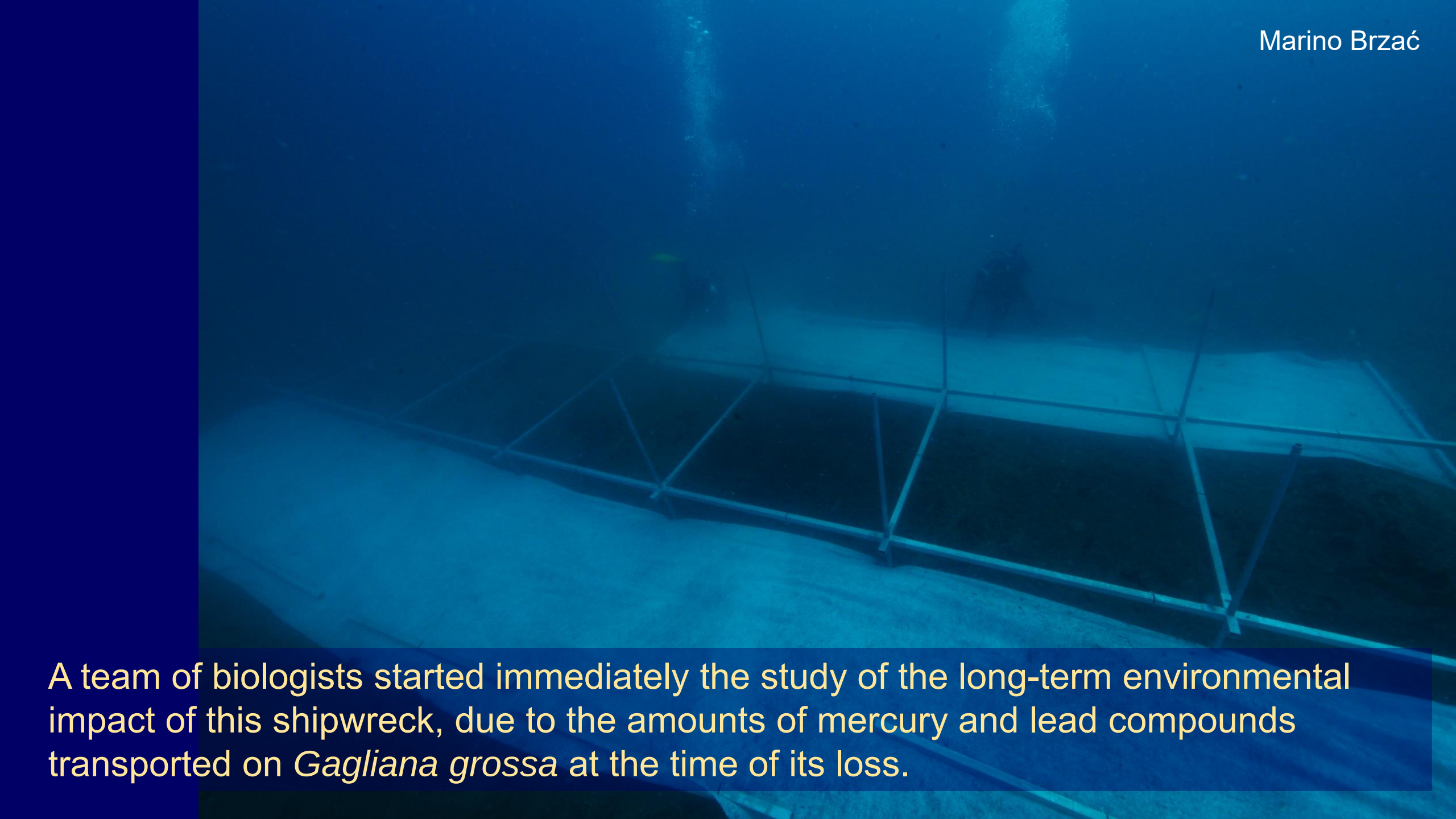
At the time of the shipwreck a similar chandelier was hanging from the ceiling of Emperor Felipe II's office.

A small collection of lead seals was studied by Christian Terzer (2006).



Pierre Drap

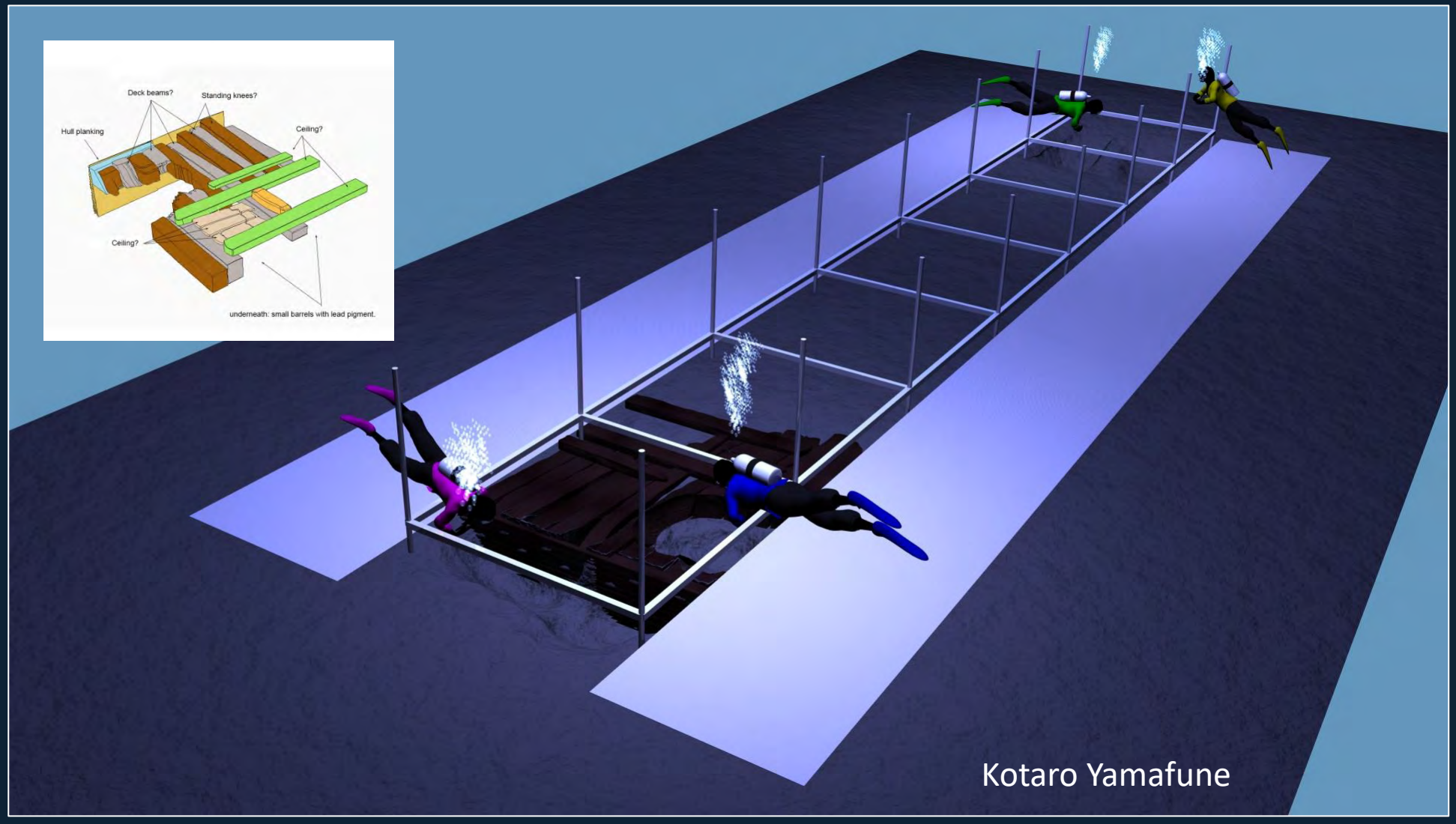
In 2012 Dr. Irena Radić-Rossi surveyed the site and opened an inspection trench in order to assess the extension and condition of the hull remains.



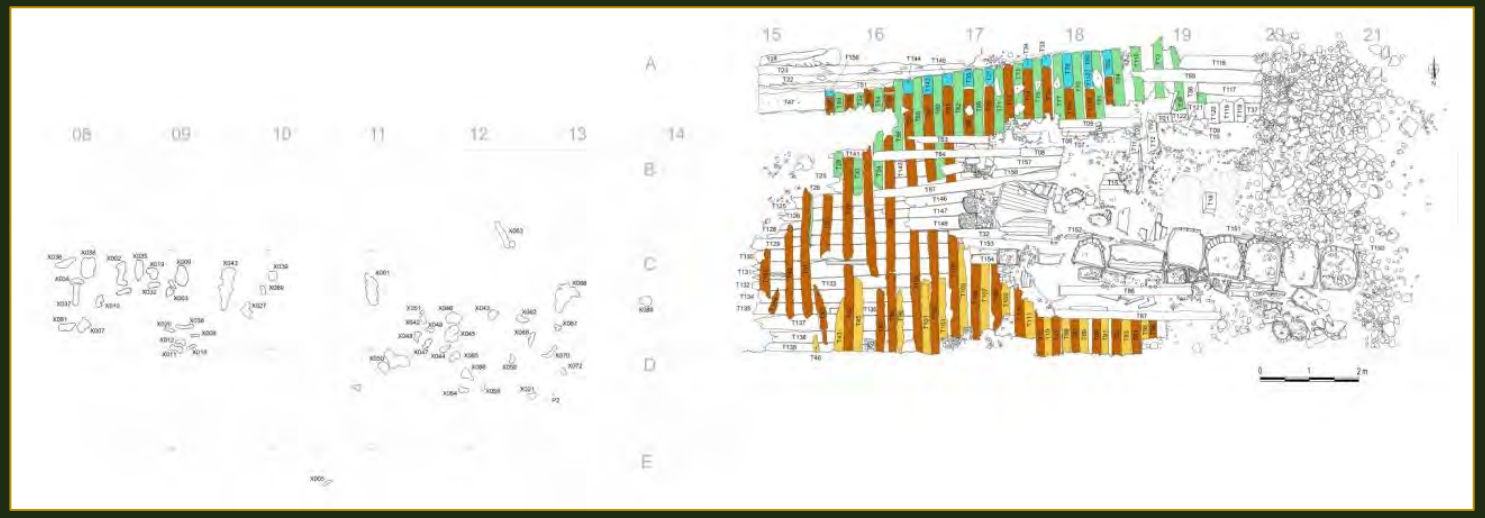
Marino Brzać

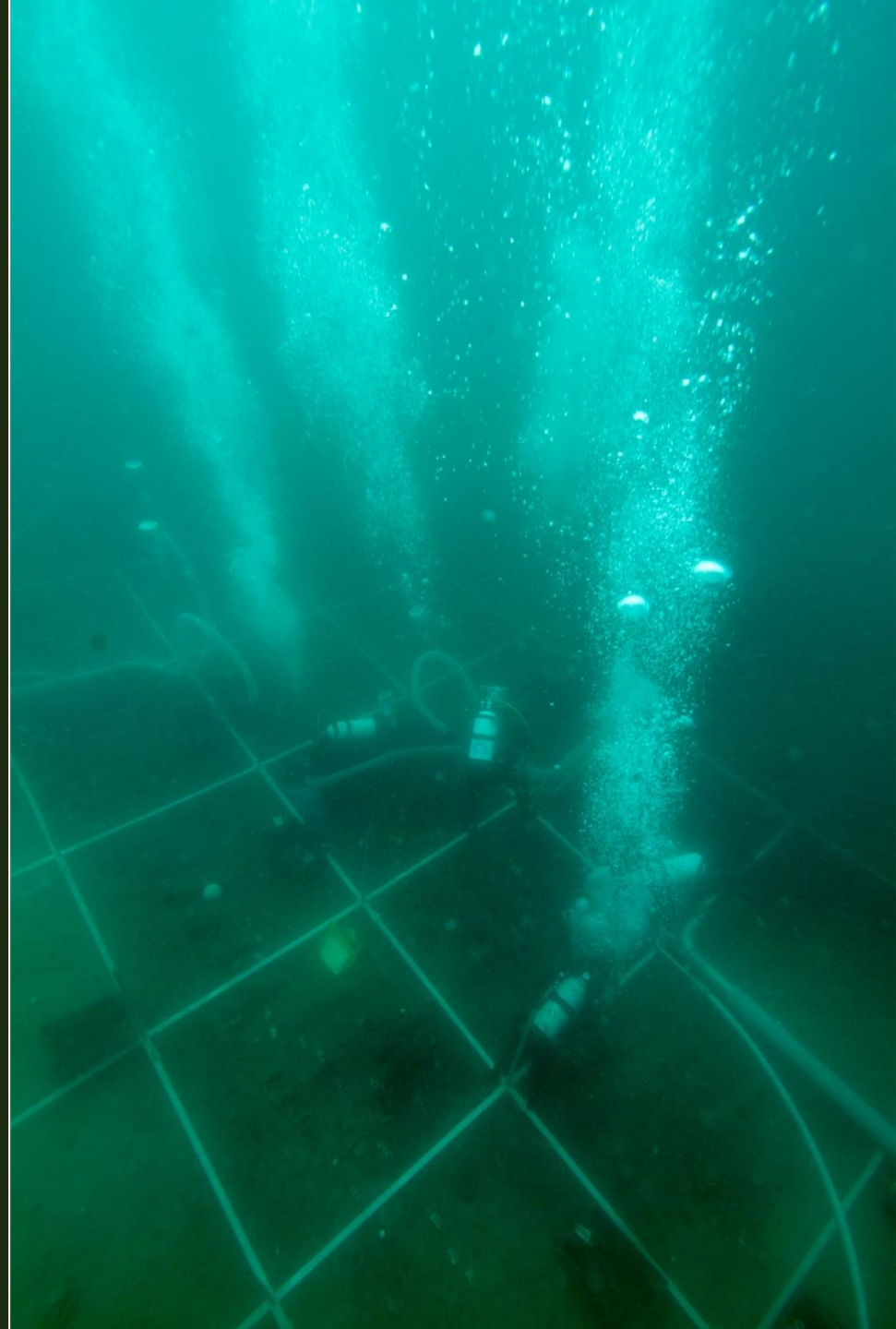
A team of biologists started immediately the study of the long-term environmental impact of this shipwreck, due to the amounts of mercury and lead compounds transported on *Gagliana grossa* at the time of its loss.

A team from the Texas A&M Nautical Archaeology Program was invited to help map the shipwreck timbers and produce a report for later interpretation and reconstruction.

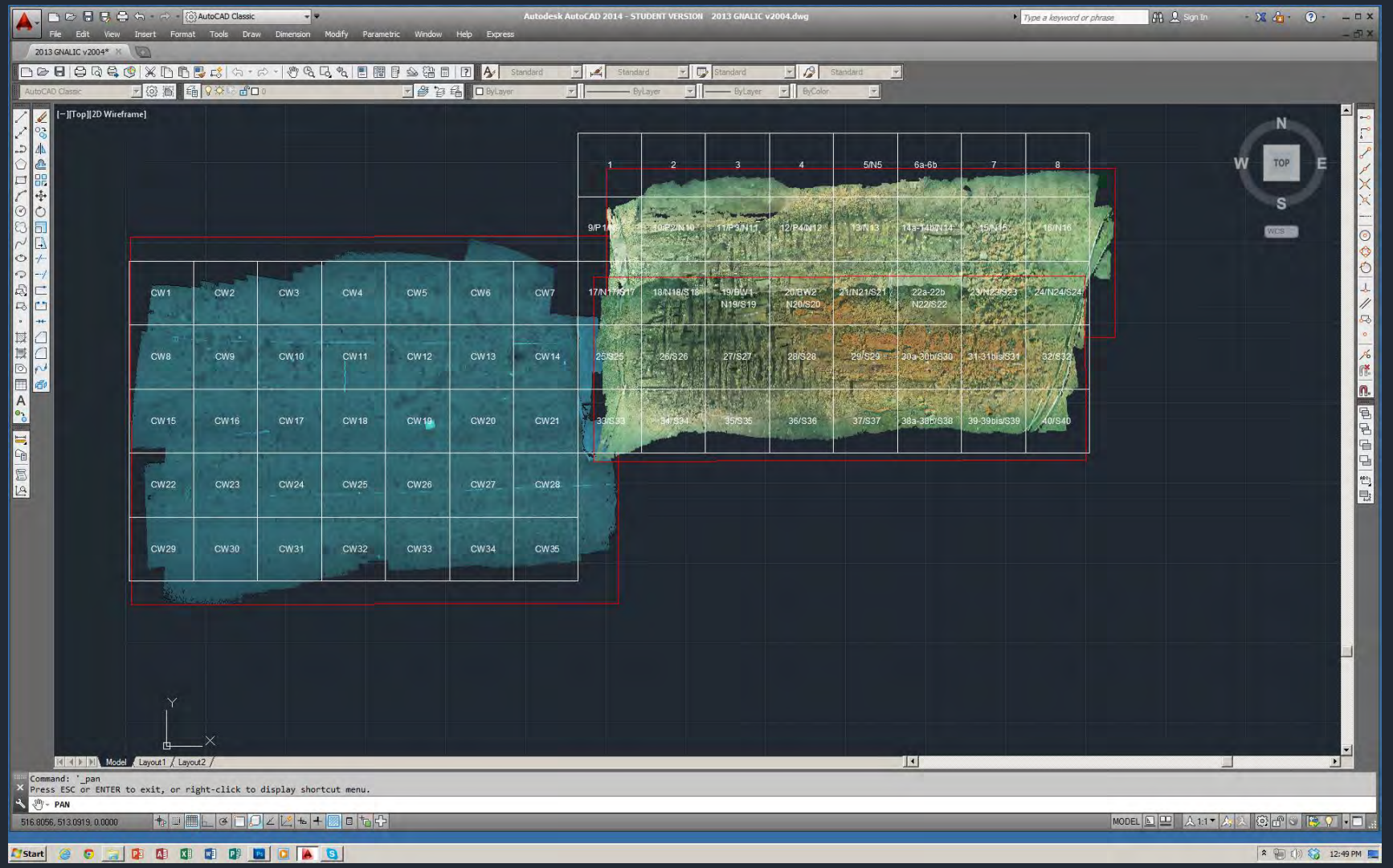


In the summers of 2013 and 2014, an area of 64 square meters was exposed and mapped, showing a portion of the hull remains and the lower layers of the cargo undisturbed.

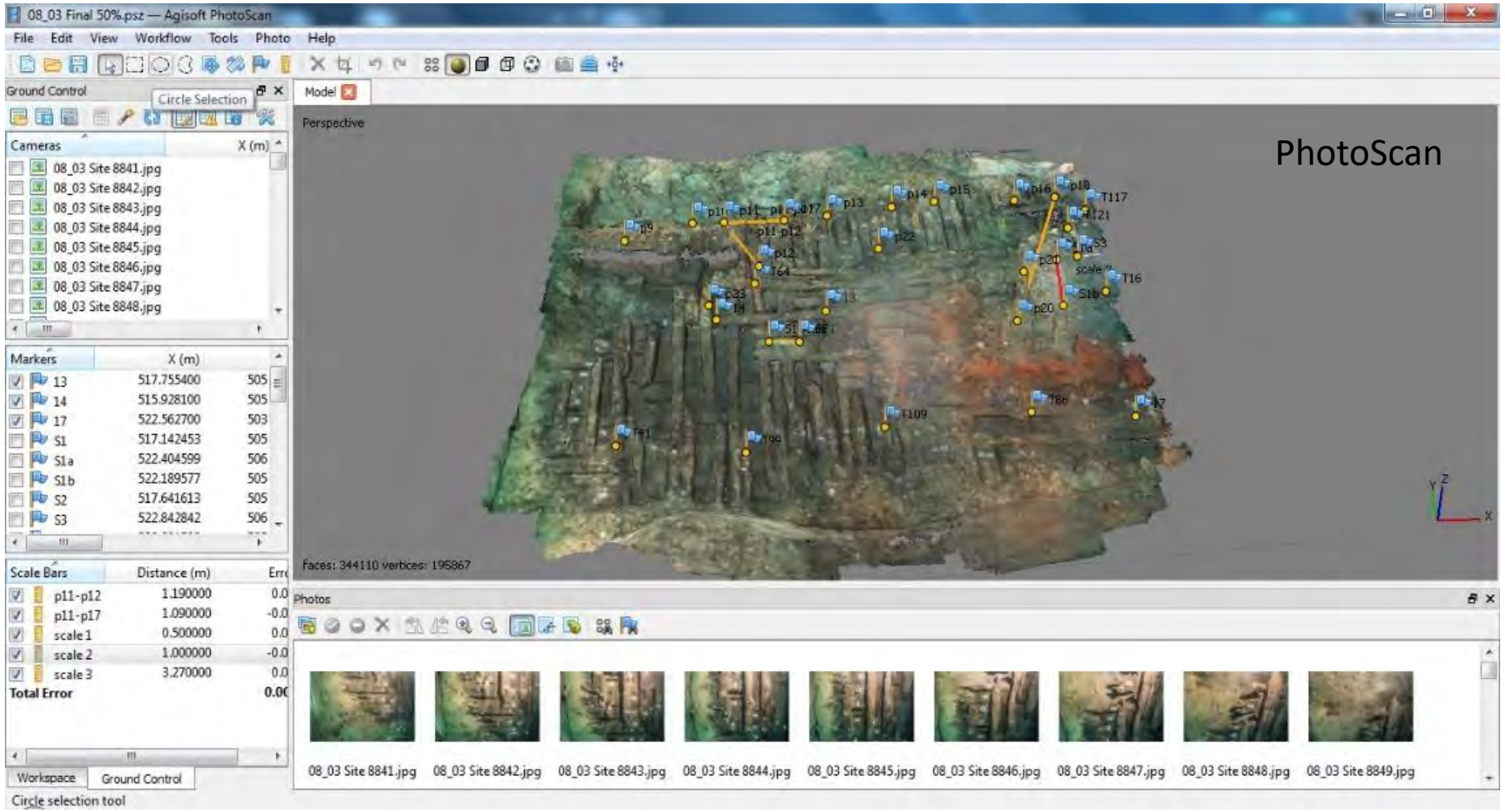




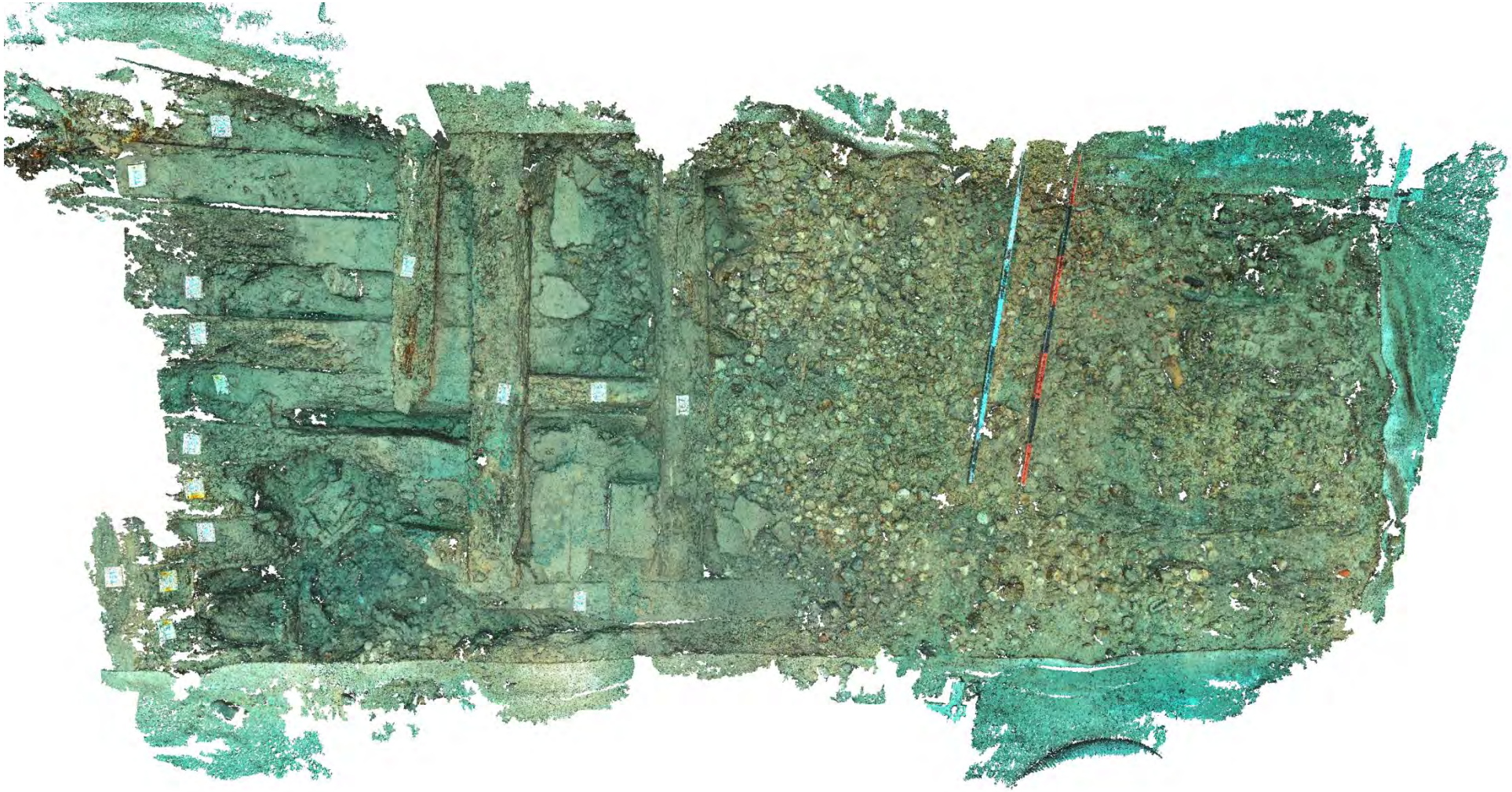
The potential of this shipwreck site is tremendous to allow a better understanding of the large merchantmen that plowed the Mediterranan during the second half of the sixteenth century.



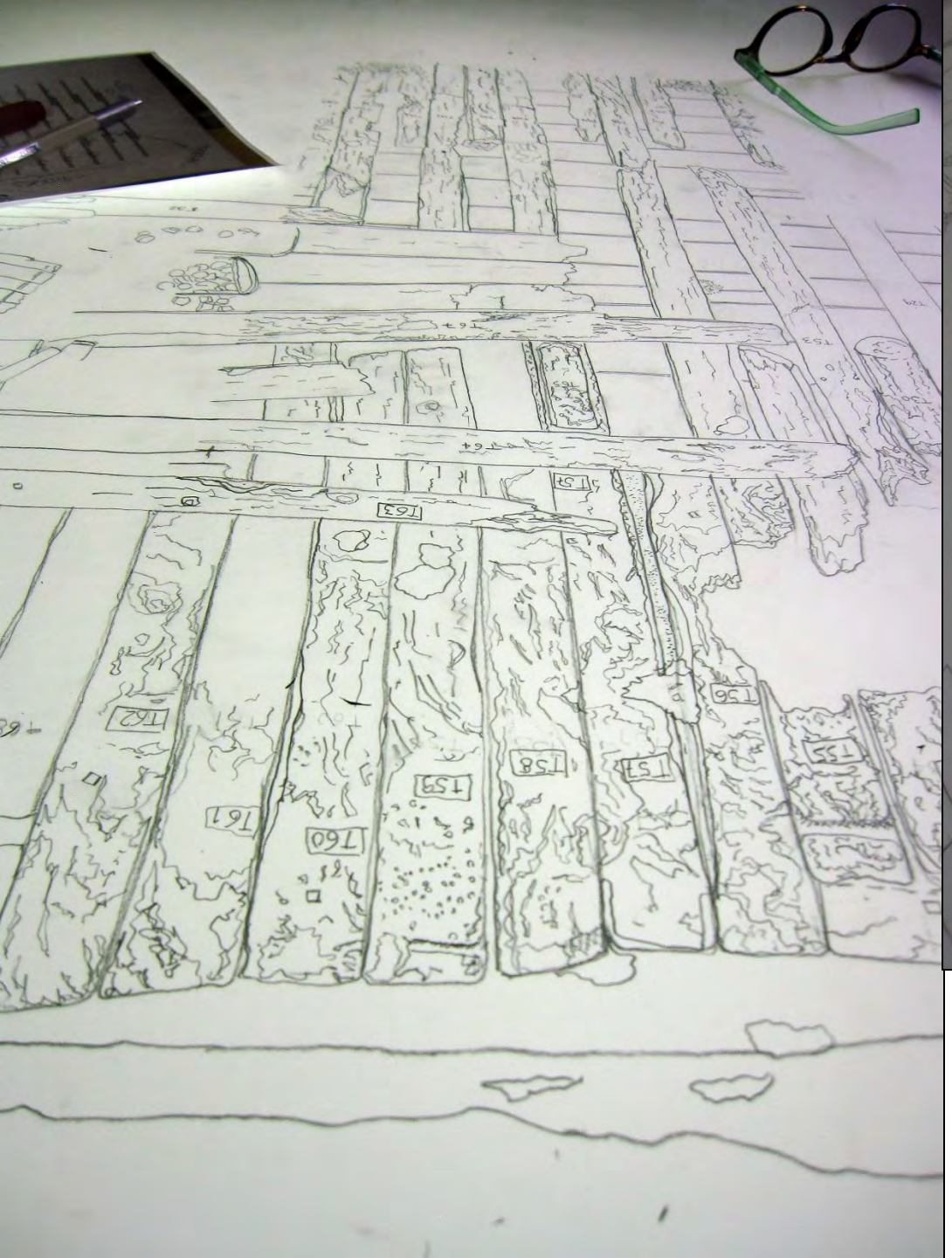
Photogrammetry software made it possible to transform large batches of pictures into tridimensional color meshes of points or into large orthogonal, scaled photos.

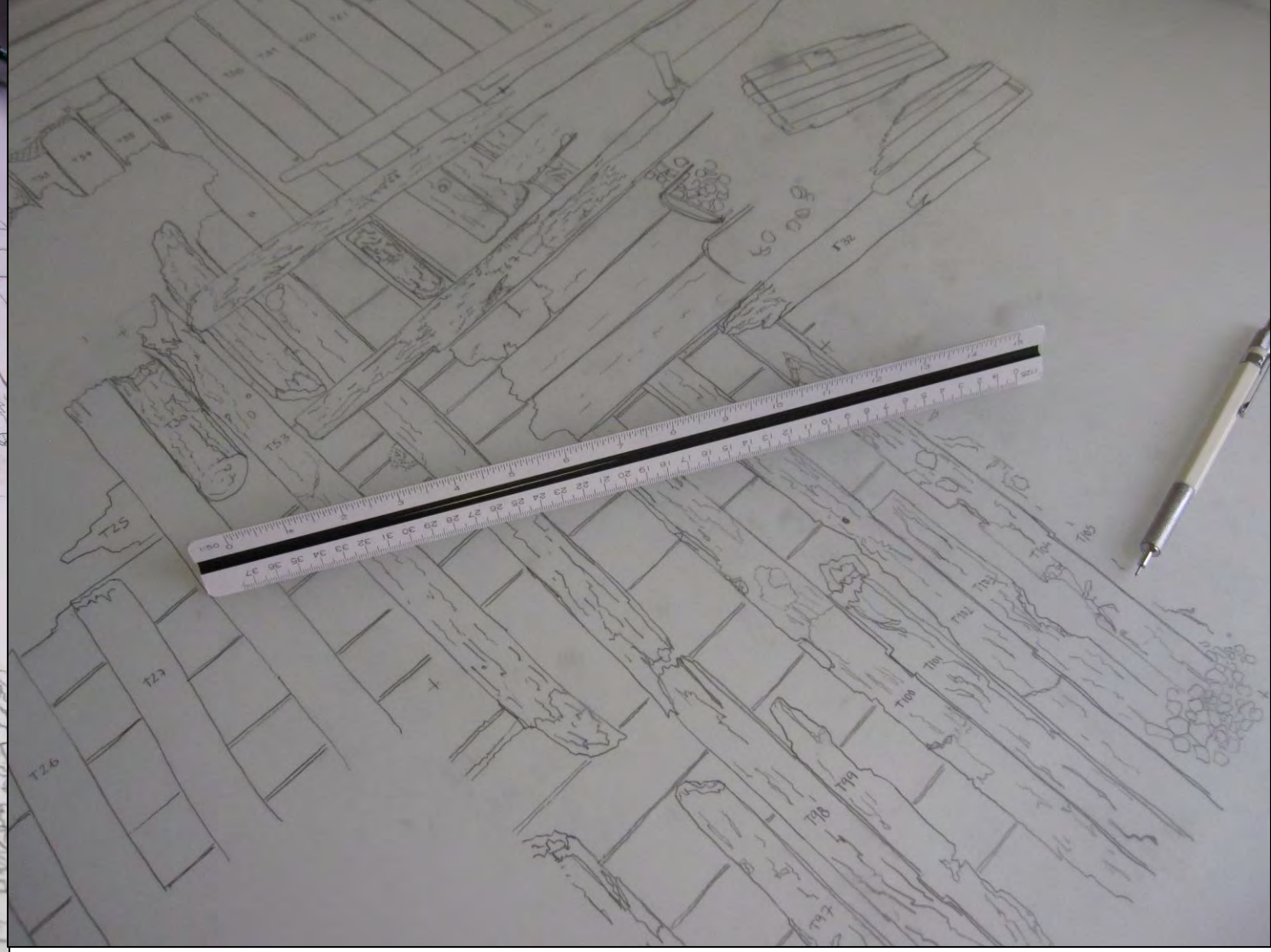


From scaled meshes of points archaeologists make their site plans



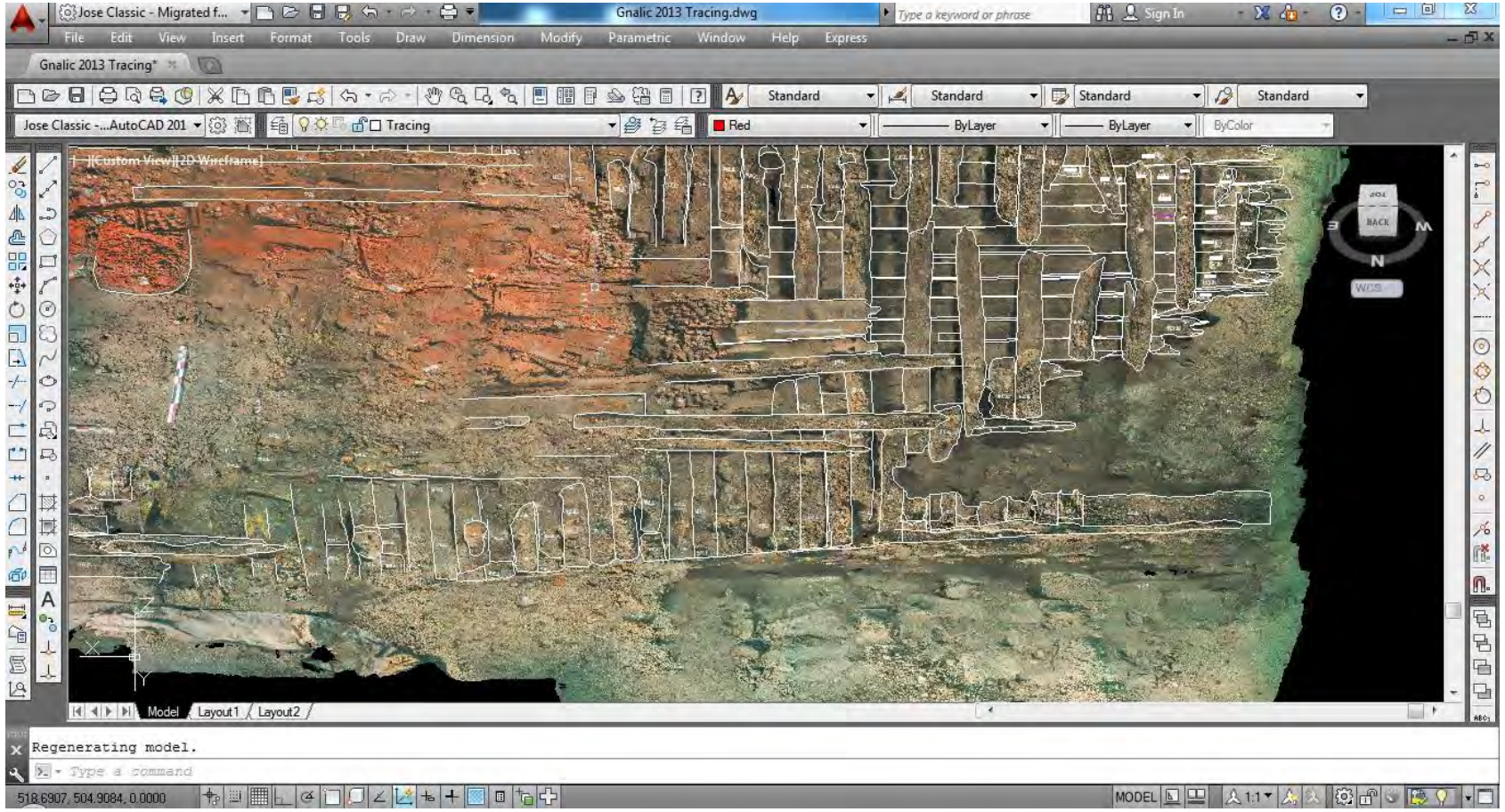
Pierre Drap LSIS-CNRS





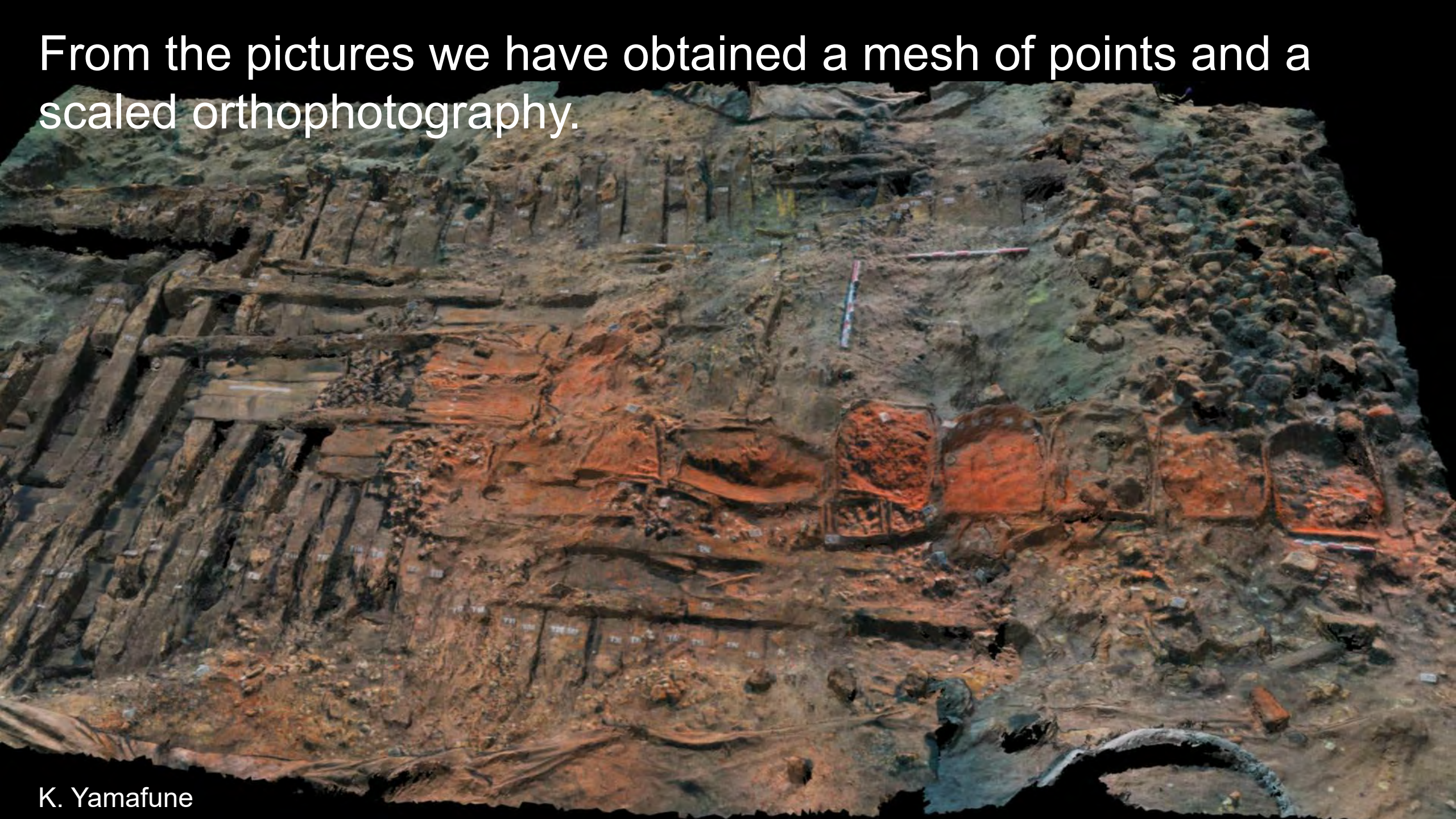
…sometimes by hand

…sometimes using off-the-shelf drafting software, such as *AutoCAD* (2D), *Adobe Illustrator*, *Corel Draw*, or *Inkscape* (open source), to cite only a few.



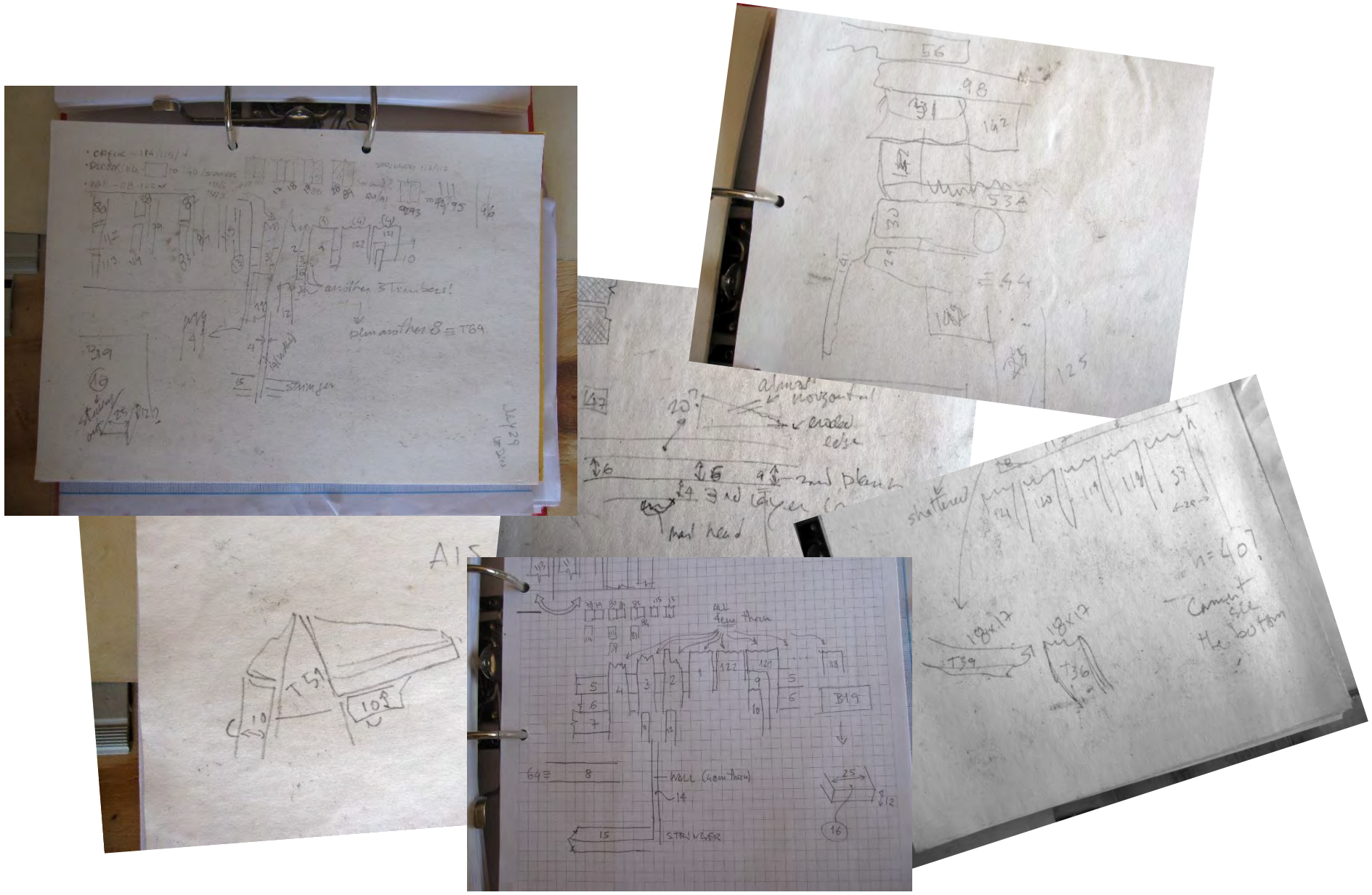
J. Luis Casaban

From the pictures we have obtained a mesh of points and a scaled orthophotography.



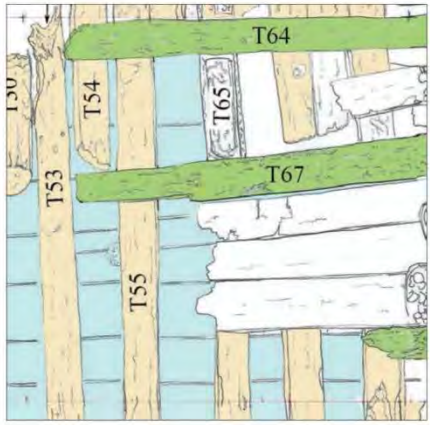
K. Yamafune

Details must still be sketched, measured, and annotated separately.

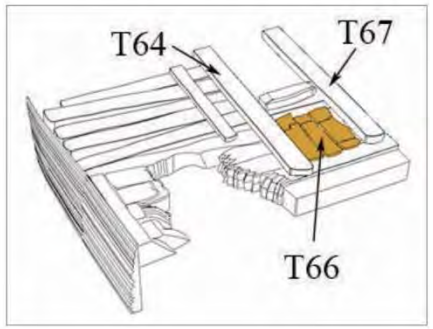


T66

(B16)
Ceiling Plank
Sided = 50 cm
Molded = 2 cm
Length Preserved = 43 cm of an original abt. 64 cm long.



This timber was removed in 2012, badly broken.



Wood type: _____

Sapwood? _____

Bark? _____

Conversion:

Joinery:

Fastenings:

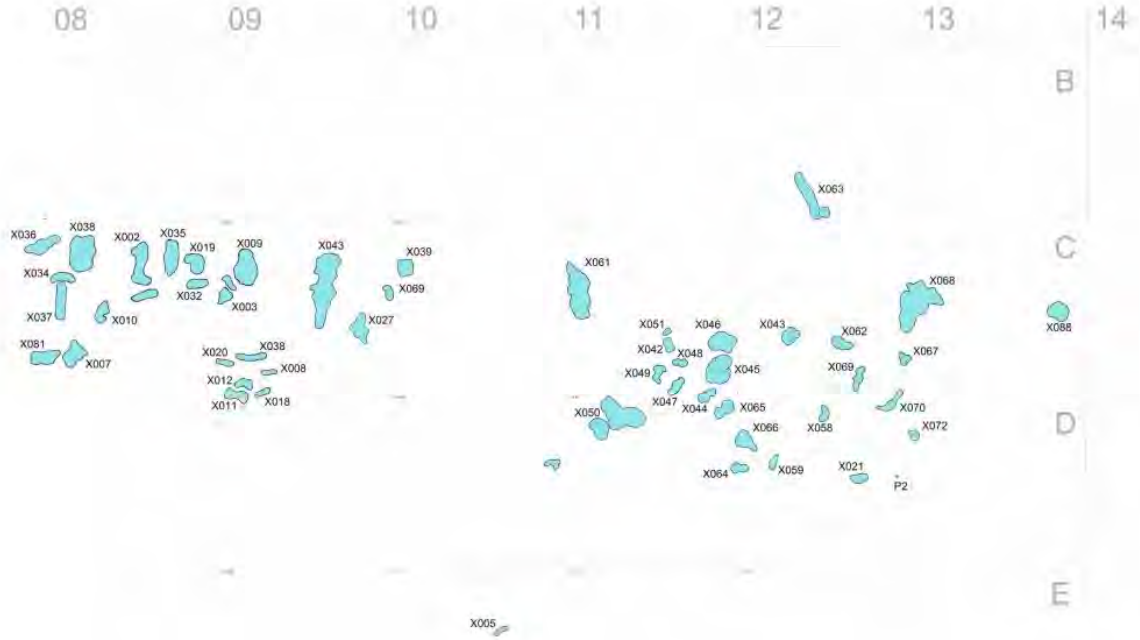
Tool Marks:

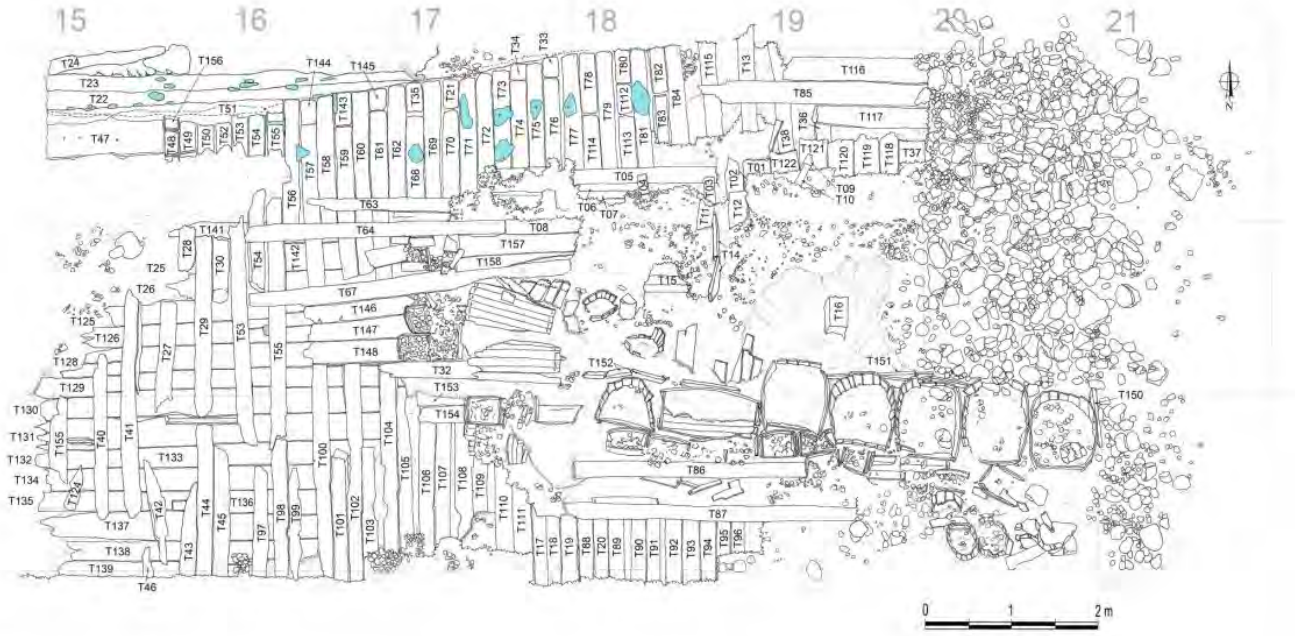
Coatings:

Samples:

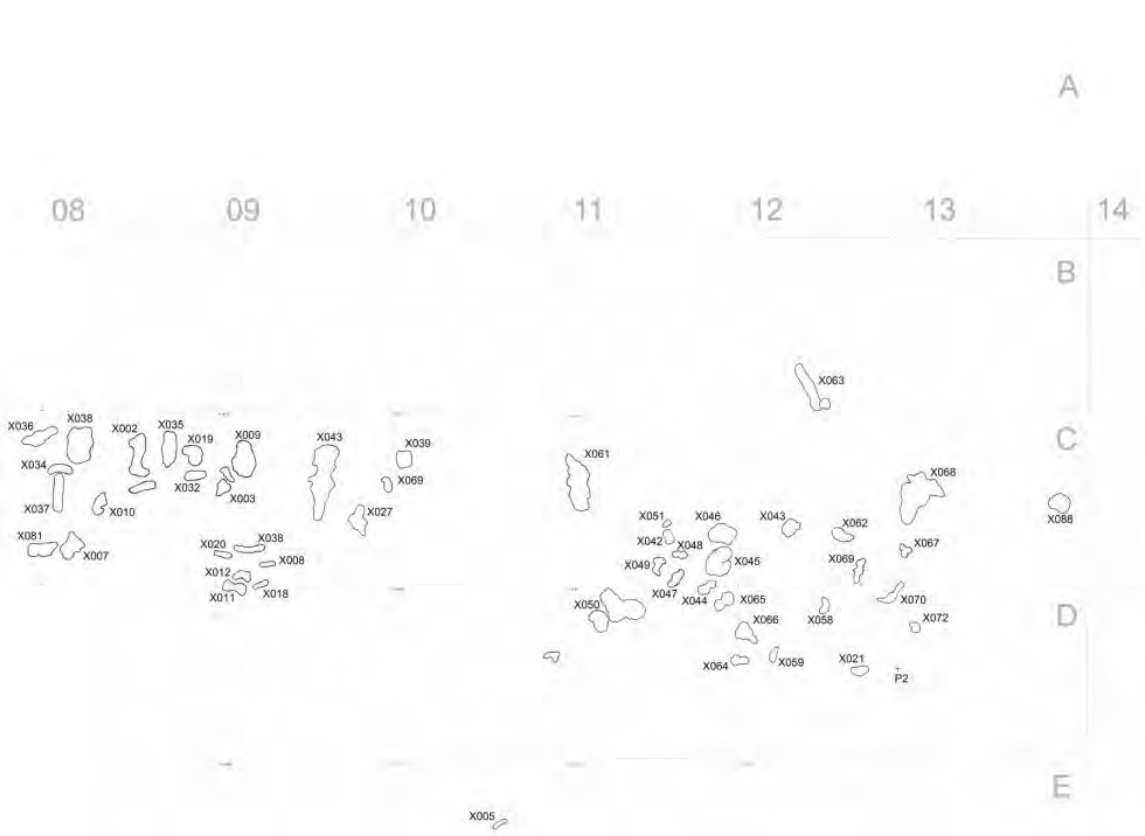
Each timber must be individualized.
A timber catalogue is a basic research tool.

From accurate drawings, simpler maps are drawn, and important features referenced and color coded (GIS).

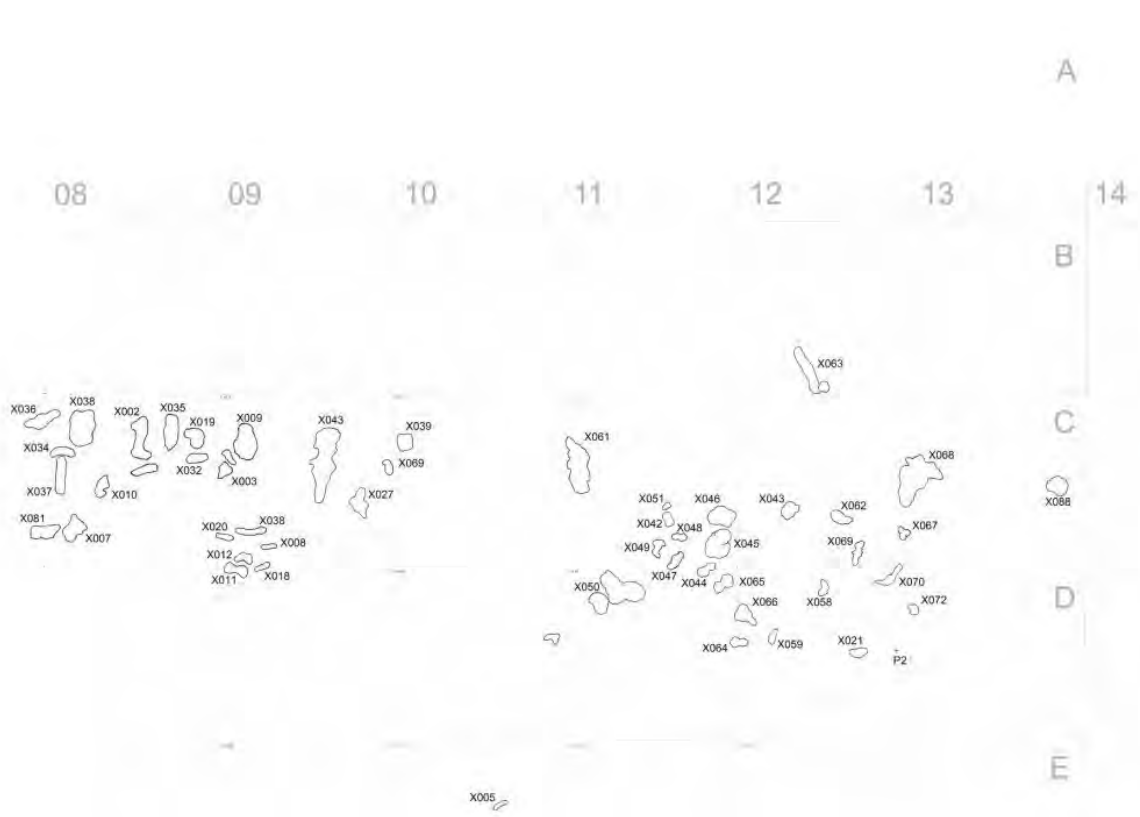


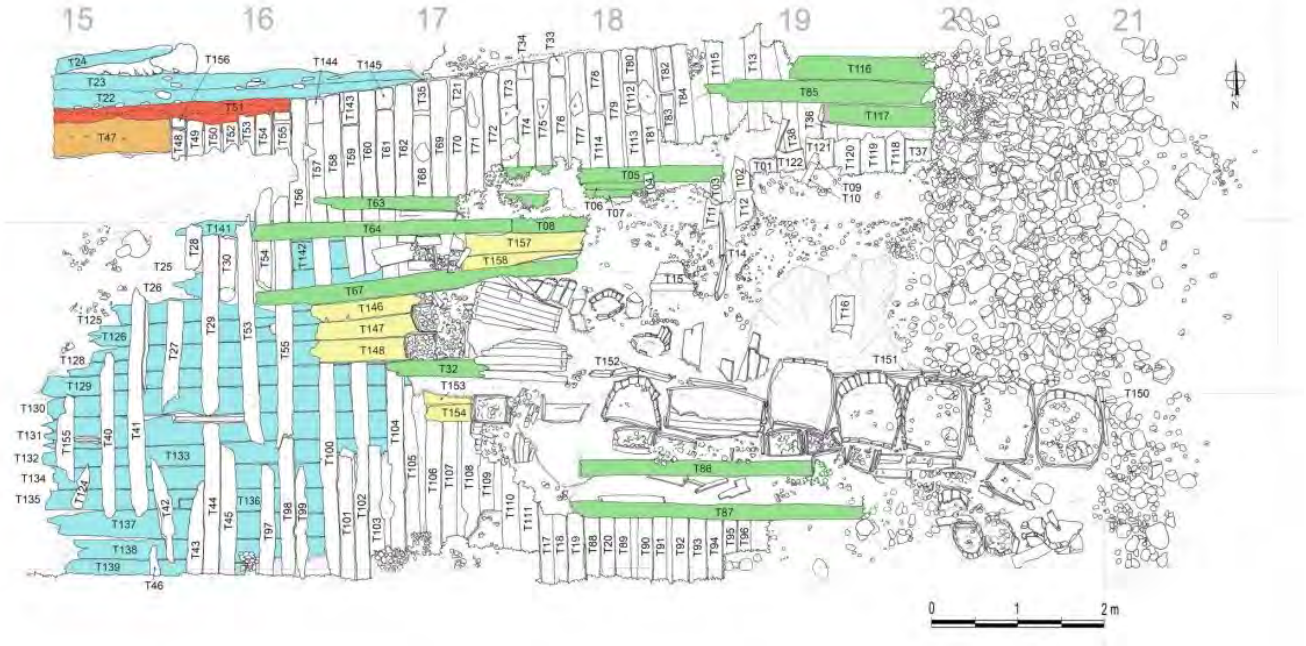


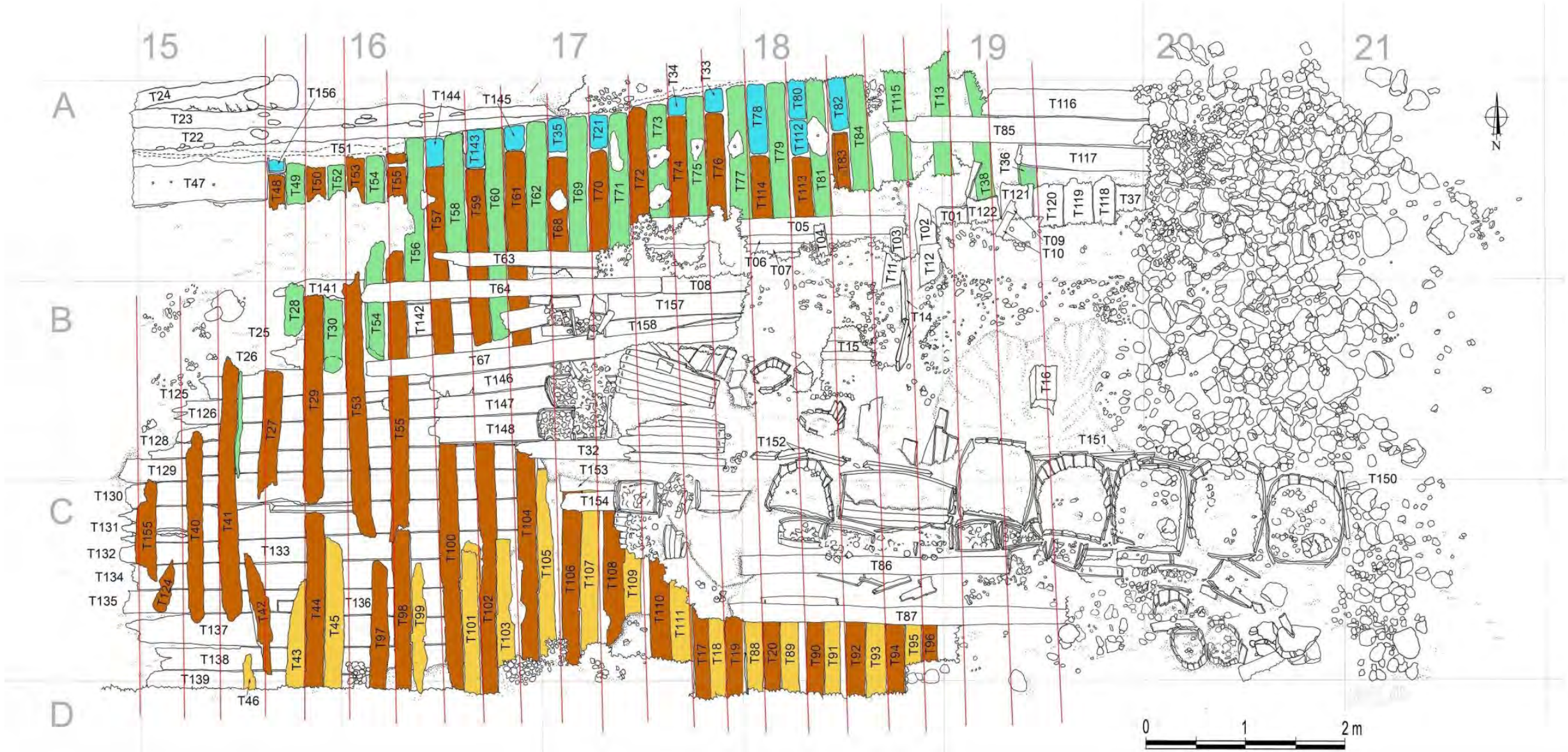
From accurate drawings, simpler maps are drawn, and important features referenced and color coded (GIS).



From accurate drawings, simpler maps are drawn, and important features referenced and color coded (GIS).



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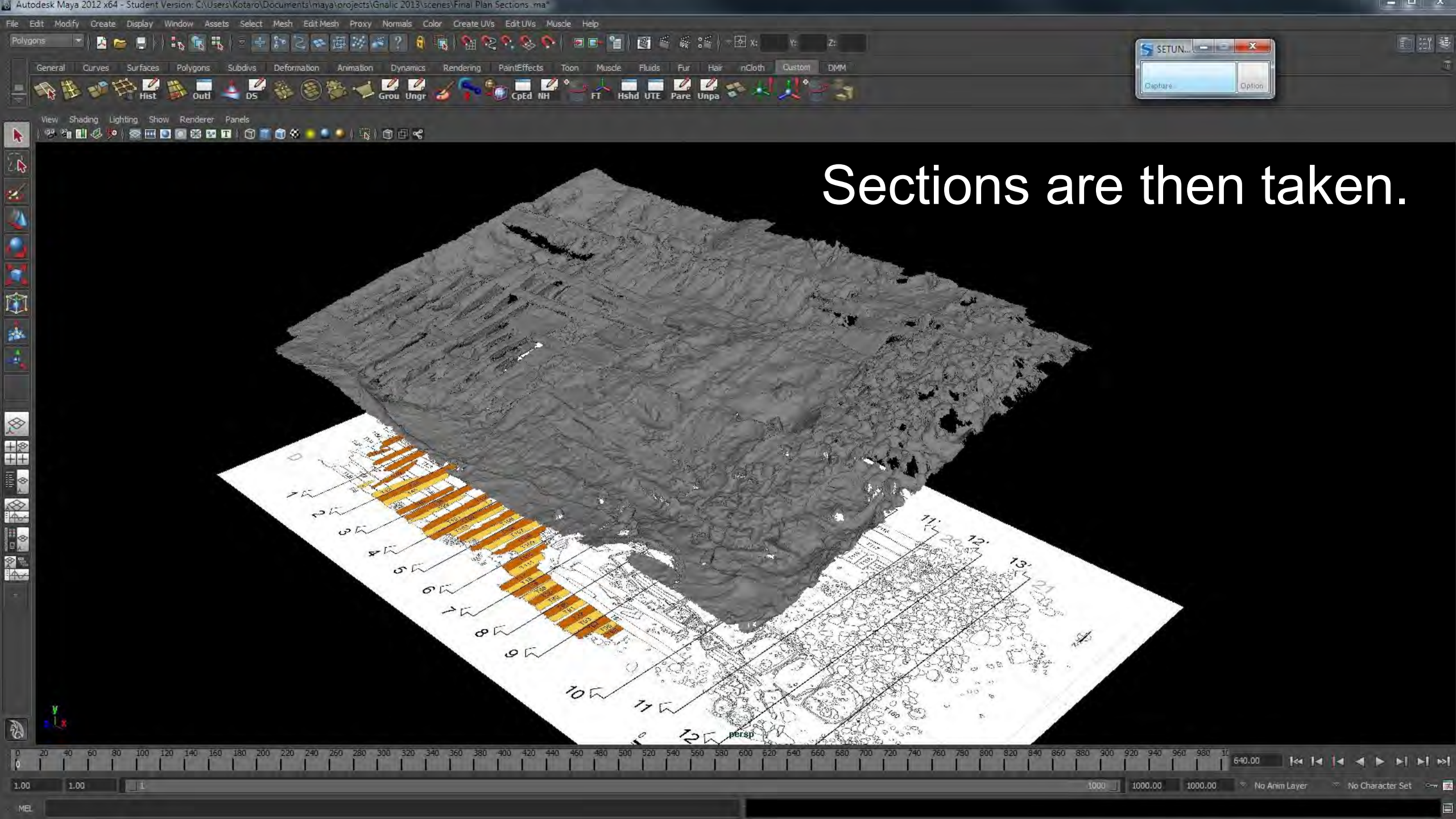
Autodesk Maya 2012 x64 - Student Version: C:\Users\Kotaro\Documents\maya\projects\Gnalic 2013\scenes\Final Plan Sections .ma*
File Edit Modify Create Display Window Assets Select Mesh Edit Mesh Proxy Normals Color Create UVs Edit UVs Muscle Help
General Curves Surfaces Polygons Subdivs Deformation Animation Dynamics Rendering PaintEffects Toon Muscle Fluids Fur Hair nCloth Custom DMM
View Shading Lighting Show Renderer Panels
Sections are then taken.
persp
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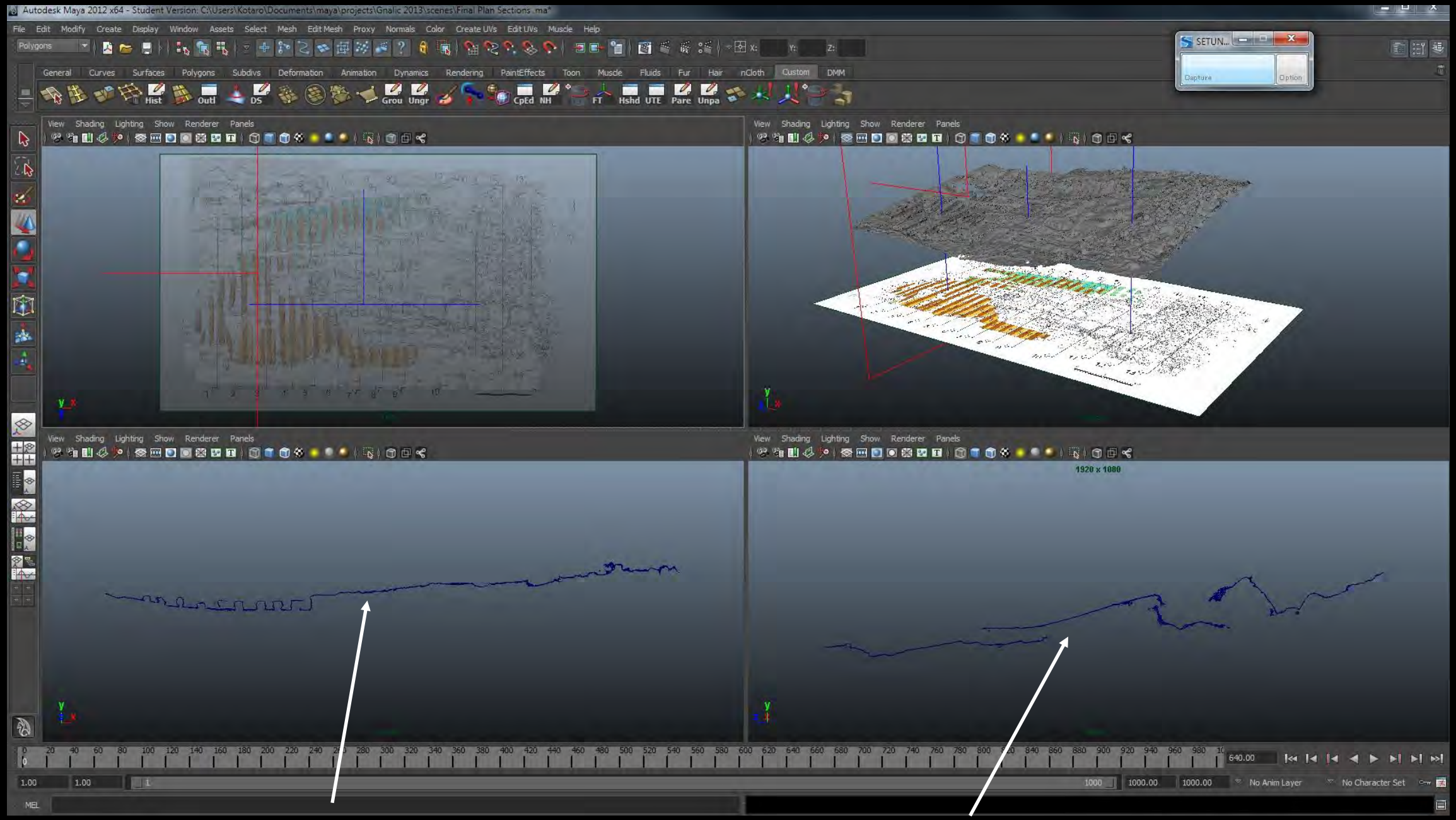
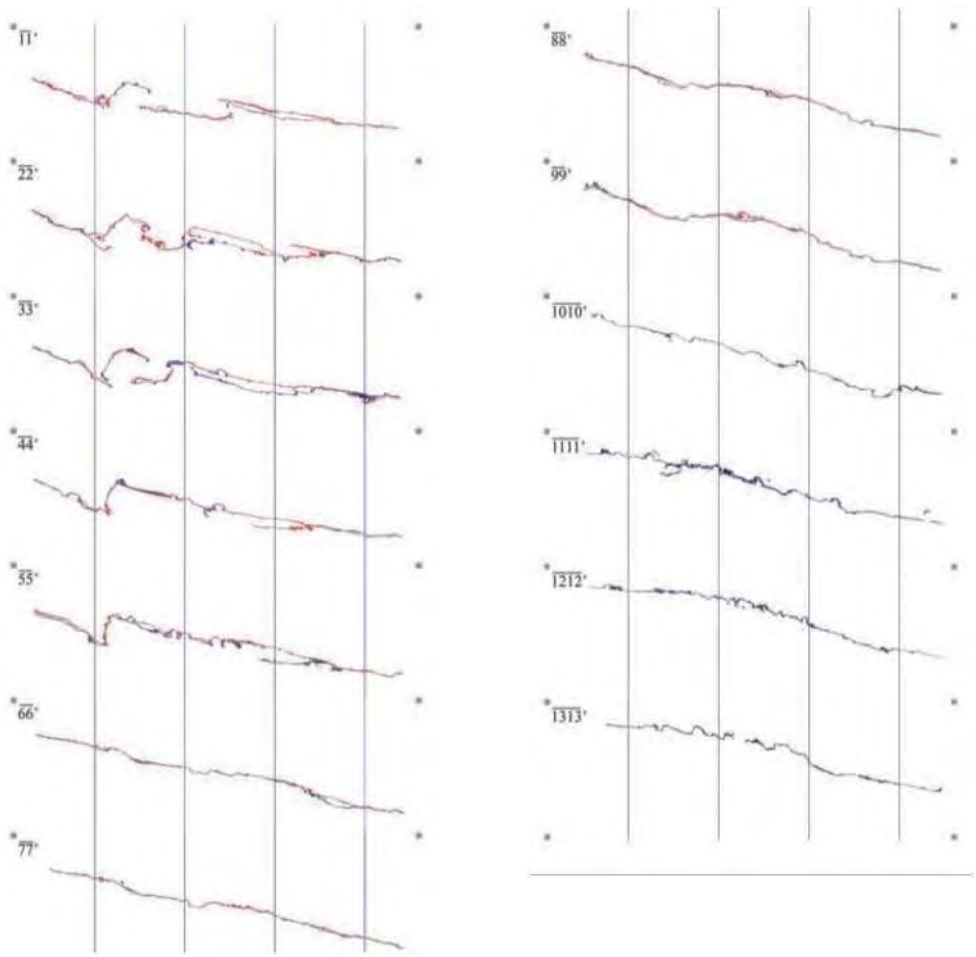
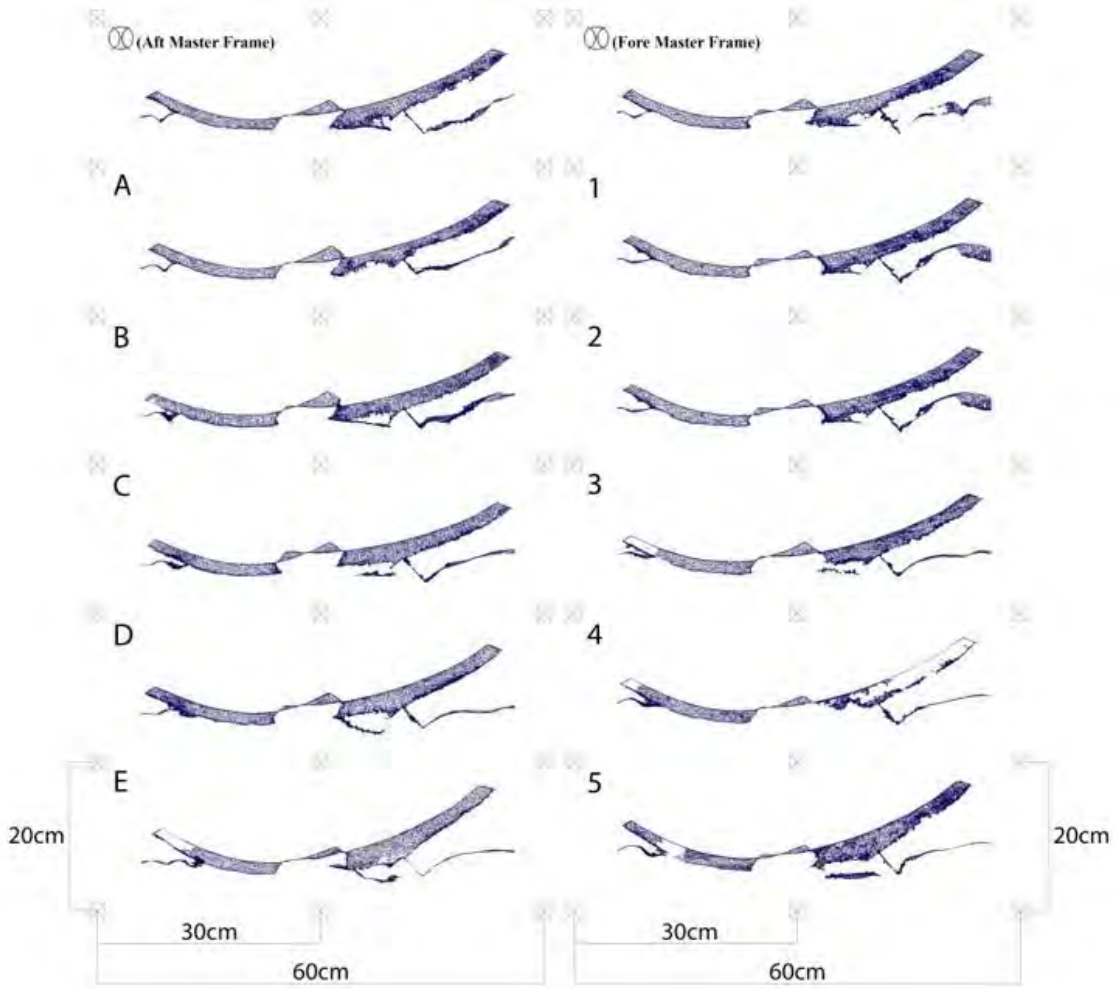
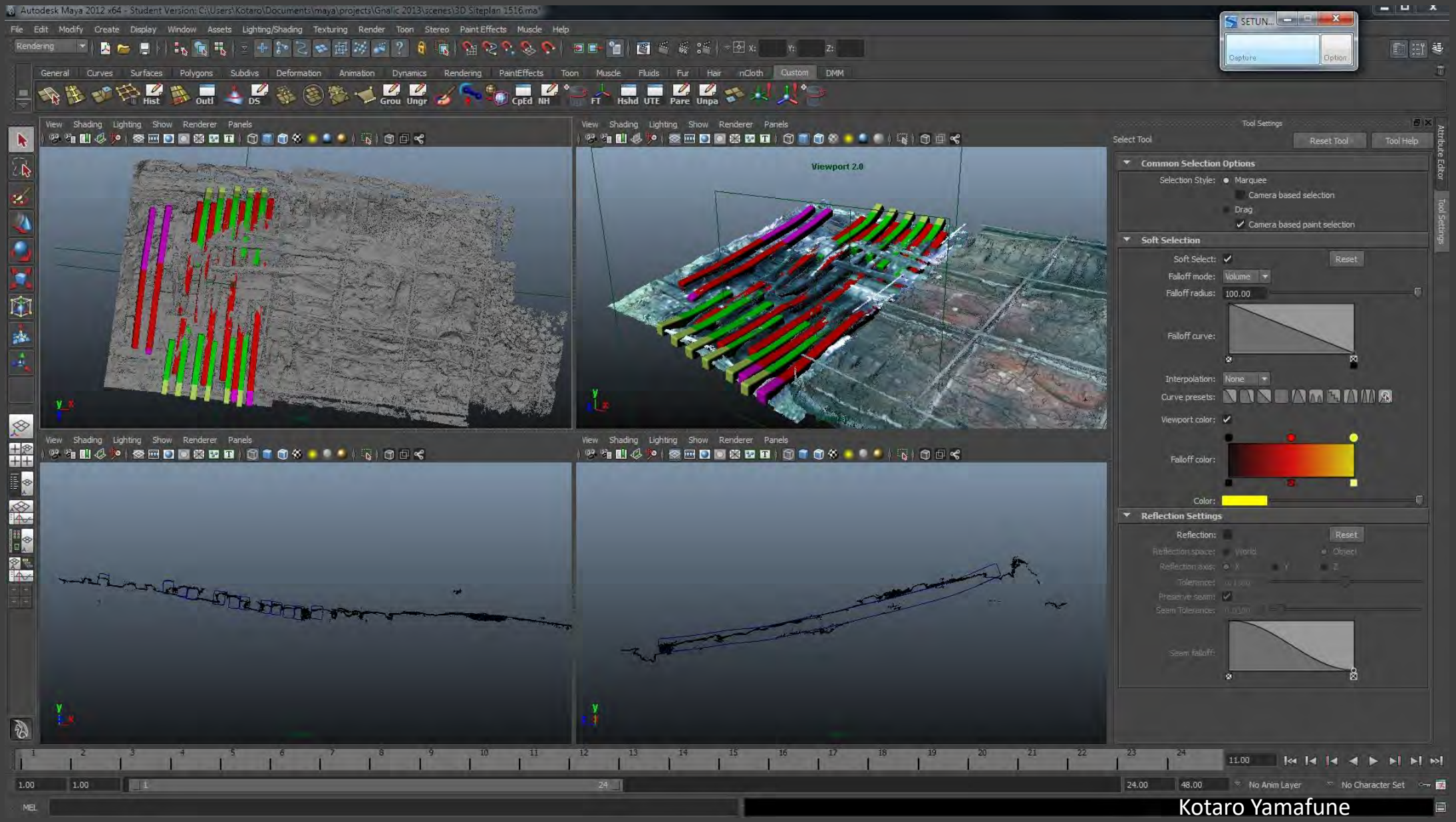

Longitudinal sections
Transversal sections



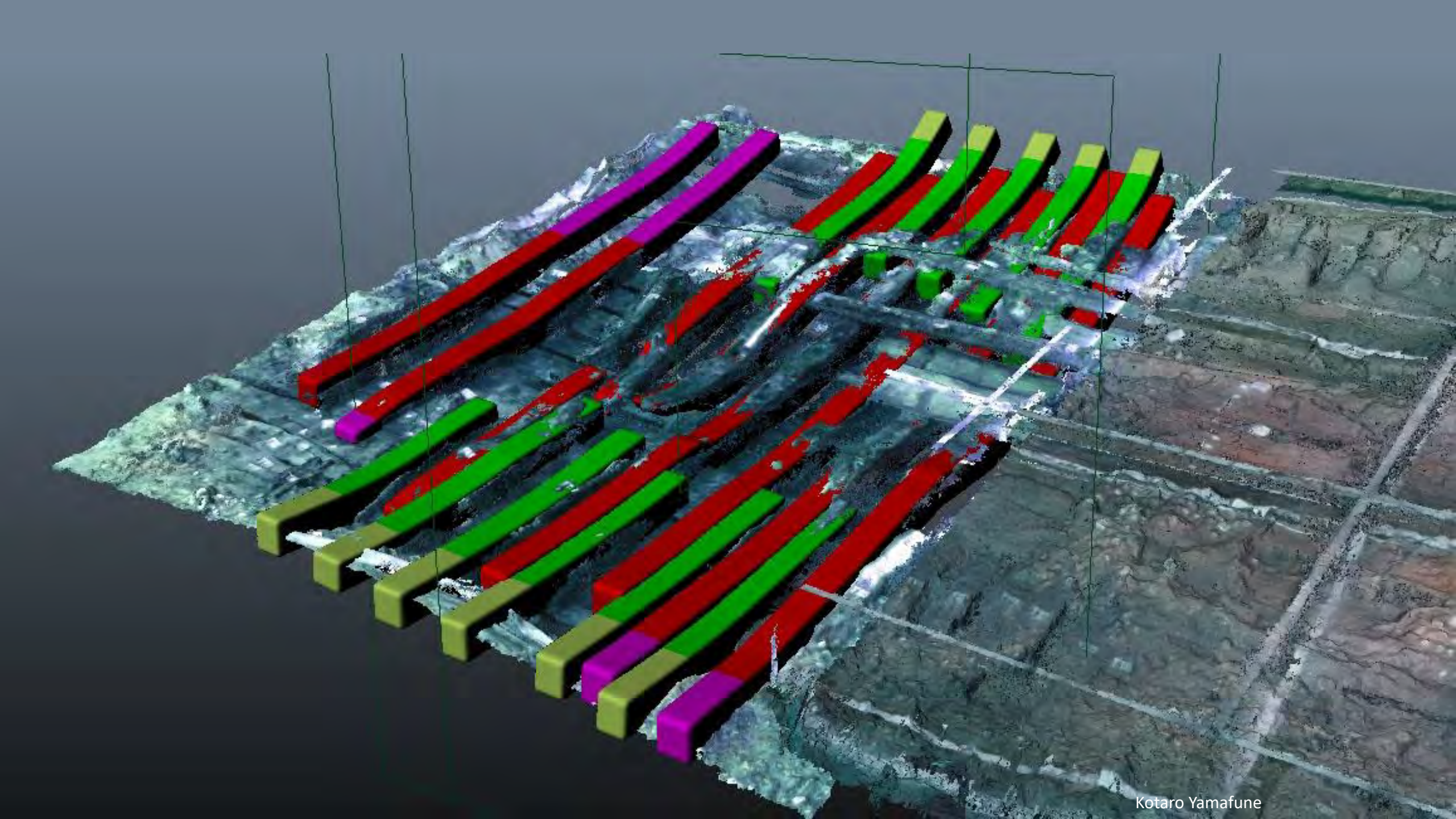


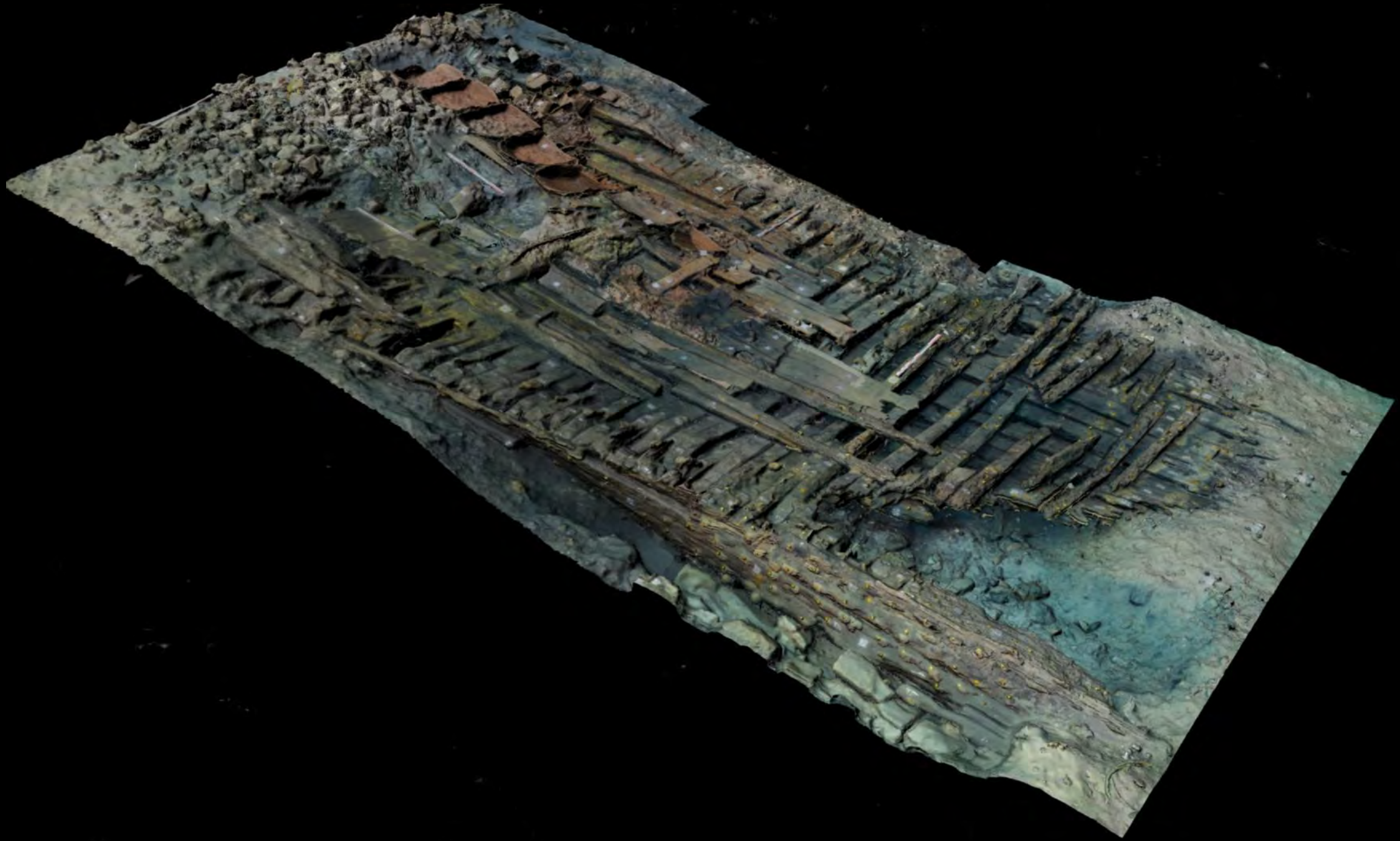
Slicing the mesh allows us to have the shapes of the frames.

And we try to reconstruct the hull remains with Autodesk Maya.

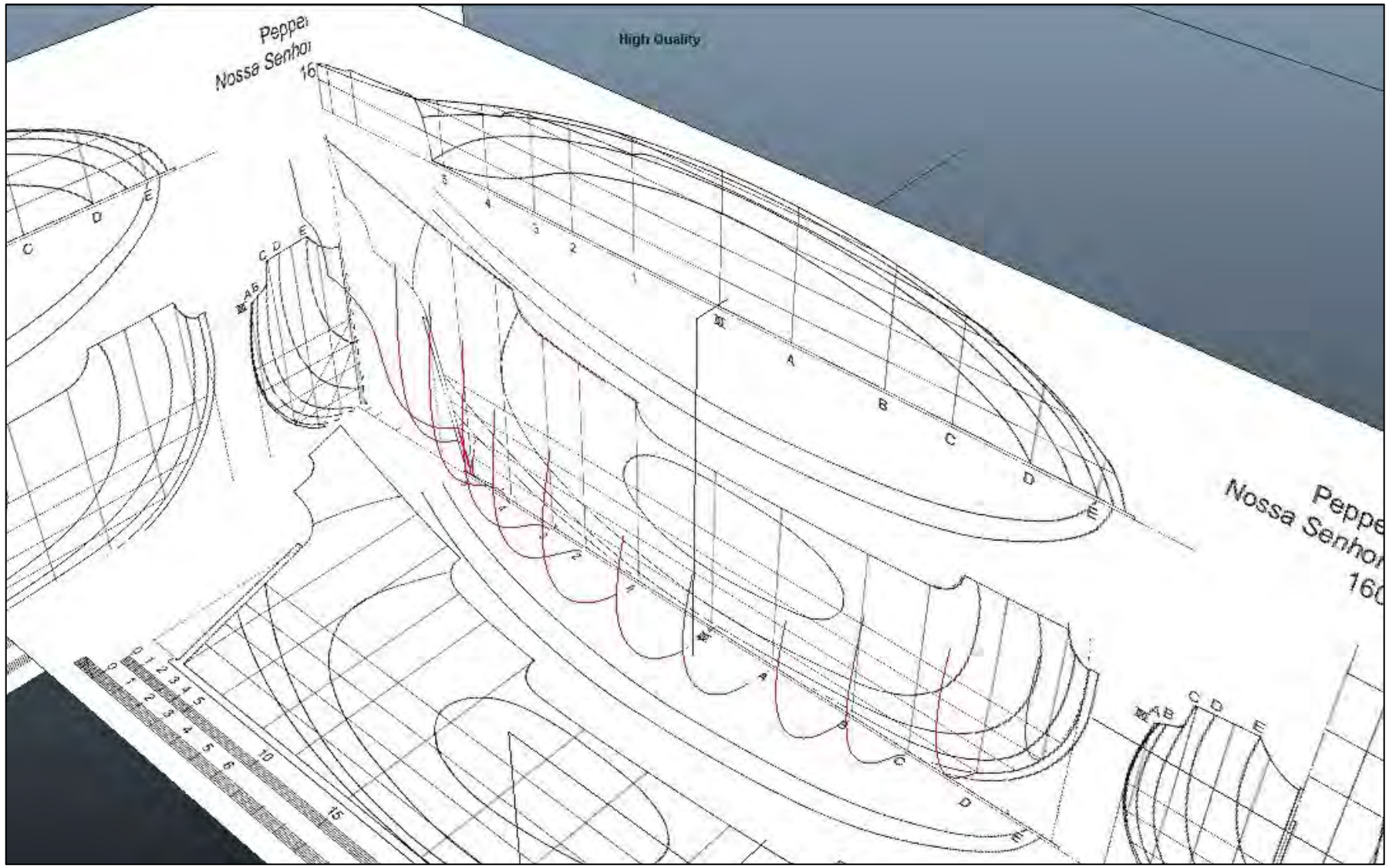


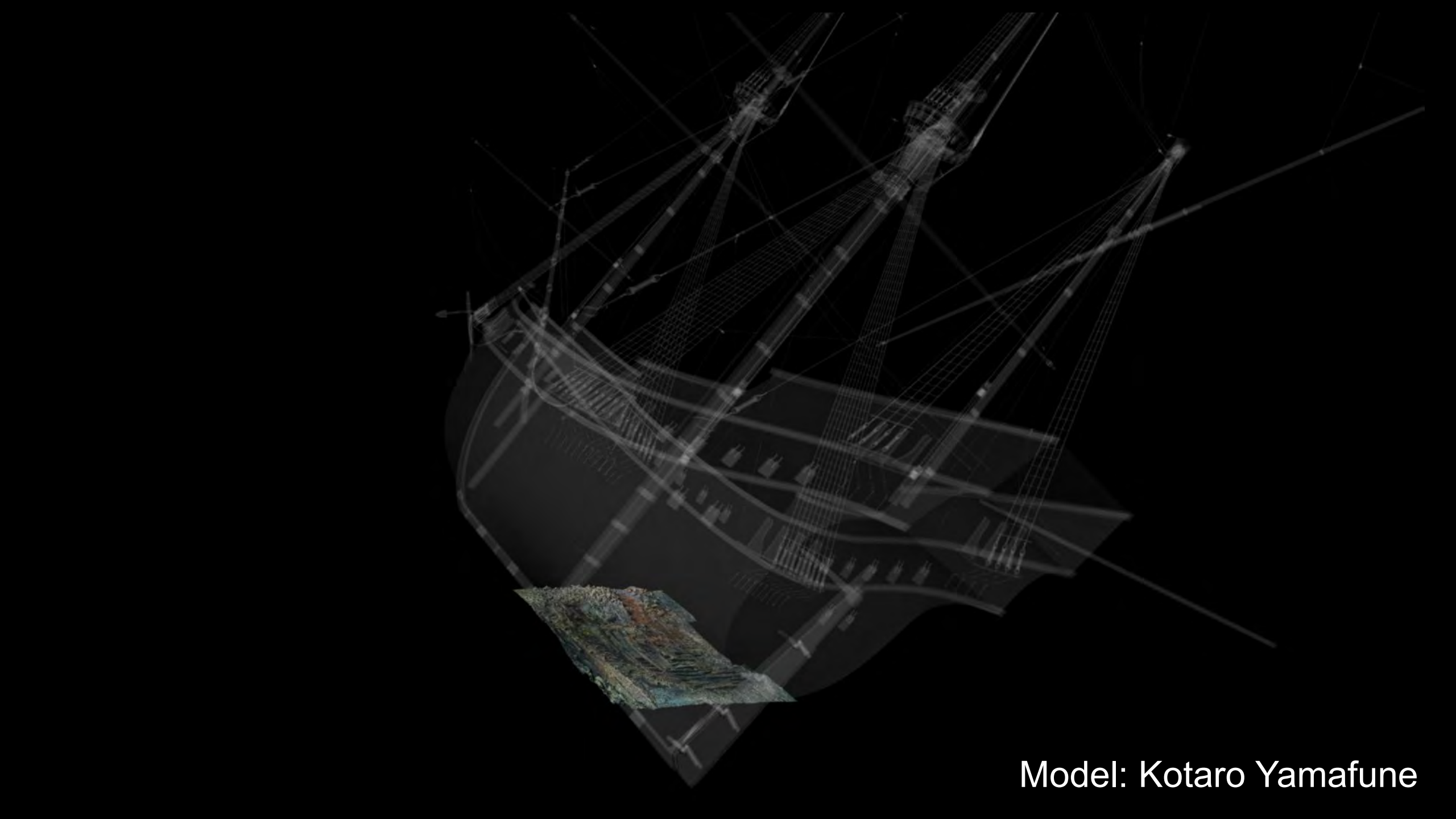
Kotaro Yamafune


Kotaro Yamafune

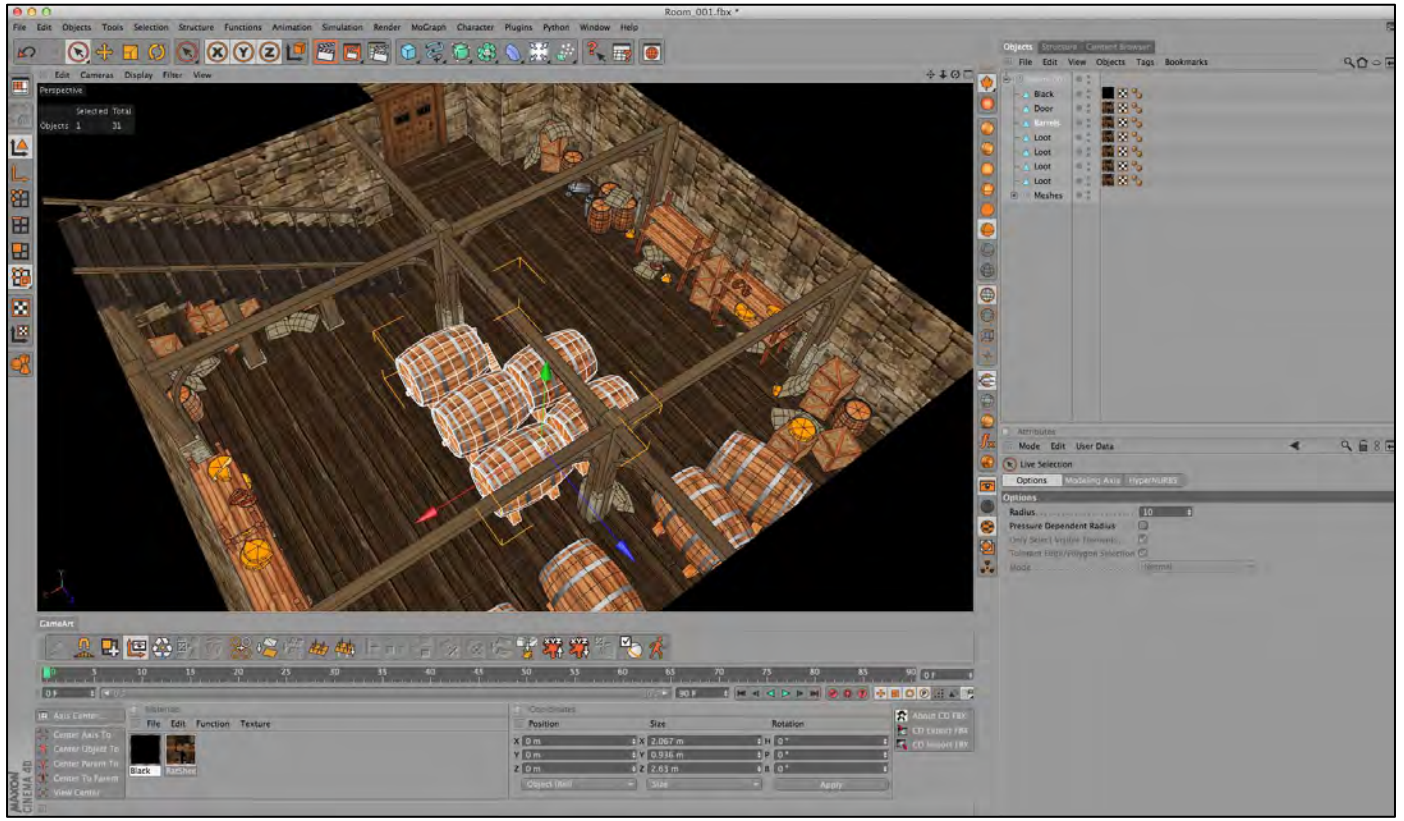


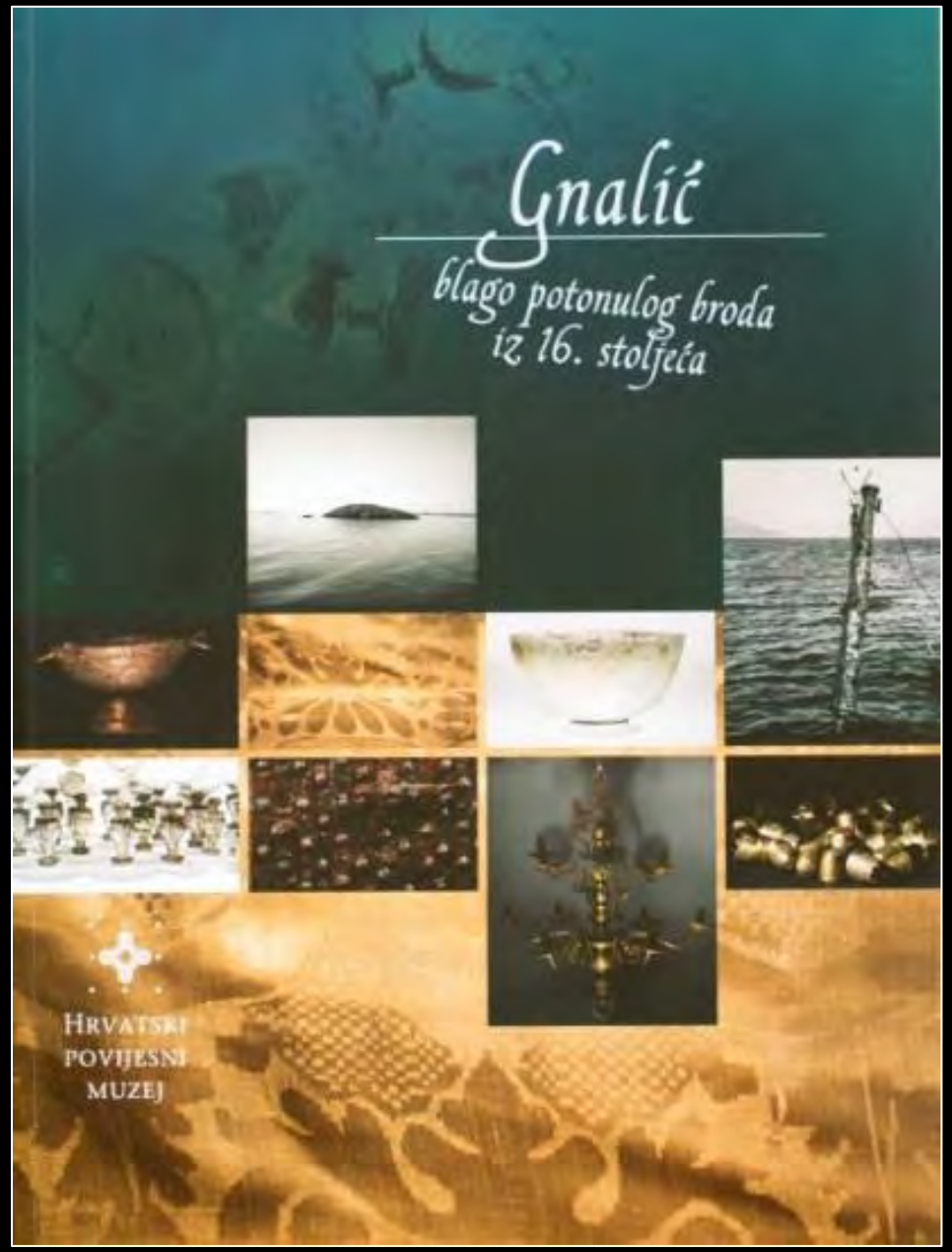
From the timbers we try to reconstruct the lines drawings.




Model: Kotaro Yamafune

SideFX has a version that works very well with Unity3D which is a real-time game engine and could possibly be used in conjunction with Houdini to propose real-time shipwreck reconstructions and share them via the web in real-time.





We stopped our collaboration in 2014, but the excavation went on:

Rossi, I., Bondioli, M., Nicolardi, M., Brusić, Z., Čoralić, L., and Castro, F., 2013. "The Shipwreck at Gnalic: a Mirror of Renaissance Europe," in Filep, A., Jurdana, E., and Pandžić, eds., *Gnalić. blago potonulog broda iz 16. stoljeca*. Zagreb: Hrvatski Povijesni Muzej.

UNIVERSITY OF ZADAR

·ADRIAS·
PROJECT

hrzz
Croatian Science Foundation

Archaeology of Adriatic Shipbuilding and Seafaring Project

Technological development of Adriatic shipbuilding and seafaring from Prehistory to the Early Modern Age

Dissemination

The fifth category of activities is concerned with public outreach, and is one of the most significant and important phases of the AdriaS project. It involves the Principal Investigator and all of the team members in a series of public talks, media exposure and exhibitions throughout the duration of the project. They will be accompanied by flyers and exhibition catalogues, newspaper and media releases.

REALIZED DISSEMINATION ACTIVITIES:

1. FLYERS

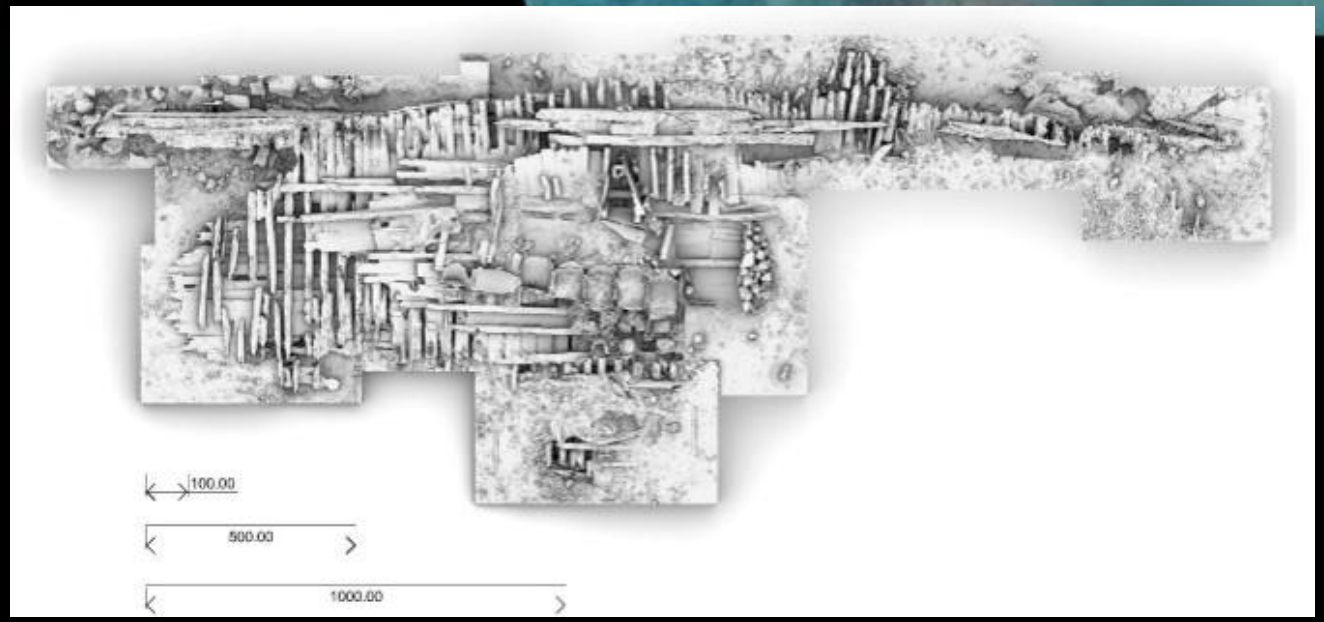
- 1 June 2015 – Flyer AdriaS / format B5 / 4 pages / full color / HR
- 1 June 2015 – Flyer AdriaS / format B5 / 4 pages / full color / ENG

2. ROLL-UP POSTERS

- 30 September 2015 – Roll-up poster AdriaS / 80 x 200cm / HR, ENG
- 3 March 2016 – Roll-up posters AdriaS – Gnalić Shipwreck: Discovery & Restarting the project/ 120 x 200 cm / HR, ENG
- 3 March 2016 – Roll-up posters AdriaS – Gnalić Shipwreck: Ship's hull & Cargo / 120 x 200 cm / HR, ENG
- 3 March 2016 – Roll-up posters AdriaS – Gnalić Shipwreck: Identification of shipwreck / 120 x 200 cm / HR, ENG

3. CONFERENCES AND ROUND TABLES

- 21 – 25 September 2015 - ISBSA 14 International Symposium of Boat and Ship Archaeology: Baltic and beyond, Change and continuity in shipbuilding, Gdansk (Poland) – Presentation: Irena Radić Rossi – Mariangela Nicolardi, The Post-Mediaeval Shipwreck of Gnalić (Croatia) in the light of new discoveries Book of Abstracts



Site Plan: Kotaro Yamafune, 2019

Thank You!