

Near Roscoff, a French city from which ferries connect Brittany with Ireland and the United Kingdom, an underwater research team of French scientists has discovered tons of tin in the form of ingots that sank to the bottom along with a Roman shipwreck in the Bay of Morlaix. The artifacts were secured by a team of divers near Île de Batz – an island off Finistère: the very end of the Breton peninsula.

According to researcher Olivia Hulot, “A Roman merchant ships appears to have been wrecked on the rocks and then split in two.” A leader in sub-aquatic archaeology in Brittany, Hulot added “We found tin, of no commercial value, and Roman ceramics.”



*Divers found the artifacts covered with algae and sea life. Tin ingots and pottery were found.*

The Roman shipwreck dates back to the 3rd or 4th century A.D. It was discovered by a local diver. Hulot said that it is likely that the tin had been mined in Brittany.

The wreck dates back to the third or fourth century A.D. The find, made by a sport diver of the area, may be evidence of "major production and transportation of tin from Finistère veins," said

Hulot. She based this conclusion on the fact that there are no significant tin lodes in the Mediterranean.



*The surf and low visibility sometimes hampered the recovery of the artifacts.*

Tin was added to copper to produce bronze, and was necessary for fabricating coins, metal implements and tools used by ancient Greeks and Romans. Copper was available in Cyprus and elsewhere. There were but minor deposits of tin located in Italy that were exploited by the Etruscans: a people who preceded the Romans in dominating the Italian peninsula. However, the Italian deposits were too small to have much effect on trade in ancient Europe. Much larger deposits are found in Portugal, Galicia in northwestern Spain, and southern England – especially Cornwall and Devon. These latter areas share with Brittany a common Celtic heritage.



*Divers carefully numbered the hundreds of ingots that were brought up in rough seas to the research vessel*

Ancient sources were aware that tin deposits were found beyond the Pillars of Hercules in northwestern Europe. Deposits of tin in Brittany were exploited by the Romans since the 1st century B.C. once Julius Caesar completed his conquest of Gaul. The demand for tin was strong enough to compel Romans to invade those countries as sources of the silvery metal. Tin became one of the most important commodities traded in a network that connected Rome with far-flung sources among what were then barbarian lands. Tin from Brittany and Cornwall has been identified in bronze objects discovered in Central Europe, bearing testimony to pan-European trade.



*Each ingot was tagged and will be studied.*

However, Cornwall was the main source of tin for the ancient world. The fact that tin trade existed is too well attested to need proof. The Greek historian, Herodotus, as early as 445 BC speaks of the British Isles as the Tin Islands or Cassiterides. The ancient Phoenecians, who originated in Lebanon, traded in tin and copper throughout the Mediterranean and are believed to have been involved in exploiting the metal in Britain as far back as 1,500 B.C. The ancient name for Britain was the basis of the name for tin ore: cassiterite. Another ancient historian Diodorus Siculus, described the tin trade of the time. The tin was mined, beaten into squares, and carried to an island called Ictis, joined to the mainland at low tide in Cornwall, and shipped thence to Morlais. From Morlaix, ingots were transported across France on pack horses to Marseilles. From Marseilles it was again shipped to Phoenicia. Some experts theorize that tin from Britain may have wound up in the bronze used in building Solomon's Temple in Jerusalem.





*Roman pottery was found broken into thousands of pieces where the ship decayed.*

In the discovery made this month in Brittany, some of the ingots were undifferentiated masses of metal, while others resembled squat cones. These bore the letter M, which according to one of the researchers may signal the origin or the recipient of the tin. The wreck was located approximately 50 feet (45 metres) below the surface. Divers had to contend with strong currents and occasionally rough seas to bring up about 500 ingots amounting to hundreds of pounds to the surface.



*Each piece of tin was tagged and brought to the surface to study.*

Researchers from the French National Scientific Research Centre are now working on the reassembled artifacts taken from the wreck. A 3D reconstruction of the wreck, using underwater

photographs, should take about a month to complete. Archaeologists will remain in Roscoff to complete initial studies until at least September 3. The artifacts are now being kept in a storage facility so that researchers can study them and determine the origin of the metal. Scientists can determine the origin of metal by identifying key isotopes that can flag where metals were extracted.



*Mysterious inscriptions on the pieces of tin have yet to be deciphered.*



*The mysterious M. Researchers do not know what it means, but wonder if it signifies the maker or the buyer.*





Olivia Hulot, who led the expedition in Morlaix, was involved in another underwater archaeological find on the other side of the world. In 2013, she assisted in documenting a wreck in Lake Michigan which some had theorized might have been *Le Griffon*: the first European sailing vessel known to have navigated the Great Lakes in the late 17th century.

