Possible Roman Era Gold Lamella Found in Maine

By Douglas Jones Sr. and Scott F. Wolter, P.G.

In the summer of 2006, Douglas Jones Sr., an avid metal detector enthusiast, was scanning the beach closest to the ocean at extreme low tide in Kennebunkport, Maine, when he heard a loud "pinging" through his headphones. Upon digging on the spot of the hit he found a small hard nodule encased with a buildup of material around the unknown object locked inside. This is Doug's write-up about the discovery and subsequent experience over the past decade to try and learn more about his artifact:

> *"I was metal detecting in the shallow water at low tide at the north end of Kennebunk Beach, a short distance south of the entrance to the port of Kennebunkport, Maine, in the summer of 2006, when I found something very unusual. On the beaches in Southern Maine, there are times when the sand is pulled out by the tides and storms exposing items that are not metal or detectable with my equipment, a Minelab Excalibur 1000. Old tree stumps are common items that turn up that have been in the water under the sand up to a few feet for a long time.*
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> *Typically, I find nails, pull tabs and other beach junk along with modern coins. Finding pieces of nails from damaged ships or boats is very common in this area. The nails are most often encased in a hard black crust which upon exposure to the air, turns a reddish color that looks like rust.*
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> *At the end of that season as winter was approaching, I cleaned my equipment as well as the pouch I put my collected items in. As I was washing out the sand and salt form the pouch, a small item that looked like a nail fell out. I noticed that one end was the color of brass or gold and tried to break the crust off by hand but was unsuccessful. I was finally able to break off the rusty colored crust off with my knife which enabled me to remove the rest of the debris by hand.*
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> *My first impression was that it was a brass pin from a piece of woman's jewelry. Upon closer inspection I could see the gold colored item was rolled up. I then unrolled it and saw that it had letters and symbols on it. The writing was foreign to me and I could not determine what it was.*
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> *That was 2006. Since then I had repeatedly tried to find any information I could about the artifact. I have asked the State Archaeologist, State Historian, sent emails to various college professors and museums. The responses I received mostly just referred me to another person. Some of them believe it is a "Lamella" which is an amulet of protection worn around the neck of ancient mariners. A museum in the UK said it resembled a magic amulet.*

For the past decade, no one in the professional or academic communities took my discovery seriously or were interested in helping try to learn more about it. In November of 2016, I contacted Scott Wolter, a forensic geologist in Minnesota. Scott said he would be visiting friends near Maine in March, and we made plans to meet. On March 25, 2017, I met with Scott and his wife, Janet, and after examining the artifact he suggested I get an elemental analysis done to determine its exact composition. After traveling to Minnesota, on May 1st, Scott Took several microscopic photographs of the script in his laboratory and made arrangements to test the elemental composition using a scanning electron microscope. The testing reveals the thin piece was 98-99% gold; the remainder was silver.

I have not been able to find anyone to interpret the symbols etched into it, where it came from or how old it is.

Doug Jones

Porter, Maine"

Photo #1: Doug Jones found the gold lamella on this location at Kennebunk Beach, Maine, at extreme low tide in the summer of 2006. (Douglas Jones Sr., 2017)

Photo #2: The Minelab Excalibur 1000 metal equipment Douglas Jones Sr. used when he discovered his gold lamella in 2006. (Douglas Jones Sr., 2017)

The definition of the word "Lamella" is thin, plate-like part, layer, organ, or structure.[1] Artifacts made of small, very thin sheets of gold are known from the Roman era that contained various text (often Greek) and symbols that were used for ritual magic as a talisman to ward off evil spirits or as pleas of protection for early mariners. Typically, they were tightly rolled into a long thin rod and often placed in a leather pouch worn around the neck like a pendant or somewhere else on the body. The text on this lamella is foreign to both Doug and myself and it is our hope this paper will prompt researchers to assist in identifying the script in an attempt to try and determine its age and country or region of origin.

[1] https://www.collinsdictionary.com/us/dictionary/english/lamella

Photo #3: An overall view of the inside surface of the gold lamella when rolled up at the time of discovery. Doug Jones Sr. found while metal detecting in the summer of 2006. (Brendon Bullock, 2016)

Photo #4: An overall view of the reverse side of the outside surface of the gold lamella when rolled up at the time of discovery. Doug Jones Sr. found while metal detecting in the summer of 2006. The darker color of the lower half likely represents remnant secondary deposits that accumulated along the exposed exterior surface of the rolled-up lamella prior to discovery. (Brendon Bullock, 2016)

On May 1, 2017, Mr. Doug Jones Sr., visited my laboratory at American Petrographic Services, Inc., in St. Paul, Minnesota, where I examined the gold artifact and took several microscopic photographs of the inscribed symbols and features of the metal itself. The designs and symbols were very carefully etched into the 1-1/8" long by 7/8" wide by approximately 1/64" thick wrinkled gold sheet and were foreign to me. The wrinkling was consistent with the small gold sheet having been tightly rolled as reported by Mr. Jones.

During the microscopic examination an area of darker color was observed on one end of the outside surface of the lamella (See photo #4). This darker zone appears to be remnants of secondary deposits on the exposed exterior surface of the lamella presumably when it was still rolled up at the time of discovery. This presence of this darker zone of secondary deposits produced by the buildup of a *"…rusty colored crust…"* on the exterior of the artifact is consistent with Mr. Jones' statement about the discovery and his removal of the crust prior to unrolling the lamella.

Photo #5: Close-up of the lower left corner of the inscribed symbols on the gold lamella at 15X. (Wolter, 2017)

Photo #6: Close-up of the lower right corner of the inscribed symbols on the gold lamella at 15X. (Wolter, 2017)

Photo #7: Close-up of the upper left corner of the inscribed symbols on the gold lamella at 15X. (Wolter, 2017)

Photo #8: Close-up of the upper right corner of the inscribed symbols on the gold lamella at 15X. (Wolter, 2017)

Photo #9: Close-up of the left middle area of the inscribed symbols on the gold lamella at 15X. (Wolter, 2017)

Photo #10: Close-up of the right middle area of the inscribed symbols on the gold lamella at 15X. (Wolter, 2017)

Photo #11: Close-up of the left upper middle area of the inscribed symbols on the gold lamella at 15X. (Wolter, 2017)

Photo #12: The undulating edge of the previously rolled up gold lamella at 15X (Wolter, 2017)

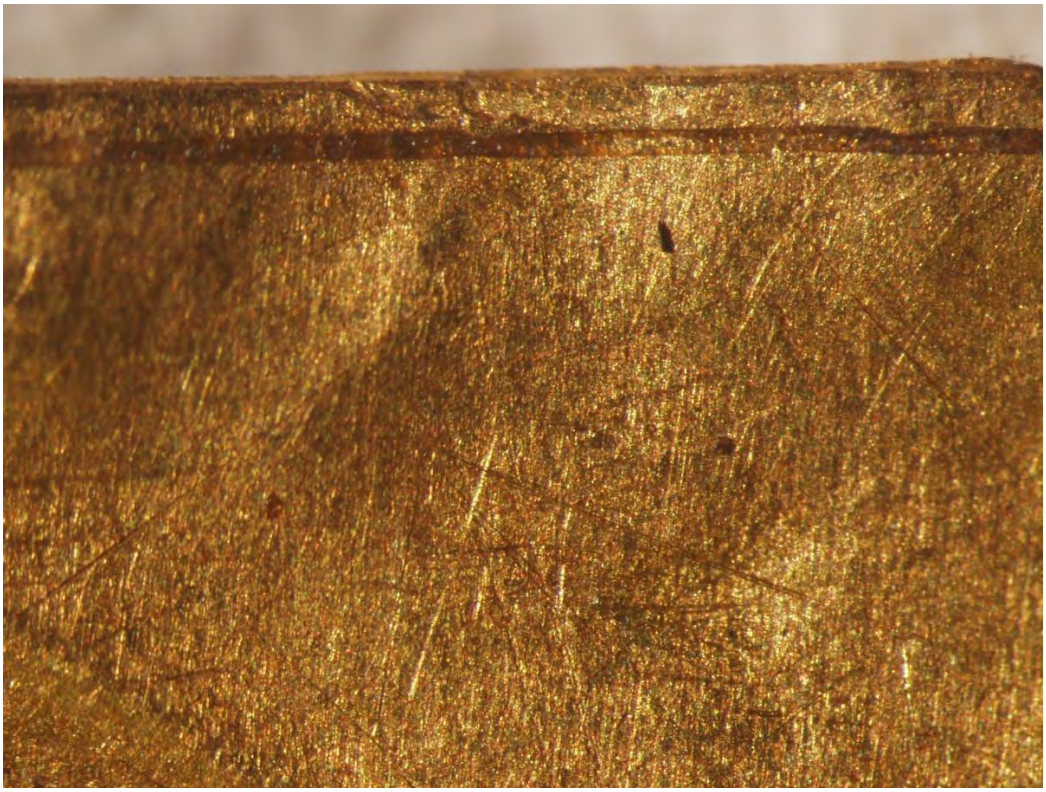

Photo #13: Thin groove along edge of back side of the lamella at 60X. (Wolter, 2017)

That same afternoon Mr. Jones and I drove over to the laboratory of Materials Engineering and Evaluation in Plymouth, Minnesota. There we documented the elemental composition of the artifact using a scanning electron microscope. Three areas on the artifact were tested and the composition ranged from 97.8 to 99.1% gold (Au) with remainder being 0.9 to 2.0% silver (Ag) with a trace amount of aluminum (Al) detected. The SEM data of the three areas tested is as follows:

Mon May 01 14:09:23 2017.

Filter Fit Chi² value: 1.859.

Correction Method: Proza (Phi-Rho-Z)

Acc. Voltage: 20.0 kV. Take Off Angle: 35.1°

Gold Lamella Area 1

Element	Element, Wt.%			Norm.		Norm.
	Wt.%		Error	Wt.%		Wt.% Err
Al	0.2	±	0.1	0.2	±	0.1
Ag	1.7	±	0.4	1.7	±	0.4
Au	98.0	±	2.4	98.0	±	2.4
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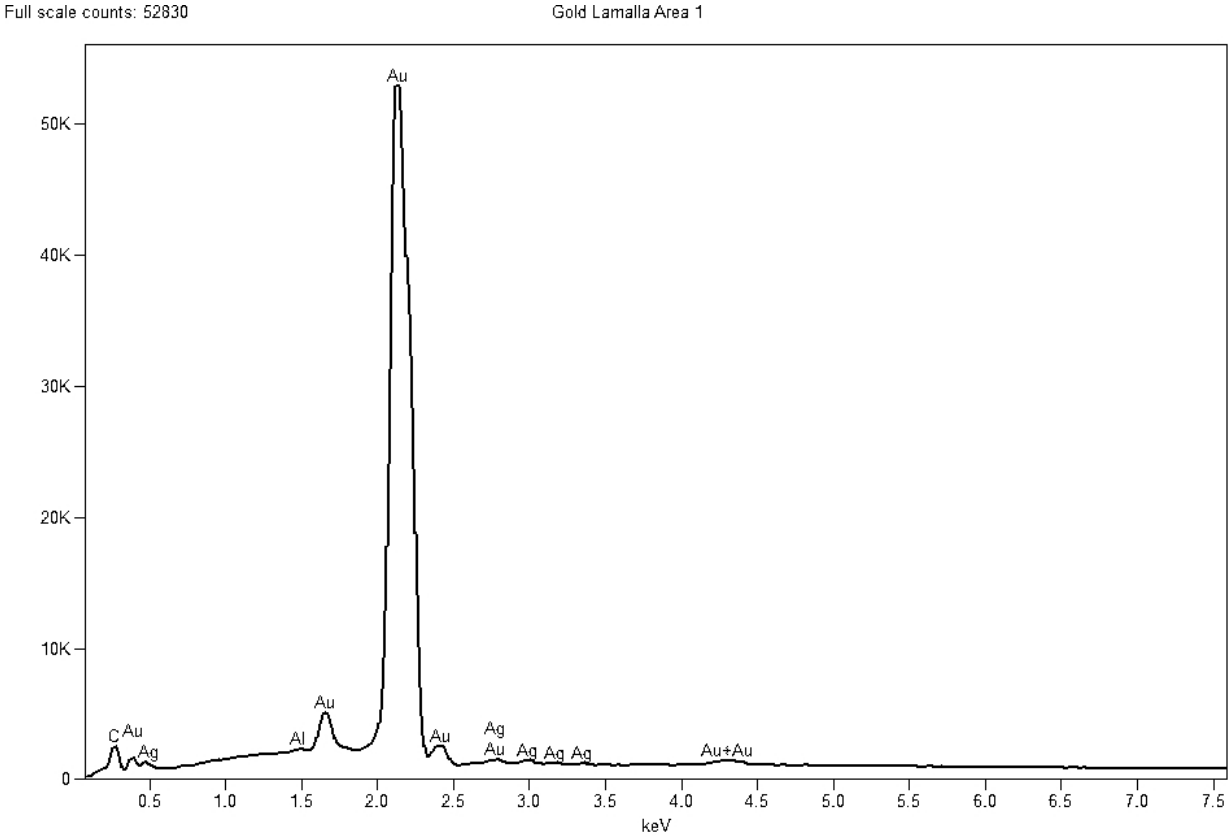
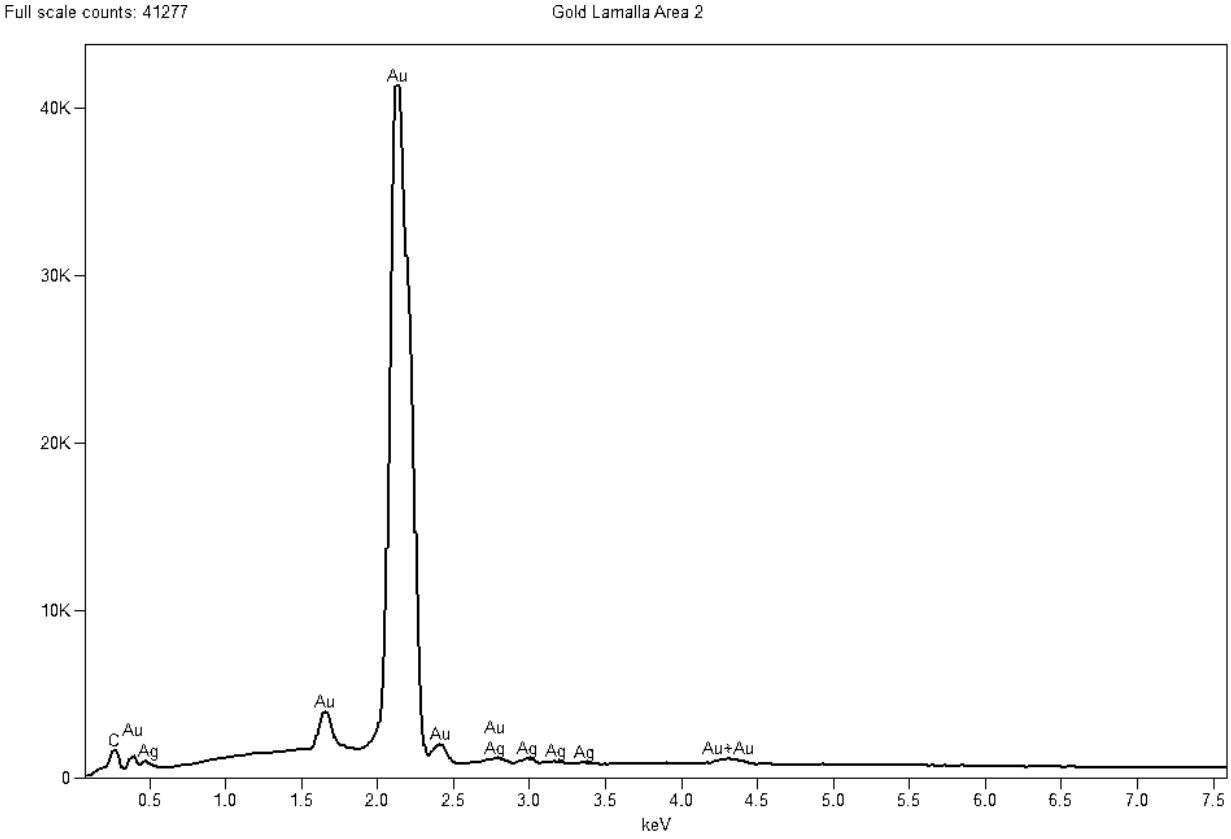
Total	100.0			100.0		



Gold lamella Area 2

Element	Element, Wt.%		Norm. Norm.	
	Wt.%	Error	Wt.%	Wt.% Err
Ag	0.9	± 0.6	0.9	± 0.6
Au	99.1	± 5.7	99.1	± 5.7
Total	100.0		100.0	



Gold Lamella Area 3

Element	Element, Wt.%		Norm. Norm.		
	Wt.%	Error	Wt.%	Wt.% Err	
Al	0.2	± 0.1	0.2	±	0.1
Ag	2.0	± 1.2	2.0	±	1.2
Au	97.8	± 5.6	97.8	±	5.6
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Total	100.0		100.0