THE DRAKE PLATE OF BRASS; ANOTHER LOOK
Written by Duane Van Dieman / The Drake Company of California

X-ray of the Shinn plate. (Courtesy Bancroft Library.)
In 1937, after being carefully tested and examined for over seven months, a plate of brass, discovered on a north bay hill in 1936 (currently being displayed at the Bancroft Library at UC Berkeley), was declared a “genuine” Drake artifact from his California landing and five-week stay in the summer of 1579. It was put on display at the San Francisco World’s Fair (the Golden Gate International Exposition on Treasure Island) in 1939 where it was viewed by millions, including members of the British royal family. Queen Elizabeth II received a copy of the famous plate in the 1970s. For 40 years “Drake’s Plate of Brasse” was considered a priceless international treasure. Written on that brass plate is the first major land claim by England (from mid-California, northward) and some consider it to be the first written document of the British Empire. The plate’s authenticity has been hotly debated in both scientific and historical circles since its reexamination in 1970s. One thing is for certain: If it is authentic, it is a priceless and invaluable artifact with major historical significance.

**THE DISCOVERY AND ORIGINAL EXAMINATION**

The plate of brass was discovered by a young man named Beryle Shinn, who found it partially buried and under a stone in an outcropping of rock near the top of a hill in Greenbrae, above what is now Larkspur Landing in Marin County. It was completely covered with a black patina, and also had crystallized plant material covering a portion of it. The thick patina made it impossible to read until it was partially cleaned several months later by Mr. Shinn, when the date, “July 17th, 1579”, was revealed. Through a co-worker friend of Mr. Shinn (at Kahn’s Department Store), who was a student at UC Berkeley, it was given the following year to Professor Bolton, head of the UC history department. Professor Bolton became elated when seeing the plate, but realized it couldn’t be confirmed as genuine without being subjected to thorough scientific testing and examination.

The testing was conducted in 1937 by Colin G. Fink, Ph.D. Sc., Head of the Division of Electrochemistry at Colombia University, E.P. Polushkin, Consulting Metallurgical Engineer for New York City and by George R. Harrison of the Massachusetts Institute of Technology. They used the most advanced scientific testing available, and the full examination took more than seven months to complete.

One observation in the final report noted that the crystalized material found on a portion of the plate alone would make it virtually impossible for the plate to be a modern forgery:

“The plant cells were undoubtedly mineralized. Occurrence of the mineralized organic tissue in the coin groove proves without any doubt that the plate had been lying on the ground, or was buried in the surface layer of the soil for a long time, since the impregnation of organic tissue with minerals is a long, slow process. Finding petrified organic remnants in the cavities of ancient metals always provides an unquestionable proof of their authenticity.”
On September 16, 1938 the final examination report was submitted to the University of California and concluded: “It is our opinion that the brass plate examined by us is the genuine Drake Plate referred to in the book, “The World Encompassed" by Sir Francis Drake published in 1628.”

It should be mentioned for the record that a person, William Caldeira, came forward several weeks after the discovery was made public to say that he found it earlier near Drakes Bay and had thrown it out of his car window near Greenbrae. Many people presumed it was just a story at the time. He said he was hoping to get some money from either UC Berkeley or the California Historical Society which had already paid Shinn $3,500 for the plate. It didn’t help Caldeira’s cause when he identified the area where it was discarded as about a half mile away from the Shinn discovery site, near the bottom of the hill on which Shinn had unearthed it (near the top). He said he showed it to the man he had been chauffeuring, Leon Bocqueraz, who later stated in an interview that he didn’t remember seeing the hole cut for the Elizabethan sixpence in the plate and also didn’t mention the slots at the top and bottom that were cut for nails.

THE RE-EXAMINATION

In preparation for the 400th anniversary of Drake’s landing, a re-examination of the brass plate was done in 1977, coordinated through UC Berkeley. It was done, in part, to help clarify where Drake had most likely made landfall and careened his ship, the Golden Hind, in 1579. A long-held theory of the exact location was being put forward for consideration by the Drake Navigators Guild (DNG) and others. The guild had lobbied for an official federal marker to be placed at their site (Drakes Estero at Drakes Bay) to celebrate the anniversary (June 17th, 1979) of Drake’s landing. To help ward off some of their critics who argued that Drake had likely found San Francisco Bay (as proven by the location of where the plate was discovered), the DNG and other supporters of sites outside San Francisco Bay encouraged a re-testing of the plate.

Between 1975 and 1977, Professor James D. Hart, Director of the Bancroft Library at UC Berkeley, organized a team of scientists to reexamine the brass plate. Among them was Cyril Stanley Smith, an accomplished metallurgist and science historian. The results of the months-long reexamination were reported to be somewhat negative, largely due to the high zinc content and rolling techniques that were uncommon with European brass of that era. That raised some doubts about the plate’s authenticity. More importantly, however, the “petrified organic remnants” of crystalized plant material found in the original 1937 examination weren’t mentioned in the final report – thus depriving the examination of one of the key elements proving its antiquity.

“The Drake Plate: A Hoax, U.C. Says” one headline stated after members of the DNG released their biased view of the re-examination. It’s important to point out that if you read the last page of the report, it doesn’t say it was confirmed to be a modern forgery - just somewhat doubtful in the eyes of the chief examiner:

“All of the features I have noted make me incline to the opinion that the plate is a modern forgery. However, I firmly believe that evidence from the viewpoint of a materials scientist is not in itself sufficient to form a historical conclusion. The opinion of an experienced curator taking into account the scientific evidence as well as all other factors is patently better than scientific evidence alone. The best of scientific measurements are historically significant only when related to comparable material – excepting only those measurements of age that depend upon invariable radioactive decay. None of my remarks should be taken as firm evidence of modernity of the plate unless and until the same criteria have been applied with negative results to ancient material of undoubted providence.”

― Cyril Stanley Smith

It is also worth noting that the scientists who reexamined the plate were disappointed by the “excessive negative remarks” by the Drake Navigators Guild stating that it was conclusive that the plate had been deemed a fake.

Although theories were put forth that the brass could have been of Asian origin (because of the high zinc content) and was constructed by using Asian smelting and pouring methods, there were no test comparisons made with 16th century Asian brass, which does have a similar percentage of zinc (approx. 35%). Brought over by “Manila galleons”, Asian brass could easily have been acquired from one of Drake’s many raids up the west coast of South and Central America. This is an important reason, besides the lack of any reference to the crystalized plant material, that I feel the reexamination was incomplete. Also, there was less magnesium detected than is found modern brass.
One argument that has been offered by some who question the plate’s authenticity is that some of the spelling is not consistent with the standards of Elizabethan times. Because most shires in England had their own way of spelling, there were no real standards. The spelling compares favorably with much of the writing in the later, published journals of the voyage; and the spelling of some words could have been altered when the journals were published. Also, if this was a carefully-planned and elaborate hoax, designed to fool experts, why would one of the words (“an” instead of “and”) be misspelled?

THE STORY OF THE “FAKE PLATE”
To answer the nagging question of why someone would promote such an elaborate hoax, Harvard historian Samuel E. Morison (who never personally examined the plate) and the DNG offered the following story with little or no evidence to back it up:

“It was a Clamper joke that got out of hand!” the guild reported. A prank by E Clampus Vitas, a fraternity of historians who enjoy having fun, was the explanation given. They went on to state that a “fake” plate was made secretly and given to Professor Bolton, also member of the organization, as a practical joke. Amazingly, nobody had the nerve to tell him – or the world – that it was a fake after the plate was determined to be genuine! To this day not one person has been confirmed to have come forward from the E Clampus Vitas organization to admit that it was a forgery and a “practical joke”. In fact, some modern members of E Clampus Vitas have “bristled at the accusation” according to one report. Incidentally, if this was set up to be a “practical joke”, why would the plate be blackened so as not readable and partially buried under a rock at such a remote location? To my knowledge, there has never been any indication or accusation that Beryle Shinn was involved in “the hoax.

So why did the DNG consider the plate a fake? In the book “The World Encompassed”, by Sir Francis Drake, there is a description of fog that lasted for the first two weeks at the careening and encampment site; “neither could we at any time in whole fourteen days together, find the aire to cleare as to be able to take the height of Sunne or starre (star).” It also states that “a plate of brasse, fast nailed to a great and firme post” was erected before the ship left the area that claimed the entire area for England as “Nova Albion” (New England). It doesn’t say in the book where the brass plate was posted. The “Larkspur Landing” area where the plate was discovered has been eliminated by most investigators as a possible Drake landing site because it gets only patchy fog due the blockage of its presence in that area by Mt. Tamalpais. Just south of the where the plate was found, however, is an area where heavy fog is common.

I believe that the Drake Navigators Guild figured it had to be a fake for two reasons: First, that they were convinced that their “Drakes Bay” location was correct, and, secondly, because of the location of where it was found. The theory of why a “fake” plate was made so the story could finally be closed. A “Clamper’s hoax” theory would enhance the plate’s uncertainty raised by its re-testing. The guild didn’t stop to consider that the actual careening site might have been in a nearby cove to the south where lasting fog is very common. I can see how the assumption that Drake left the plate at the careening site is an easy one to make. Where it was erected would also have had the best access for future explorers.

The late Robert H. Power, a former California Historical Society president around the time of the reexamination, published several articles stating that he firmly believed that Drake had found San Francisco Bay and that the Famous Drake Plate of Brass was indeed authentic. There are copies of letters available at UC Davis (links are available here on the “Discovery” page) that Power sent to scientists involved with the retesting that questioned the thoroughness and accuracy of the plate’s re-examination.

DRAKE’S JOURNEY, AND WHERE DO WE GO FROM HERE?
Upon making their 1579 California landing for their five-week stay in Marin, Drake and his men were the first English-speaking people to stand anywhere in what is now the United States of America. The 40 tons of booty (mostly silver) they took from the Spanish paid off England’s foreign debt and helped lay the foundation of what would become the British Royal Navy. The circumnavigation of the world by Drake and his men was only the second in history (after Magellan’s crew) and the journey’s great success brought Francis Drake a knighthood by Queen Elizabeth I after almost three years of being away from his wife and home of Plymouth, England.

Drake’s voyage was one of the most-important chapters in British and US history. Because of this, I firmly believe that the brass plate should be thoroughly re-examined with detailed comparisons to Asian brass from that era by an impartial, highly-qualified scientific and historical team, using the very best modern technology. The complete test results would then be released with a detailed presentation to the press, to avoid any possible influence of public opinion by private interests that might promote a biased view of its results.
If the “Famous Drake Plate of Brass” is indeed authentic, placing it at the Greenbrae (“Larkspur Landing”) location would make perfect sense if Drake and his men were encamped at Strawberry Cove. The location would insure that larger ships would be able to approach it more closely, and, importantly, if men (and possible treasure) were left at the careening site, any evidence of their encampment would probably not have been discovered.