

LOCATING 1943 GUADALCANAL BEACON 'G' FOR THE PURPOSE OF FINDING TBF-1 #125, BUNO 06063

TBF #125 SURFACE CRASH SITE OFF LUNGA POINT, GUADALCANAL, JULY 7, 1943

Determining the location of Beacon 'G' is key to finding TBF-1 Avenger Torpedo Bomber #125, BUNO 06063, that crashed at 11:10 p.m. on the night of July 7, 1943 in the waters "*off Lunga Point*", as described by Lt. Cdr. Robert Lee Savage, Jr., the C.O. of Torpedo Squadron 21 (VT-21). TBF #125 and its 3-man crew were members of VT-21, flying from Henderson Field on Guadalcanal. TBF #125 was piloted that night by Lt.(jg) Murray Charlton "Chile" McKinney (SN O-114265), with turret gunner ARM3c Jacob Casper "Jack" Durner (SN 6421589) and radioman ARM3c Richard Thomas "Dick" Dole (SN 6202987), all serving in the US Naval Reserves (USNR). They were returning to Guadalcanal from a night mission off the southern tip of enemy held Bougainville Island near the Japanese Kahili-Buin airfield, where they glide-bombed and probably sank a Japanese destroyer with a 2,000-pound bomb. Their TBF was badly damaged by enemy anti-aircraft fire and a few minutes later they were attacked by a Japanese fighter, probably an Imperial Navy, twin-engine, Nakajima J1N1 Gekko night-fighter (called an Irving by the Allies). The night-fighter killed Jack in his turret and did even greater damaged to the TBF. Chile nursed his badly shot-up Avenger 300-miles back to Guadalcanal and it's believed he chose to ditch in the sea rather than attempt a landing at Henderson Field, and when he spotted a friendly ship on patrol off the north coast of Guadalcanal, he ditched about 1-mile from her. Chile and Jack went down with the airplane, but Dick Dole was miraculously thrown clear and rescued by the USS *Skylark*, the Auk class minesweeper Chile saw on anti-submarine patrol. The deck log of the *Skylark* states: *2310 Observed TBF plane crash into water and immediately disappear about 1 mile bearing 195°T from Beacon "G". 2311 Observed burning gasoline on water from crashed plane, changed speed to 10 knots on course 200°T. 2315 Stopped all engines rescued one man R.T. DOLE, ARM3c, VF-21 [sic VT-21] – TBF 125. 2320 Proceeding to Lunga beach at various courses and speeds to send injured man to Henderson Field.* By finding the location of Beacon 'G', TBF #125 and possibly Chile and Jack's remains, might be found somewhere along the 195°T bearing from "G", likely somewhere between 3,000 and 7,000-yards from shore; that estimate being based on the usual distance for anti-submarine patrol ships off Lunga Point and the *Skylark*'s turn towards the crash, her speed, and arrival time at the crash. See: "*Part II. Chile and Jack's Crash Site...*", filename: PART-2 CRASH LTJG Murray C McKinney DPAA053022.pdf for a map showing possible crash locations along the Beacon 'G' 195°T bearing.

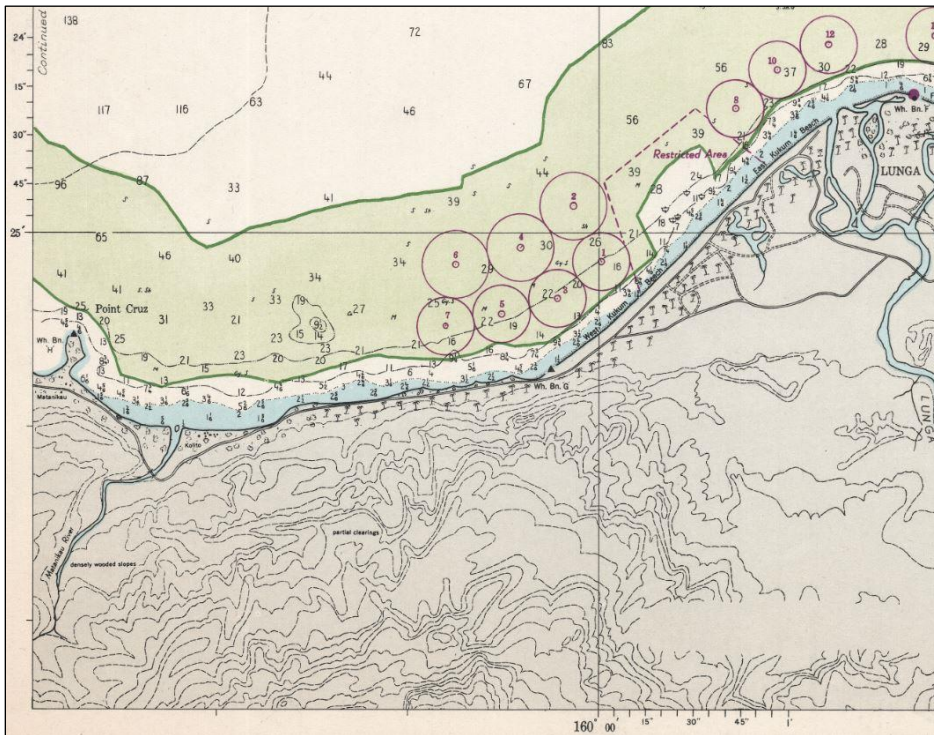
1943-44 GUADALCANAL ANCHORAGE CHART 'BC' MAPS SHOWING BEACON 'G' AND OTHER BEACON LOCATIONS

Three editions of a map titled "*Solomon Islands, Guadalcanal Island North Coast, Lunga Point and Adjoining Beaches, Anchorage Chart 'BC'*", 1:40,000 scale, were published by the US Navy, US Hydrographic Office, Washington, DC, between the July 1943, 1st Edition and the July 1944, 3rd Edition. These 'BC' maps show the locations of Guadalcanal shore beacons from the Tasimboko Bay Beacon 'N' (east) to the Point Cruz Beacon 'H' (west). Beacon 'G' is symbolized by a black triangle and labeled "Wh. Bn. 'G'" (White Beacon 'G'), located at West Kukum Beach (aka Ranadi Beach) at the southwest base of Lunga Point, which today is in east Honiara City, the Capital of Guadalcanal. The July 1943, 1st Edition map has not been found. The 2nd and 3rd edition 'BC' maps are available at: April 1944, 2nd Edition at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A93955> An exportable 1GB high resolution tiff file. July 1944, 3rd Edition at <http://alabamamaps.ua.edu/historicalmaps/World%20War%20II/Pacific%20Theatre%20Solomon%20islands.htm> Only viewable as a "plugin" onscreen. The export function did not work as of May 31, 2023. The 3rd edition map images in this document are screenshots of the plugin.

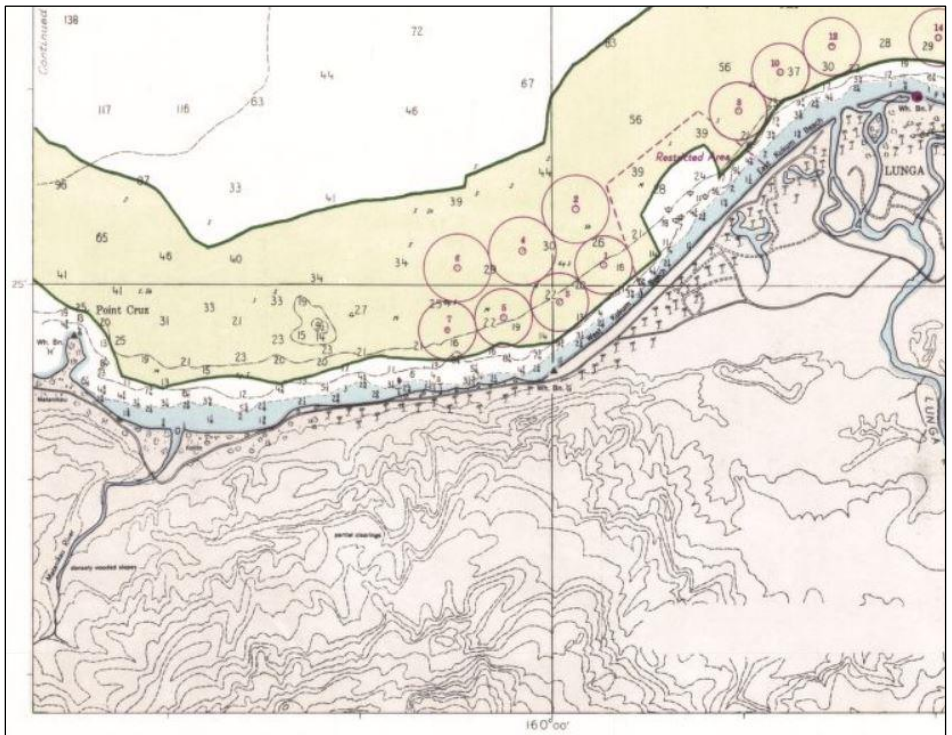
The 2nd and 3rd edition maps are identical with one exception; each map uses a different origin of coordinates on Gavutu Island to establish the latitude/longitude grid on Guadalcanal, resulting in different geographic coordinate calculations for beacons and other locations. Why the origin of coordinates is different is unknown. The origin of coordinates is described in the notes found in the left-center of each map page. The April 1944, 2nd Edition states "*ORIGIN OF COORDINATES: Observation spot, Gavutu Id., H.O. Chart 2918 with the longitude decreased by 24". Lat. 9° 06' 59" S. Long. 160° 11' 06" E.*" The July 1944, 3rd Edition states: "*ORIGIN OF COORDINATES: Observation spot, Bn. X. Gavutu I. Lat. 9° 06' 42.7" S. Long. 160° 11' 21.3" E.*"

When comparing these two 'BC' maps with Google Earth, neither map conforms perfectly to the current Guadalcanal lat/long projections, although the 3rd edition seems a better fit than the 2nd edition. However, what does not change on the 1944 'BC' maps is the locations of all physical features including beacons, roads, rivers, points, and the numbered ship berth circles and their center points. The only thing that changed on each map is a shift in the lat/long grid. Each beacon on the 2nd edition map is in precisely the same physical location as on the 3rd edition map, but because the lat/long grid has shifted, the calculated lat/long coordinate for beacons (and all other physical features) is different for each map edition. As an example, the calculated coordinates for Beacon 'G' on the 2nd and 3rd edition maps are:
 April 1944, 2nd Edition Beacon 'G' coordinate: 9°25'43" S / 159°59'45" E (this latitude is very close to the proposed 'G' location. See page-4)
 July 1944, 3rd Edition Beacon 'G' coordinate: 9°25'26" S / 160°00'1" E (this longitude is very close to the proposed 'G' location. See page-4)
Proposed Beacon 'G' location coordinates based on this research are: 9°25'42.4"S 160°00'00.1"E // -9.428441 160.000032

A comparison of the location of Beacon 'G' on the two maps is illustrated in the screenshots below that show longitude on the 2nd edition map (left) was shifted east, and latitude was shifted north when compared to the 3rd edition map. However, Beacon 'G' remains in precisely the same location. This can be directly observed by imagining a vertical line being drawn through the beacon symbol on the 2nd edition map (left), that is identical to the 160°00' longitude line on the 3rd edition map (right). The result is that each line bisects ship berth #3 to the north in precisely the same location, that is, bisecting the second numeral 2 in the 22-fathom label inside berth #3. The numbered ship berths, represented by the magenta circles, were used to help confirm the physical location of 'G' as discussed in the next section.



April 1944, 2nd Edition. Longitude moved eastward. 'G' has not moved.



July 1944, 3rd Edition. 'G' at 160°E south of berth #3 identical to 2nd edition.

BEACON 'G' 1943 PHYSICAL LOCATION USING ANCHORED SHIP'S DECK LOGS THAT NAME THE BERTH AND BEACON BEARINGS

The physical location of Beacon 'G' on Guadalcanal in 1943 and 1944 remained unchanged although the lat/long grid was shifted on the two 'BC' maps as previously described. Beacon 'G's location at the south end of West Kukum Beach (aka Ranadi Beach) has been further verified by obtaining the deck logs of ships that were anchored off Kukum Beach in numbered berths and that recorded at least 2 bearings to shore beacons that include Beacon 'G', so that the ships' location could be triangulated and the berth number verified. This also serves to verify the location of Beacon 'G'. Additional criterion is that the ship must be anchored during a similar time period as the crash of TBF #125. Five ships and their deck logs were found anchored off Kukum Beach from May 1943 through October 1943 with beacon bearings and that occupied 5 different berths (2, 5, 8, 10, and 12) out of 10 total (see previous maps). This research confirms that Beacon 'G' was accurately depicted and mapped on the 2nd and 3rd edition 'BC' maps. Beacon 'G' was located at what is today the Solomon Islands National University (SINU) Ranadi Campus, formerly known as the TS (Training Ship) Ranadi Marine Training School. The coordinate of 9°25'42.927"S 160°00'0.086"E in the following images has been adjusted to 9°25'42.4"S 160°00'00.1"E for more accurate non-Google-Earth projection. The ship's berth triangulation research is attached as an appendix.

SINU RANADI CAMPUS BEACH "OBJECT" USED AS SURROGATE FOR BEACON 'G' LOCATION



A triangular shaped beachside object at the SINU Ranadi Campus in east Honiara, as seen above in the Google Earth image using 2022 high resolution imagery (typical for all Google Earth images herein), is not a remnant of the actual beacon structure. However, based on this research, the object is thought to be very close to the 1943-44 location of Beacon 'G'. If the object persists, it could be used as a substitute for Beacon 'G', to take bearings to find TBF #125. If the object is ephemeral, then a temporary monument could replace it, or an appropriate SINU building or feature could be used. The coordinates for the object are 9°25'42.4"S 160°00'00.1"E. Interestingly, the Google Earth latitude is very close to the 2nd edition 'BC' map latitude for Beacon 'G' at 9°25'43" S and the Google Earth longitude is very close to the 3rd edition 'BC' map longitude for Beacon 'G' at 160°00'1" E. Additional evidence that this is the correct location for Beacon 'G' is provided in the following 3 images where the Google Earth measuring tool was used to determine the distance from 3 "fixed" geographic land features and then comparing that distance to the 'BC' map distance using its 1:40,000 scale. In addition, a 1968, 1:10,000 scale map of Honiara City was also used to confirm distances. The Honiara map can be found at <https://openresearch-repository.anu.edu.au/handle/1885/145247> It is understood that the farther the distance, the less precise the result and the more inaccurate the data. These 3 physical objects were chosen because they are considered to be the least changed since 1943-44.

~200-YARDS FROM BEACON 'G' TO THE SHORELINE "TURN"



Erosion, sea level rise and human activity have undoubtedly altered the Honiara shoreline since 1943-44. However, a 1992 technical report titled “*Ranadi Beach Coastal Erosion Study*” by R.D. Gillie, suggests that the shoreline at the Beacon ‘G’ location, and also at the shoreline “turn”, may be much more stable than other Ranadi beach [aka Kukum beach] locations. Gillie states “*Shoreline position changes decreased gradually toward the southwest end of Ranadi Beach at the Marine Training School. Here, there was negligible change, or a slight trend for coastal accretion of about 5-10 metres over the period 1966-1986...At the Marine Training School, accretion has occurred and the shoreline has prograded seaward up to 10m between 1976 and 1992.* The 1944 Anchorage ‘BC’ maps and the 1968 Honiara map agree that the shoreline turn is ~200-yards from the proposed Beacon ‘G’ location. Ranadi study at <https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/37/3747af6bf80e7093dff9889589d99d1a.pdf?sv=2015-12-11&sr=b&sig=kjGIDA%2FC4IcyHJPhar8IvU1JjVt5EIzAtyvcca2O2hg%3D&se=2023-11-17T01%3A29%3A50Z&sp=r&rsc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22TR0152.pdf%22>

~4,000-YARDS FROM BEACON ‘G’ TO THE MATANIKO RIVER MOUTH



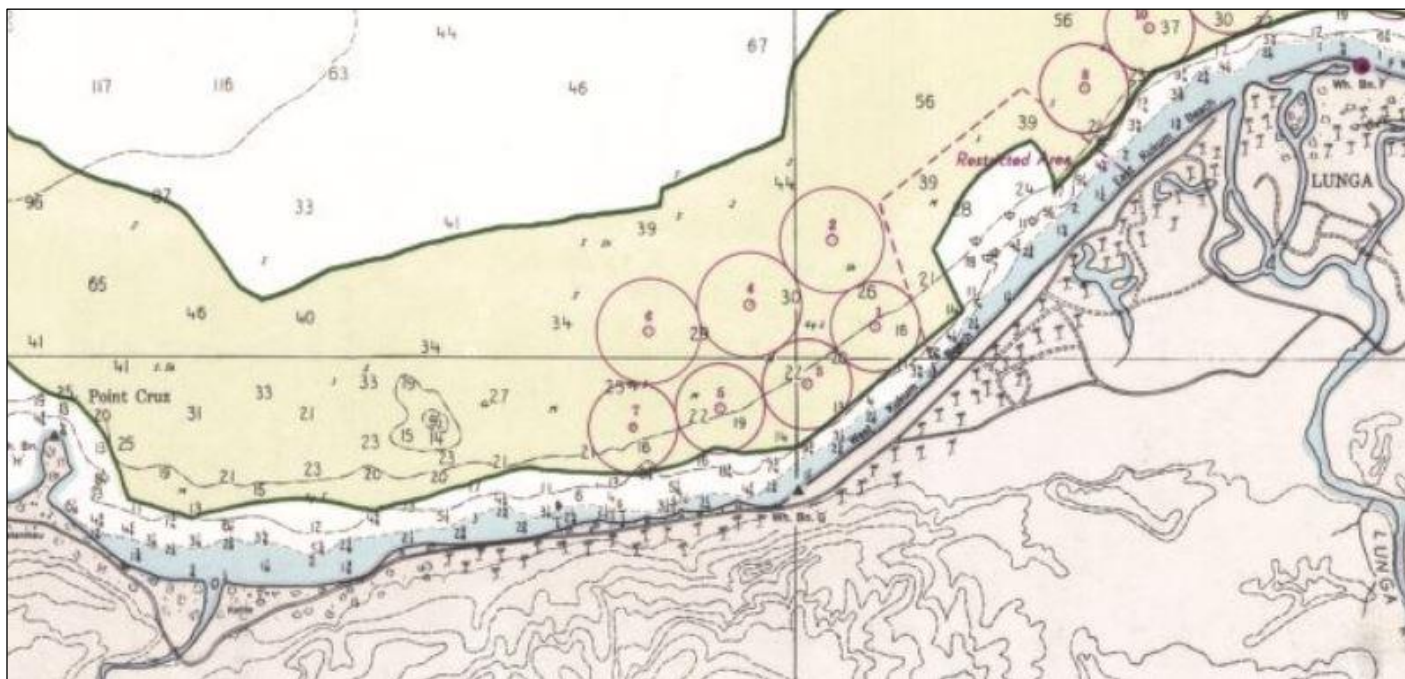
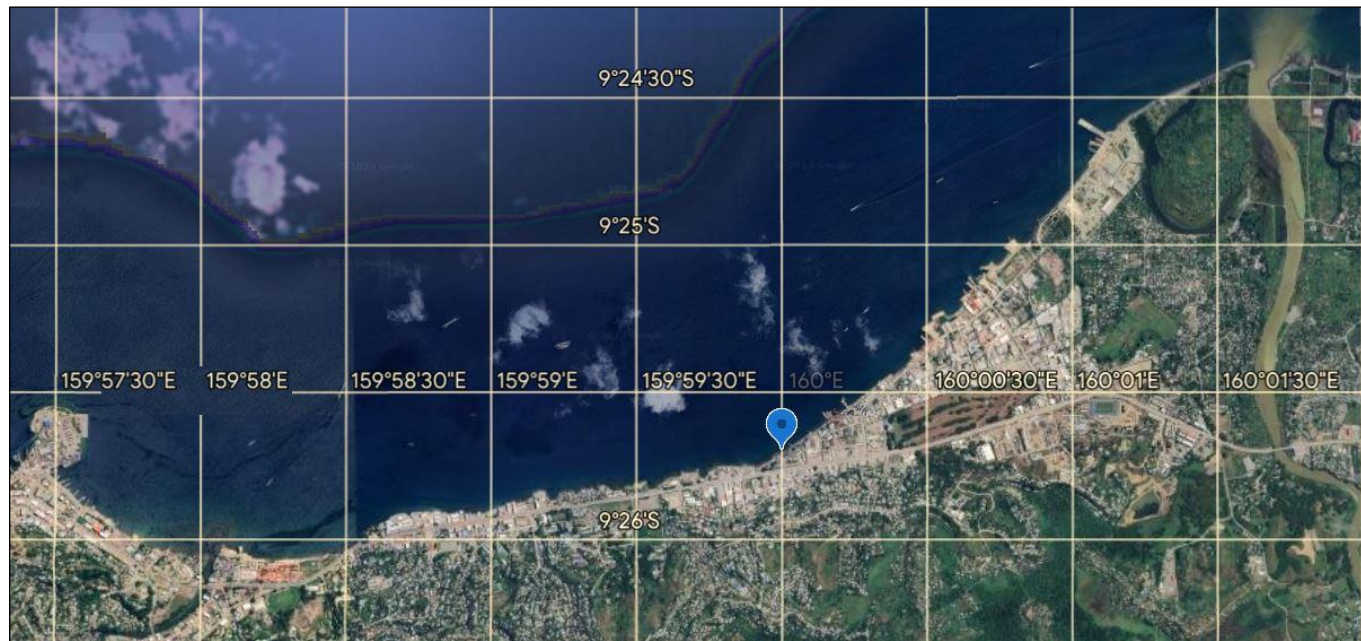
When comparing older aerial images and topographic maps with current images and maps, it appears that the mouth of the Mataniko River (aka Matanikau River) has not moved significantly, perhaps because, like much of the Honiara shoreline, it has been stabilized with jetties, wharfs and concrete docks and is also protected by naturally occurring coral reefs and rock. The 1944 'BC' maps and the 1968 Honiara map agree that the mouth of the Mataniko River is ~4,000-yards from the proposed Beacon 'G' location.

~5,200-YARDS FROM BEACON 'G' TO THE BASE OF POINT CRUZ



The base of Point Cruz was used rather than the point because the point has been enlarged over the years to accommodate containerships and other large vessels by constructing wharfs, piers and concrete docks. It is believed the centerline of the base is a better choice for measurement. The 1944 Anchorage 'BC' maps and the 1968 Honiara map agree that the base of Point Cruz is ~5,200-yards from the proposed Beacon 'G' location. **Proposed Beacon 'G' location Google map link:**

<https://www.google.com/maps/place/9%C2%B025'42.4%22S+160%C2%B000'00.1%22E/@-9.4285518,159.9999346,112m/data=!3m1!1e3!4m4!3m3!8m2!3d-9.428441!4d160.000032?entry=ttu>



TOP: Google Earth with blue pin at proposed Beacon 'G' location. BOTTOM: July 1944 3rd Edition Anchorage 'BC' map with 160°00'0"E aligned with top map. Locating Beacon 'G' to Find TBF #125