

THE CENTRAL AMERICAN TEKTITES AND STREWN FIELD UPDATE.

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In 2011, significant new data has been found for the Central American tektite strewn field (1). In 1994, Hildebrand et al. announced that in Guatemala about thirteen tektite-like glasses were found near the ruins of Tikal (2). In 1995, G. Izett et al. obtained a 40/39 Argon age on these glasses of approximately 820 ky (3). While this date is fairly close to the Australasian tektites, their low SiO₂ content of approximately 62 wt. percent classes them into a separate event. In 2006, V.L. Kowald discovered the 13+ km. Pantasma Impact Crater in northern Nicaragua. In 2010, Geologist, J. H. Cornec announced the finding of a strewn field in the San Ignacio area of western Belize. This is 50 km east of Tikal (4),(5). In 2011, veteran tektite hunter Brian Burrer led three major field trips to this area and collected approximately 80 tektites with a total weight of approximately 400 gms. (6).

At the present time (2012), there has been an estimated 200 tektites recovered from western Belize. The majority of these have poor documentation, the 80 specimens with consistent documentation have been chosen to have all their data reanalyzed by the latest 40/39 Argon dating and electron microprobe analysis as a blind study. These were submitted to R.S. Harris of Georgia State University and were found to be essentially identical to the earlier analysis (6). The Argon dating is in progress at this time by V.A. Fernandez at the University of Berlin.

The statistical results of the 80 specimens are as follows. The average weight is approximately 5.0 gms. The largest known complete specimens are likely in the range of 35 gm., but the one fragment from a large specimen indicates a possible weight of about 70 gms. One of the earlier problems was while there were interesting shapes, few were the typical splash forms of disks, tear drops and dumbbells. In the last group recovered, these forms have now been found and represent approximately 20% of the total.

One specimen obtained by Cornec in the Santa Familia area deserves special attention. Under magnification, it shows a layered structure, similar to the Muong Nong-type tektites. It appears to have a lower SiO₂ content and significant traces of both Au and Ag. More research on this specimen is under progress.

The revised electron microprobe analysis by R.S. Harris is as follows:

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|--------------------------------|-------|-------------------|-------|
| SiO ₂ | 62.49 | CaO | 4.47 |
| Al ₂ O ₃ | 17.58 | MnO | 0.17 |
| FeO | 6.45 | K ₂ O | 1.74 |
| MgO | 1.76 | Na ₂ O | 3.37 |
| TiO ₂ | 0.98 | Total Wt % | 99.01 |

The total known area of the western Belize strewn field is approximately 600 square km. There has been very little field work done in Nicaragua and Guatemala. However, if the strewn field covers Nicaragua, Honduras, Belize, Guatemala and parts of southern Mexico, it could easily be as large as 200,00 square km.

The best time to do field work is in the dryer and cooler winter months. Experience has shown that with very favorable conditions, a tektite can usually be found in about 4 hours by an experienced hunter.

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[1] Povenmire, H. 2011 The New Central American Tektite Strewn Field 41st Lunar and Planetary Science Conference, Houston, TX. [2] Hildebrand, A. 1994 Tektites Found in the Ruins of Tikal, Guatemala 24th Lunar Planetary Science Conference pp. 657 [3] Izett G. and Meeker, G. 1995 GSA Abstract pp. 207 [4] Cornec, J. and Cornec L. 2010 Western Belize Tektites – The Sequel [6] Burrer, B. 2011 Results of Three Expeditions to San Ignacio, Belize Tektite Strewn Field. Personal Communication.