

**A SPECTACULAR NEW TEKTITE FROM JEFFERSON COUNTY, GA.** H. Povenmire<sup>1</sup>, R. Strange<sup>2</sup> and D. Rathbun<sup>3</sup>, <sup>1</sup>Florida Institute of Technology, 215 Osage Dr. Indian Harbour Bch., FL 32937 (cpovenmire@cfl.rr.com), <sup>2</sup>2105 Highway 272 Tennille, GA 31089, <sup>3</sup>1501 Arizona No. 1-C El Paso, TX 79902.

**Introduction:** Up to 1959, only 12 tektites had been recovered from four counties in central Georgia. In 1970, this researcher started a field program to recover new specimens and plot out the strewn field [1].

As of the year 2001, approximately 1700 tektites have been recovered from 17 counties in east central Georgia. Most of these tektites are found along the Eocene – Oligocene boundary which runs roughly from southwest to northeast across central Georgia toward Augusta, GA [2].

In 1968, Robert Strange found a 2.3-g, very well documented tektite in extreme western Jefferson County. It measured 21 x 17 x 9 mm. Despite extensive fieldwork, no other well-documented tektites were recovered from Jefferson County. This left a gap in the distribution unaccounted for.

**A New Find:** This all changed on April 17, 2001 when Robert Strange found a spectacular 25.94 g tektite. It was recovered from a gravel lens of large, white (5-cm) quartz cobbles. This well documented, 47 x 39 x 11-mm elliptical disk was totally unchipped. From the side aspect it was teardrop shaped. It is the typical drab olive green color with no bubbles. There are several very small surface inclusions, which appear to be lechatelierite. These will be analyzed by electron microprobe. All are smaller than 1.0 mm.

**Location:** The find site is located on the USGS 7'.5 Wadley, GA topographic map. The coordinates are approximately long. 82° 28' 49". 0 W., lat. 32° 49' 27". 4 N. The elevation at this site is approximately 110 meters. This location is only about 20 km ESE of where the only Muong Nong-type Georgia tektite was found [3]. This area had been searched extensively many times before but with no success [4].

**Review:** We have believed that the Georgia tektites are eroding out of the Piedmont Plateau and are deposited as lag gravel along this boundary onto the Georgia coastal plains. The scientific value of this find is that it shows that the geological model used is apparently accurate and when a gap occurs, it means that despite how much fieldwork has been done, more is needed.

Nine other counties are suspected of producing tektites due to their geological setting, but so far fieldwork has not produced results. These counties are Dooly, Wilcox, Ben Hill, Wilkinson, Coffee, Burke, Bulloch, Candler and Toombs. It is expected that eventually, Georgia tektites will be found northeast of Augusta, GA in South Carolina. With Jefferson County now well confirmed, the Georgia tektite strewn

field is now equal to or larger than the Texas bediasite strewn field.

It was investigated as to whether any trend would show up in size, shape or chemical composition over different parts of the Georgia strewn field. In spite of critical analysis, no pattern of shapes or sizes could be found [5]. Electron microprobe analysis has shown that the composition is remarkably consistent over the entire strewn field.

**References:** [1] Povenmire H. (1997) *Tektites: A Cosmic Paradox*, Scott Publishing Cocoa, FL. [2] O'Keefe J.A. (1976) *Tektites And Their Origin*, Elsevier Amsterdam. [3] Glass B.P. et al. (1995) *Geochimica et Cosmochimica Acta*, 59, No. 19, 4071-4082. [4] Povenmire H. (1995) *LPSC XXXVI*, 1131-1132. [5] Povenmire H. (1985) *Meteoritics*, 20, No. 4