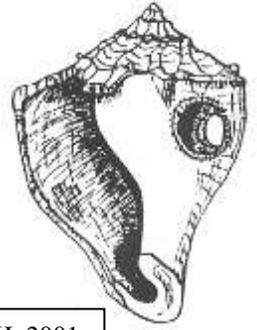


SWFAS

NEWSLETTER

THE SOUTHWEST FLORIDA ARCHAEOLOGICAL SOCIETY



JOHN G. BERIAULT, ACTING EDITOR

VOLUME 17, NUMBER 3

MARCH, 2001



OLD MARCO BEFORE THEY SPELLED IT 'OLDE': This is a splendid early postcard of the waterfront at Marco (Key Marco) showing the future Olde Marco Inn and Capt. W.D. Collier's Store sometime prior to 1909 (the date the postcard was mailed). How things have changed! – archaeologically and in every other way!

SWFAS LOOKING FORWARD TO WONDERFUL "SECOND MEETING" (UNDER NEW MANAGEMENT) AT FLORIDA GULF COAST UNIVERSITY!

Your acting editor is pleased to report that our Society is "Under new management" with the election of

Betsy Perdichizzi as SWFAS president for the year 2001. Those of us that know Betsy know that she brings considerable talent and dedication to anything she does. We should have a great and interesting time

meeting at our new location. We have a good series of speakers, several courtesy of the Florida Humanities Council.

We will be holding Archaeology Day at the Collier County Museum March 18th, and it will not be long before the Florida Anthropological Society will hold the annual Conference at Saint Augustine.

Inside this Newsletter

- 1 We are Moving!** Florida Gulf Coast University will be the new site of our General Meetings
- 2 Whaz-Up?** Read about what our sister chapters are doing...
- 3 Read the Quote of the Month :** Thanks to Linda Ballou...
- 5 Splashdown – Part Two!** Read (and welcome back!) Dr. Robert Gore...

THE DATE BOOK

March 14th SWFAS Board Meeting – Hampton Inn, Bonita Springs, 7:00 PM

March 21st, 2001 General Meeting – HELD AT FGCU MAIN CAMPUS – TAKE EXITS 19 OR 20 EAST OF I-75

About SWFAS

The directorate: President Betsy Perdichizzi, first vice president Don Taggart, membership secretary Charlie Strader, treasurer Charlie Strader, recording secretary Jo Ann Grey, directors Steve Tutko, Sue Long, Dottie Thompson, Jo Ann Grey, Charles Dugan, Jack Thompson, Tom Franchino, John Beriault and Charlie Strader.

The committees: Field: Beriault, 434-0624; Hospitality: position open; Membership: Charlie Strader; Publicity: Dottie Thompson, 597-2269; Sales: position open; Finances, Jack Thompson 597-2269, 774-8517; Lab: (774-8517), Art Lee, 261-4939, Walt Buschelman, 775-9734, Jack Thompson, 597-2269.

To Join: Address your check to the Southwest Florida Archaeological Society, P.O. Box 9965, Naples, FL 34101. Dues are: Individual \$20, Individual Sustaining \$50.00, Family \$35, Student \$15.

Any questions, comments, contributions to the Newsletter: John G. Beriault, acting editor, P.O. Box 9074, Naples, FL 34101-9074 or Email to: JGBeriault@aol.com.

DUES ARE DUE!

Friends, it's that time of year again to remind you that SWFAS membership dues are due and payable January 1st, 2001. We're not like the phone or power company – can't remind you by turning off the utility. We hope you will see this notice and sit right down and send us a check payable to the **Southwest Florida**

Archaeological Society, P.O. Box 9965, Naples, FL 34101-9965. As a group we've had a positive impact in informing people, preserving our historic and prehistoric resources, and just plain enjoying each other's company and having a good time! Please help us by staying with us and sending in your dues. Thanks!

Here's What's Happening in Other Societies:

ARCHAEOLOGICAL SOCIETY OF SOUTHERN FLORIDA (ASSF)

Editor n Lloyd 453-1660
January 2001

For Archaeology Month in March the Pensacola Society is planning a bus tour for March 17 and 18 to tour archaeological sites in the Tallahassee area. The bus leaves march 17, stay overnight in Tallahassee, and return on the 18th. Drs. Bense will lead the trip to San Luis Mission site, Lake Jackson and the state museum. Dr. Bense will secure local experts for both segments and lead the museum tour herself. San Louis de Talimali was established in 1633 as the mission center and military garrison. It was the headquarters for the

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Franciscan mission effort with the Apalachee Indians until 12704, when it was destroyed by the English colonists and Indians from South Carolina (Degan 1987)

Cutting Edge Technology Used in St Michael's Cemetery. Ground penetrating radar (GPR) equipment, by NASA archaeologist Dr. Marco Giardino and two others from Lockheed Martin, was used on the cemetery to determine if GPR could be useful in delineating unmarked burials in the cemetery. Five areas around the site were chosen for testing. Approximately 50 anomalies that fit the signature of a known burial were recorded, in pathways, roadways and in open areas.. Some readings suggest multiple stacked burials. There may be a large number of unmarked burials in the cemetery and there is support for this theory. Computer readings suggest that this approach could be useful in delineating unmarked features.

CENTRAL GULF COAST ARCHAEOLOGICAL SOCIETY (CGCAS)

Archaeology Month celebration on March 10th in the St. Petersburg Society call for an Archaeology Day

and Indian Village Opening. Mac Perry will lead the discussion. This is an opportunity to tour the Village before is scheduled to open March 24th. The main mound has been sodded, demonstrations tables built, framework structures erected on the mounds. The planned activities to teach both adult and children the value of preserving middens and other cultural resource sites, the methods and techniques used by archaeologist in studying sites ranging from excavation to sorting an classifying artifacts in the lab.

**VOLUSIA
ANTHROPOLOGICAL
SOCIETY (VAS), Ormand Beach
FL**

The Ormand Beach society January newsletter contained a lengthy and well written article "The Prehistoric Timucua" by Louis Lumaghi, tracing the history of the 14 or 15 tribes named by the Spanish c. 1600. The tribes spoke possibly eleven dialects of a common language. It was their speech, for lack of political or even cultural unity, that set them off as a distinct people.

(Three explanatory maps and enlargements of the area identify the range as far north as the Altamaha River rising about St. Simons Island, stretching almost to the west coast and flowing down past Ocala encompassing the Withlacoochee River and the Oklawaha almost to Orlando area.) Lumaghi points out that the Timucua villages were not fortified by palisades as portrayed by Le Moyne and de Bry. They consisted

instead of round log walled, thatched houses, each containing a central fire pit and a raised platform serving as couch or bed. Community structures included houses for drying, smoking, and storing food, a maternity house, and a large round open-roofed council house capable of accommodating 2-3,000 people. There were no temples but worshipped sun and moon gods with the aid of images.

New Book of Archaeology, "Treasure of the Calusa," by Ryan J. Wheeler, an important new book on the archaeology of Southern Florida is now available. *The Johnson/Willcox Collection from Mound Key Florida* focuses on an interest cache of artifacts found on Mound Key over 100 years ago by Frank Johnson and his sons. Veritable treasure of Indian and Spanish artifacts, including glass and crystal beads; silver, copper, and gold ornaments; as well as items of shell, bone, and stone were found ..the cache ended up in the University of Pennsylvania Museum and this book presents the first synthetic study of this collection.

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February 21st Meeting, Gulf Coast University, as a new meeting place for SWFAS,

promises to be a good move. The January meeting, with Dr. Robin C. Brown, filled the room to capacity. The suggestion was made that we should perhaps meet in a larger hall, one that will hold 60 people. Tentative arrangements are being made to have a social at 7:00 in the Academic Building Three, Room 116 and be guided to the meeting hall. February 21 guest speaker is Mrs. Barbara Sumwalt of Useppa.

SWFAS March Archaeology Month plans discussed.

**Quote of the
Month**

Contributed by Linda Ballou

"It takes very special qualities to devote one's life to problems with no attainable solutions and to poking around in dead people's garbage; words like 'masochistic,' 'nosy,' and 'completely batty' spring to mind." (Paul Bahn. 1989 *Bluff Your Way in Archaeology*)

Interesting News From Other Archaeological Societies in Florida

THE ARCHAEOLOGICAL RECORD, Pensacola, FL

Field Trip, bus tour, to Tallahassee. The group they will visit the San Luis Mission, Lake Jackson Mounds, and the State Museum, lead by Dr. Bense and Dr. Benchley. This is an over night stay in March 17 and 18. In mid February the society toured various mills which represent a significant part of the history of Northwest Florida.

ARCHAEOLOGICAL SOCIETY OF SOUTHERN FLORIDA, Miami, FL

"The environmental movement of the 1960's" made people more ecologically conscious and aware of environmental changes and is a "major driver" behind the surge in amateur science, "it's part of a wave of more volunteerism throughout our society," says Forrest Mims III, amateur atmospheric scientist. There's more of a societal push for people to participate and to do it in a meaningful way." It is the involved amateurs in collaboration between professional scientist and their nonprofessional counterparts that is becoming more visible in astronomy, archaeology, geology, ecology, even marine biology and health.

Also Happening: Richard Stucky, chief curator at the Denver natural History Museum, instituted a

paleocertification program in 1971: now ten years later more than 100 people have graduated. Last year, 189 volunteers logged more than 32,000 hours-the equivalent of 16 full-time employees. (Reprinted from The Christian Science Monitor, June 15, 2000.)

CENTRAL FLORIDA ANTHROPOLOGICAL SOCIETY, Maitland, FL

Archaeologists dig on site of George Washington's, the nation's first president's, whiskey still. It was the largest whiskey distilleries of his time. The team uncovered



Celebrating *Florida's Lost Tribes*, for Archaeology Month, the society is preparing an exhibit of prehistoric and historic artifacts and art from this area. "Featured will be paintings by Theodore Morris of Sarasota, depicting native cultures that have disappeared over time, and the pottery of Dorothy Domingo. New College students helped design the exhibit describing the major cultural periods of prehistory and history of archaeology in Sarasota County. T shirts and mugs, with a design by Morris will be available for purchase.

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the foundation of a 75 by 30-foot distillery during a 1997 survey. Records show Washington built it in 1797, two years before his death, and it produced 11,000 gallons of corn and rye whiskey from 1798 to 1799. The whiskey was sold or traded to farmers and prominent local families. Ledgers show the Lees, Randolphins and Fitzhughs were regular customers. The five-still project earned \$7,5000, one of Washington's most profitable ventures. The Mount Vernon estate will be renovating the distillery with the help of a \$1/2 million grant from the Distilled Spirits Council of the United States. (Associated Press)

CENTRAL GULF COAST ARCHAEOLOGICAL SOCIETY, St. Petersburg, FL

The society is constructing an Indian Village, and has completed one of two thatched structures. It will be a significant tool for schools and groups in the area. They are working to complete it before their observance of Archaeology Day, March 24.

**SOUTHEAST FLORIDA
ARCHAEOLOGICAL
SOCIETY, INC,** West Palm
Beach, FL

A stone pendant and a clay effigy were among the collection of artifacts found on the Florida ridge located in the lake country of Central Florida. Ann Reynolds, presented a program and exhibited the artifacts.

Also Happening: The antiquity of 85 Indian canoes discovered sticking out of a lakebed near Gainesville last April, was confirmed by archaeologists. This discovery in Newnan's Lake was the largest of its kind in the U.S. The canoes, dated from 500 to 5,000 years old, with most built between 3,000 and 5,000 years ago, were discovered by high school students working on an environmental project.

**TIMESIFTERS
ARCHAEOLOGY SOCIETY,**
Sarasota, FL

Theodore Morris, artist
The exhibit will be open March 3 to May 12 at Sarasota County Historical Resources, 701 North Tamiami Trail, Sarasota.

**VOLUSIA
ANTHROPOLOGICAL
SOCIETY,** Ormond, Beach: Will hold a Northeast Florida Plantation Symposium March with speakers tracing history from 1763 when East Florida became a British colony establishing the plantation legacy. A dozen speakers will lecture on Indigo and Rice production, Sugar plantations, architecture, plantation workers,

the role of native American in plantation operations and more.



POTSHERDS AND

**POTSHOTS... AN
ONGOING SERIES BY
ROBERT GORE**

**BIRDSHOT AND THE
BEACHBALL. 11.**

Previously we looked briefly at the Chicxulub Impactor and astroblemes, or "star-blemishes," with an eye toward considering some possibilities in regard to Lake Okeechobee. But before proceeding further we need to introduce some perspectives in physics. First, any "starfall" onto earth involves questions of proportionality. First, the difference between a meteor and an asteroid is one of proportion. Broadly defined, a meteor ranges in size from dust motes to table-sized objects several yards wide. Many are shattered pieces of asteroids, but most are believed to originate as debris from comets. Their

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main orbits lie respectively either between Jupiter and Mars, or far beyond that of Pluto, the most distant known planet in the Solar System. Asteroids, on the other hand, are larger objects (sometimes called planetismals) that originate from the accretion and/or break-up of space debris. They may range from boulders several hundred feet wide to mini-planets 500 miles wide. As noted, their main collective orbits lie between Jupiter and Mars. Although they all circle the sun from afar, some asteroids have erratic orbits that carry them well inward in the solar system. Some come frighteningly close to earth. And some collide with it.

A further proportionality becomes evident when asteroids are compared to planets. An asteroid 2-10 miles wide such as the Chicxulub Impactor, hurtling into the roughly 8,400 mile wide planet earth, is not a large projectile in relation to its target. In fact, relative to the size of the earth, the projectile is but a mere speck of dust, barely greater than one one-thousandth of the planet's diameter. In other words, it both the Chicxulub asteroid and the earth could be reduced

suitably in size, a 10-mile wide asteroid hitting the earth would be approximately equivalent to a single pellet of No. 7 1/2 birdshot (2 mm wide) slamming into a 68 inch wide (1,700 mm, or 1.7 m) stone beach ball. Are you with me quail and dove hunters?

Size is one thing, speed is another--particularly an object's entry velocity into the earth's atmosphere. An asteroid traveling at 100,000 miles an hour is racing along at nearly 1,670 miles per minute, or about 28 miles a second. Such an object would thus pass over a land mass equivalent in length to the present Floridan peninsula in about 15 seconds. Here is where the branch of physics called hypervelocity kinetics comes into play. Hypervelocity kinetics formulates the laws that govern ultrahigh-speed impacts, such as No. 7 1/2 birdshot on quail, micro meteorites on space shuttles, or asteroidal impacts on planets--or limestone peninsulas. In short, the overall effect caused by an impactorally depends on both its size and its speed at the time of impact. That's one reason why bullets and birdshot are so lethal.

The third proportional factor entering this hypervelocity scenario is mass. This value can be related to both the size and to the density of the flying object. If our No. 7 1/2 birdshot was made, for example, of uranium instead of lead, its mass would be almost two times greater although its size (denoted by 7 1/2) remained the

same. Similarly, No. 7 1/2 birdshot made of copper would be about three times lighter, less dense, or lacking in mass. In other words you would need three copper shot pellets to equal the weight of one pellet of lead. Even so, any No. 7 1/2 shot traveling at 100,000 miles per hour, be it made of uranium, lead, or copper, remains a mass to be reckoned with. If you want to test this for yourself have someone drop a pellet of No. 7 1/2 lead shot onto your head from ten feet up; then drop the same pellet from the top of the World Trade Center. Be sure you wear a very thick helmet though. Velocity matters--particularly the velocity imparted by gravity to an object falling onto earth from outer space. And even though size, as well as mass, are important to a hypervelocity physicist, there still occurs a point of irrelevant consequences. Your survivability under a 10 mile wide asteroid traveling at 100,000 miles per hour whether falling onto you from ten feet up, or from 1000 miles up, would be equally poor. Your ashes would just be buried deeper.

There is an old joke about car crashes: It's not how fast you go that kills you, it's the sudden stop. This aphorism can be applied

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broadly to extra-terrestrial impactors. For example, there is ample evidence for still another type of destructive capacity. The so-called "Tunguska Event" in Siberia in June, 1908 killed dozens of Siberian reindeer and destroyed some 1,300 square miles of remote forestlands in a 30-40 kilometer radius (18-25 miles) from the point of explosion and impact. The object, which was never recovered, is now believed to have been a 100 meter wide (325 feet) fragment of a comet that exploded in the atmosphere, rather than actually penetrating the earth's surface. Still, the damage was both considerable and widespread. When it comes to surviving asteroids or comets, regardless as to whether you are a dinosaur or some other animal, your chances are vanishingly small. Some meteor falls, on the other hand, are survivable, as we shall see in a future column. Proportionality.

There may be a rueful up-side to all of this. Because of the Chicxulub Impactor's hyper-sonic entry speed any living animals in the region would have remained essentially unaware of their impending doom. Hearing nothing, with

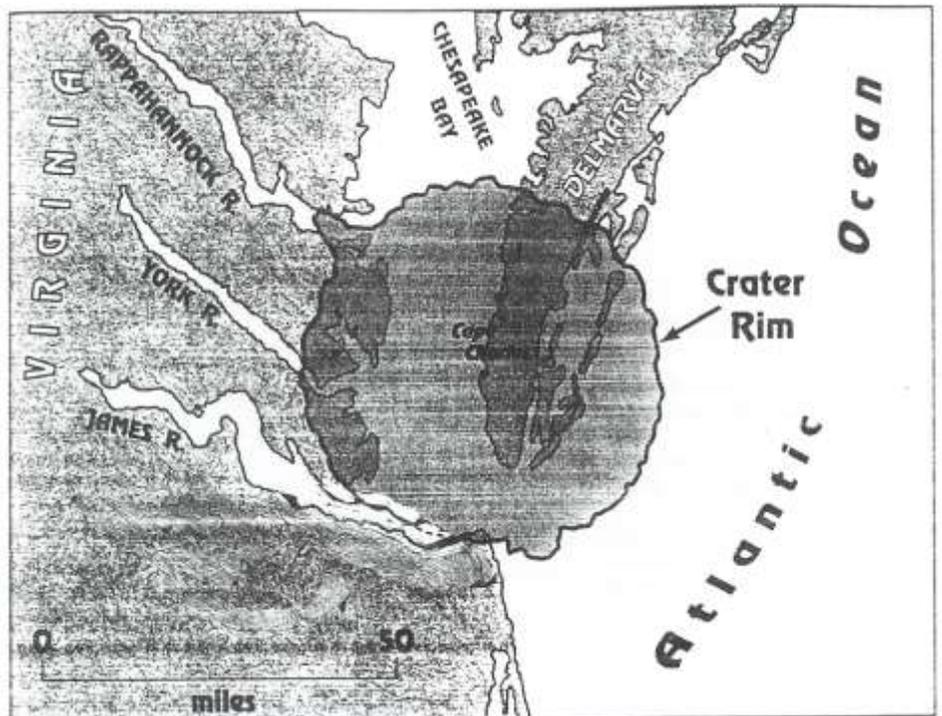
little if any forewarning, all life within a radius of 600-1,000 miles from impact center would have been Instantly incinerated, dying without a whimper in the bang. Their only indication of peril would have been a Geographical extent of the sudden and massive compression of the atmosphere above and around them just before the rock struck. They would not have to worry about the subsequent impact explosion.

Furthering the doomsday scenario, some scientists have suggested that the Chicxulub fireball may have heated the atmosphere rushing back Into its vacuum path to over 50,000 degrees Fahrenheit (nearly twice the boiling point of iron), and ignited a vast conflagration that could have spread across the nearby continents(at that time much closer together owing to seafloor spreading and continental drift). An estimated 25% of the world's total vegetation may have been consumed in such a firestorm. The huge and pervasive clouds of smoke, combining with an estimated 200,000 cubic kilometers of pulverized sediments (about 48,000cubic miles, or about 80% of the total area of Florida excavated one mile deep) thrown Into the air by the asteroid's impact are hypothesized to have created a globe-enshrouding cloud layer that blocked incoming sunlight for years if not decades. This would have caused the death of any plants that survived the firestorms, and thereby affected the survival and reproduction of most herbivores.

Contrary to Jurassic Park fiction, most dinosaurs ate plants. Carnivores, then as now, occupied a lonely apex in the food web.

These effects, however, tie neatly Into one more proportionality: palaeontological change. The Chicxulub Impactor's

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 years earlier (225 million years BP), came to a palaeontologically sudden and species-shattering end. What is not controversial is that the demise of the dinosaurs forms one of several temporal signatures for the end of the limestone-chalky Cretaceous Period.



adverse environmental effects, spread over decades and centuries, are now believed to have led to the eventual extinction of the dinosaurs. The data remain controversial, but some paleontologists think it may not have been a coincidence that a few million years after the asteroid's Impact the Great Age of Dinosaurs, begun in the Triassic Period approximately 160 million

Figure 2. The Chesapeake Bay Impactor. A) The impact site super-imposed on modern day geography. After Poag, C. W. 1999, Chesapeake Invader. Princeton Univ. Press, Princeton, NJ.

And, with the dinosaurs gone, the mammals were given the evolutionary chance in the subsequent Paleocene Period to exploit their regulatable body temperatures, live-birthing abilities, and brain development, thereby

TABLE 2

Extra-terrestrial Impact Sites in the United States

Site Name	State	Diameter	Age (years)
Broken Bow Crater?	NE	1 mile	3,000 yrs?
Crooked Creek Structure	MO	3-4 miles	300 million
Decaturville Dome	MO	3.7 miles	~300 million
Flynn Creek Disturbance	TN	2.3 miles	360 million
Haviland Crater	KS	55 feet	Recent
Kentland Disturbance	IN	3,200 ft	300 million
Manson Structure	IA	20 miles	74 million
Meteor Crater	AZ	4,200 ft	50,000
Odessa Crater Field	TX	530 feet	200,000
Red Wing Creek	ND	5 miles	200 million
Serpent Mound	OH	4 miles	300 million
Sierra Madera	TX	8 miles	100 million
Wells Creek Basin Field	TN	360 ft-3 miles	200 million
Chesapeake Bay	DE/MD/VA	50 miles	33 million

Data from Norton, O. R., 1994. Rocks from Space. Mountain Press Publishing Co., Missoula, MT

becoming dominant. One such group, the primates, would soon reign supreme at the top of the evolutionary and ecological food web--and eventually some of these would collect and study extra-terrestrial impactors and begin to sort out earth's geological and palaeontological and eventually anthropological history.

But this Chicxulub scenario, although satisfyingly dramatic, is not something that has happened a lot to earth, has it? Indeed, It has. Although the eco-palaeo-geological consequences are not often so clear. For example, at least 300 potential impact craters are known on earth, with 12 being found within the United States. And these are just the ones above present-day sealevels--the deep sea may hide even more. True, most of them have deteriorated or been nearly obliterated by the ravages of

time, weathering, and earth movements; but they remain nonetheless identifiable--some more so than others. There is solid evidence, for example, that an asteroid estimated to be between two and three miles wide smashed into the DelMarVa peninsula on the upper middle Atlantic coast of the United States.

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The crater it produced is now known as Chesapeake Bay. (Figures 2, 3]

It may prove disquieting to some to realize that Mother Gaea has been a celestial target for the slings and arrows of universal fortune for all of her 4.5 billion year history. She has covered most of her facial pockmarks with the pancake makeup of sediments, soils, rocks and water. Thus, accurately correlating the eco-palaeo-geological consequences of her blemishes remains exasperatingly difficult, although if the

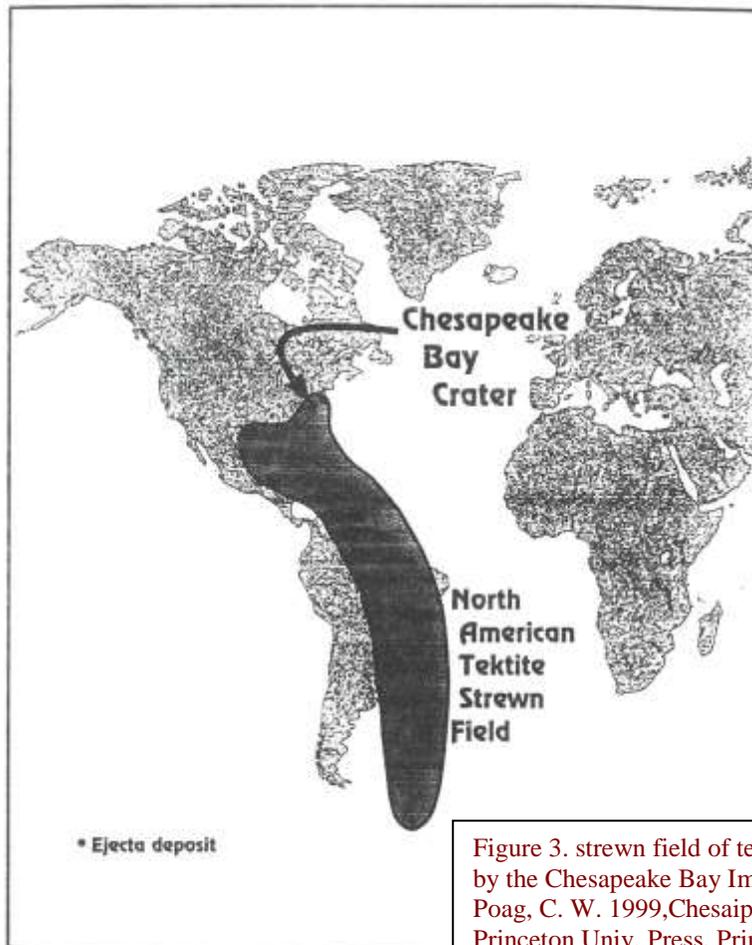


Figure 3. strewn field of tektites caused by the Chesapeake Bay Impactor. After Poag, C. W. 1999, Chesapeake Invader. Princeton Univ. Press, Princeton, NJ.

Cretaceous-ending Chicxulub scenario is any guide there certainly should have occurred similar catastrophic changes in other geological periods. In fact, the Chesapeake Impactor in the Late Eocene, noted above, is closely associated in time with another extinction event that marked the transition into the Oligocene Epoch.

Now let's Insert another preview of coming attractions. As noted earlier, most impact craters on earth have been detected by eye, or by aerial or satellite photography. The obvious craters share one feature--they all look like circles with a depression in the center. The less obvious ones, more deeply buried, more severely weathered, many filled with water and named as lakes, are often detected by what they suggest took place underneath them. Thus they exhibit a sort of Platontan geological ideos where things are not so much. as they seem today as what they suggest they once were. We'll close this philosophical circle a bit more next time.