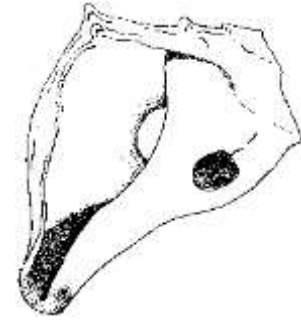


Southwest Florida Archaeological Society Newsletter



BETSY MCCARTHY, EDITOR

Vol. 21 No. 6

June 2005

FAS ANNUAL MEETING

By Jack Thompson

The annual meeting of the Florida Anthropological Society was held in Gainesville at the Hilton Hotel and convention center. The hotel was excellent as were the meeting areas. Over 200 pre-registered. On Friday, May 13, FAC and FAS board meetings were held. That evening FAC hosted a party at which Gerry Milanich received a lifetime service award. He was both praised and roasted. The wine and champagne flowed freely and the hors d'oeuvres were bountiful.

Two SWFAS members; Dottie Thompson and Don Taggart received awards for contributions to the chapter's efforts.

Saturday there were three meeting rooms where 20-minute speeches ran from 8:10 am to 4:50 pm. After a short business meeting, a banquet with cash bar began. Chris Newman of the CARL program received the Bullen Award, which was greatly deserved.

The guest speaker became ill and Dr Milanich masterfully stepped in for him, with little warm-up time.

The UF staff, which put this meeting together, deserves a sincere thank you.

Next year we will be meeting in Stuart, Florida.

SWFAS MEMBERS RECEIVE AWARD

Two long-time SWFAS members were honored with awards from the Florida Anthropological Society at the Annual meeting.

Dottie Thompson and Don Taggart received well-deserved awards for their contributions to our chapter activities. Congratulations to both of you!



Some of us slipped out briefly to visit the Butterfly Rainforest, which is part of the Florida Museum of Natural History complex.

WELCOME

SWFAS welcomes new member Cati Femal from Bonita Springs!

CRAIGHEAD LAB REPORT

By Jack Thompson

As usual, some of our members have gone north for the summer. Jean Belknap, Jack Harvey, Liz Clement, Betsy McCarthy, Art Lee, and Jack Thompson will hold things together until fall. We still work on the Olde Marco Inn project for Bob Carr and on preparing Strader results for John Beriault, as well as meeting the public each Tuesday and Thursday morning.



Photo by Nora Belknap

Lab Rats, left to right: Jack Harvey, Jean Belknap, Betsy McCarthy, Jan Gooding, and Liz Clement

The "lab rats" were invited to the museum's volunteer award luncheon and were surprised to receive awards. The Lab was presented a special award for its contribution to operations of the Museum. Art, Jack Thompson, Jack Harvey, Betsy, Jean and Liz were given certificates for hours worked and silver or bronze pins from President Bush.

We will welcome a visit from any and all of you some Tuesday or Thursday morning.

ABOUT SWFAS

The Directorate:

President – Corbett Torrence

1st VP – Theresa Schober

2nd VP – Tom Franchino

Recording Secretary – Jo Ann Grey

Treasurer – Charlie Strader

Membership – Charlie Strader

SWFAS Committees:

Field – John Beriault

Lab – Jack Thompson

Hospitality – Jeanne Sanders

Education – Dr. John Worth

Finance – Charlie Strader

Publicity – Victoria Rans

To Join: Address your check to:

The Southwest Florida Archaeological Society,

PO Box 9965,

Naples FL 34101.

Dues are:

Individual - \$20. Sustaining - \$50.

Family - \$35. Student - \$15.

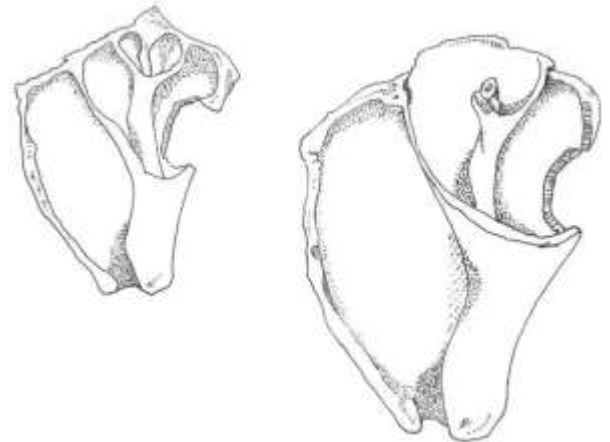
QUESTIONS, comments or contributions to the newsletter: Betsy McCarthy, 909-8 Augusta Blvd., Naples, FL, 34113, or e-mail:

popismom@hotmail.com

or groucho@naples.net

Board meetings: 2nd Wednesday of the month
at 7 PM, Hampton Inn, Bonita Springs

All welcome



Gastropod Hammer Type C

GOOGLING ARCHAEOLOGICAL SPACE DUST

by Jack Harvey

The great South Florida Archaeologist and commentator on all things of earth, Dave Barry, explained why everybody in the world is gaining weight. Barry says the universe is responsible because 25 tons of space dust lands on the earth every day, thereby increasing gravity.



NASA Scientists Studying Space Dust

Could space dust also account for some of the rise in surface elevation that we see at archaeological sites in South Florida? The surface rises with time even when there are no obvious shell mounds built up by the Calusa. Consider Heineken Hammock for example. When we dug this site in 1987, we found a whelk shell at a depth of about 25 centimeters. Radiocarbon dating showed it was about 4000 years old. Was a significant part of the material we found *above* the Heineken Hammock whelk shell deposited from outer space?

The Search

Answering questions like this in 1987 was very difficult, but now we have Google to perform instant Internet

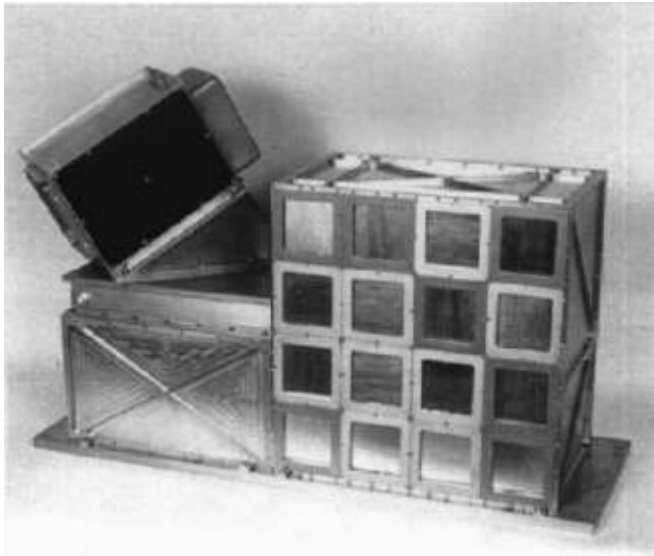
searches for us. It quickly found many estimates of the rate that space dust is falling to earth published by various authors. I reviewed several and found that the estimates differ widely. They ranged from 900 thousand grams per year, through 2.7 million to a high of 170 billion to the current latest estimate of 150 billion grams per year.

The two largest values (170 and 150 billion) were by the same author, Zdenek Ceplecha, writing in 1992 and 1996 in *The Astrophysics Journal*. So who's this Ceplecha guy? Google found lots of scholarly references to his articles published in various astronomy journals such as *Bulletin of the Astronomical Institute of Czechoslovakia*, *Astronomy and Astrophysics*, *Journal of Geophysical Research* and others going back to 1951. His astronomy specialty is comets, meteors and other small inter-planetary bodies with considerable published research on their collisions and the resulting debris – space dust.

The lower of the two values is his latest estimate, published in 1996 after further refinement of his measurements. So I decided to try to find out how high 150 billion grams of space dust would pile up on the earth's surface in a year. Google returned nothing applicable when I asked it. Perhaps space dust scientists don't consider my question worthy of a publishable answer. I had to calculate the value myself.

What is the surface area of the earth? Google found "Scientific American Science Desk Reference", published by Wiley in 1999 that gives the land area as 150 million square kilometers. I used the land surface figure (rather than total surface)

since that would show the most buildup. (Also the math is easier.) So each year we have 150 billion grams of space dust spread over 150 million square kilometers. How high does that pile up in a year?



SPADUS Satellite Experiment evaluated dust in space in 2000

How tall is a gram of space dust? Google didn't find any directly useful values but maybe space dust is about the same density as water. We know that a gram of water is also very close to one cubic centimeter in the metric system. So let's simplify the math and assume that a gram of space dust is a cube one centimeter on each side, a little smaller than a sugar cube.

Now we need to turn those 150 million square kilometers of surface into square centimeters. In the metric system, this is easy. You just add ten more zeros giving:

$$1,500,000,000,000,000 \text{ cm}^2$$

So the number of cubes of space dust that pile up on each square centimeter of land every year is:

$$\frac{150,000,000,000 \text{ cm}^3 \text{ per year}}{1,500,000,000,000,000 \text{ cm}^2}$$

Simplifying this by canceling, we get 0.0000001 centimeters per year buildup. (Come on, you can do it.)

Conclusions

Lucy, one of our earliest ancestors, is believed to have lived about 3.2 million years ago. If Ceplecha is right, the thickness of space dust that has fallen since Lucy walked across Africa is 0.32 centimeters or about an eighth of an inch. In the 10,000 years since early archaic people founded SWFAS, the space dust buildup has been around 0.001 centimeters, thinner than spider silk.

So space dust isn't a big part of the soil we dig through. Then where did that 25 cm of soil above the Heineken Hammock whelk shell come from? Didn't Darwin suggest earth-worm coprolites?

SWFAS PROGRAM FOR JUNE 2005

On Saturday, June 25th, SWFAS members and guests will meet for a tour of Bonita Bay and picnic, from 10 am to 1 pm. Everyone should bring their own lunch and a beverage. There is a screened pavilion there for shade.

Entry into Bonita Bay is at US 41 and Terry Street. We will receive a map at the guardhouse for directions, (basically, stay on the main entry road all the way to the end and the Estero Bay Park will be on the left.) It has a small parking lot and if full, park along one side of the street.

See you there!