



Fossil Footnotes

Central Texas Paleontological Society

July 2006

President's Message

The Central Texas Paleontological Society was started by the same person who founded the Austin Paleontological society 1985. The time has come to join them. There are many good reasons for a merger and no good ones for having two clubs. The two clubs have always had the same basic purpose. Look at the purposes from our web pages:

APS -.. "promote interest in the science of paleontology, to encourage the study, preservation, and exhibiting of paleontological material, and to assist the professional and non-professional collector"

CTPS- '.. "advancing the state of the science, educating the public, and collecting and identifying fossil specimens."

We have the common goals of promote, educate, study, preserve and collect.

As I said, there are many reasons why there should only be one club. Here are my Top 10 reasons for the merger:

10 - The personality conflicts that motivated the split are behind us.

9 -Many of us are members of both clubs.

8 - We already share field trips (and field trip chairman)

7 - The talents of the members of each group can be shared.

6 - More free time: one meeting a month instead of two

5 - Only one set of officers.

4- the opportunity to consistently have high quality speakers.

3-A more focused message to the public.

2-Only one newsletter and web page.

1-Strength in numbers. Each member brings their strengths and talents. Together we can have a stronger club.

This technically is not a merger. The existing clubs would be dissolved and a new one formed. The approach has been to combine the articles and bylaws of the existing clubs in a format suggested by the State of Texas. There are no current plans to form a state non-profit organization. But it seems wise to take this opportunity to make that easier if it is ever decided by following the state format. No specifics about the activities of the new club are included in the new bylaws. These are to be decided by the membership of the new club.

The major obstacles to a merge were seen as the name of the new club, the merger of assets,

meeting place and time, and the fact each club has a fossil show.

The suggested name is the Austin Central Texas Paleontological Society. The treasury of the existing clubs would be donated to the new club. Meeting place and time and the future of the two shows would be decided by the new club's membership.

Come to July's meeting to express your opinions and concerns. We plan to vote on the merger. The time has come to join and form a stronger Paleontological Society for our area.

July 11th Meeting Tuesday night

The July meeting will be at the LCRA Building on **Tuesday night July 11th** starting at 7:00 PM.

Meeting Calendar

July 11	CTPS Meeting
August 8	CTPS Meeting
September 12	CTPS Meeting
October 10	CTPS Meeting
November 3-5	Fossil Fest, CTPS Fossil Show at Old Settlers Heritage Association, Round Rock, Texas
December	Christmas Party (no meeting)

Visit our web site

<http://www.texaspaleo.com/ctps/index.html>

Membership Information

- \$18 per Family
- \$15 per Individual.
- Individual and Family memberships include a newsletter subscription, membership in the

South Central Federation, and liability insurance coverage for club activities.

- Associate membership is \$10 per year and includes a newsletter subscription.



See you at the meetin' partner !!

2006 Field Trips

July 15 th	Canoe trip Brazos River
August 12 or 19 th	Vertebrate or Invertebrate Lab at UT
September 16	Brazos River for Eocene fossils
October 14-15	Lake Texoma
November 18 th	Waco Pit
December	Christmas Party

Article provided by David Lindberg

Oldest Known Spiderweb Found in Ancient Amber

Charles Petit
for [National Geographic News](#)
June 22, 2006

The oldest known fragment of spiderweb has been found entombed in a piece of 110-million-year-old Spanish amber, scientists announced today.

The fossil web was found complete with several entangled insects and other small creatures.



Its discovery seems to cement arguments that spiders living in the age of dinosaurs already wove complex aerial webs like those snagging bees and butterflies today.

Experts believe the earliest spiders probably made silk to line burrows or to help pick up vibrations from prey crawling past them.

But no one is sure exactly when so-called orb weaving spiders evolved and began suspending their iconic spiral webs in the air.

"When you look at the piece, the striking thing is that the geometry of the web and the prey type and size in it are like what one would see today," said David Grimaldi, an invertebrate biology specialist at the American Museum of Natural History in New York City.

Spiders have been fishing insects from the air for a very long time."

Grimaldi and colleague Enrique Peñalver, along with Xavier Delclòs; of the University of Barcelona in Spain, will publish their findings in tomorrow's issue of the journal *Science*.

A separate study by a team based at the University of California, Riverside, which also appears in this week's *Science*, analyzed genetic diversity within two groups of living orb-weaving spiders.

That study concludes that orb-weavers probably first appeared around 136 million years ago, a date that reinforces the amber evidence.

Fossil Gem

Spiders and many other small creatures are often found trapped in ancient amber. The hard,

yellowish material is a fossil form of the sticky sap that oozes from trees such as pines and other conifers.

Amber is considered a gem, and pieces containing intact insects are among those that jewelry makers prize the most.

The newfound amber piece is roughly cylindrical and measures about 0.7 by 0.3 of an inch (18 by 7.5 millimeters).

It comes from fossil-rich amber deposits discovered in the Aragon region of northeastern Spain about seven years ago. According to the authors, the new find is not only the oldest but also the first known substantial fossilized section of spider web.

The partial web includes 26 strands of silk, some of them joined by cross-links, Grimaldi says, which are typical of orb-weaving spider webs.

The only sample comparable to the find is a piece of Lebanese amber 130 million years old that holds a single strand of spider silk.

Both specimens formed during the early Cretaceous period, a time when creatures such as iguanadons were on the scene but well before the arrival of *Tyrannosaurus rex*.

While there was no spider present in the latest find, the amber did contain a mite, a beetle, a leg from a wasp, and a fly caught by the spider's silk.

The discovery, Grimaldi says, helps researchers understand the evolution of both spiders and their prey.

For example, a long history of hanging webs would mean spiders have been influencing the evolution of flying insects for millions of years.

Tangled Web

Jonathan Coddington is a spider expert with the Smithsonian Museum of Natural History in Washington, D.C., who was not involved with the study.

He agrees that even without a spider present, there is little doubt that the webbing is spider silk,

because of the tiny, characteristic beads of glue spaced out along several of the strands.

"There is just nothing else that could do it," he said.

The paper's authors propose that the webbing in the amber is from a single section caught by the sap as it dripped slowly from a tree branch.

Coddington disagrees with that detail. "A glob like that is probably not going to get a whole section with that much prey at once," he said.

Instead he imagines that the web was suspended close alongside a hanging glob of sap. As wind occasionally slapped the web against the resin, the web would lose a chunk along with its trapped prey.

But Coddington supports the paper's basic point about the time frame for the origins of orb weaving. Another fossil and amber expert, George O. Poinar, Jr., of Oregon State University in Corvallis, is more doubtful.

He says the new report is interesting, but that many authorities "just assume spiders have made webs since [the animals] first appeared" more than 400 million years ago.

Still, he says, amber such as this latest discovery does preserve vital information on spider evolution. By one count, 500 extinct spider species have been found in amber from Europe's Baltic region alone.

<http://news.nationalgeographic.com/news/2006/06/060622-amber-web.html>

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From: Science 19 May 2006:
Vol. 312. No. 5776, pp. 983 - 984
DOI: 10.1126/science.312.5776.983a

Via Mike Smith

**PALEOANTHROPOLOGY:
How the Hobbit Shrugged: Tiny Hominid's
Story Takes New Turn**

Elizabeth Culotta

SAN JUAN, PUERTO RICO--The strangest ancient humans may be Indonesia's "hobbits," the 1-meter-tall people who made stone tools and hunted dwarf elephants 18,000 years ago. When announced 2 years ago, the fossils from the island of Flores seemed almost too bizarre for fiction. Now, close-up looks at some of the bones have given the hobbits' saga even more odd twists.

At a recent meeting here,* two anatomists presented analyses suggesting that the original hobbit skeleton may not be female, as first described, and that its shoulders differ from those of modern people and hark back to an ancient human ancestor, *Homo erectus*. That detail and others bolster the notion that an *H. erectus* population on the island evolved into the dwarf form of *H. floresiensis*, anatomist Susan Larson of Stony Brook University in New York said in her talk at the meeting.

Other researchers' opinions about almost every aspect of the hobbits, however, continue to run the gamut. Many are impressed with Larson's analysis. "I support Larson's observations ... [and see] evidence of a faint phylogenetic signal" connecting the finds with *H. erectus*, says paleoanthropologist Russell Ciochon of the University of Iowa in Iowa City, who calls the skeleton from Flores "a very important link to our past." But a few researchers still find the whole tale too tall to swallow. In a Technical Comment published online this week by *Science*, paleoanthropologist Robert D. Martin of the Field Museum in Chicago, Illinois, and colleagues argue that the single skull is that of a modern human suffering from microcephaly (see sidebar). And even some researchers who are reasonably convinced that the fossils do not represent diseased modern people caution that the sample size for the shoulder bones is one. "It's always nicer to have more than one individual" to hang a hypothesis on, says Eric Delson of Lehman College, City University of New York.

Mini-me. Details of the *Homo floresiensis* skeleton suggest that it may be descended from *H. erectus*.

At the meeting, a packed room listened intently as Larson described her work on the upper arm

bone, or humerus, of the original skeleton, labeled LB1 as the first human from Liang Bua cave. The LB1 humerus is peculiar--or, rather, it lacks a peculiarity shared by living people.

In modern humans, the top or head of the humerus is twisted with respect to the elbow joint by about 145 to 165 degrees. As a result, when you stand straight, the insides of your elbows face slightly forward, allowing you to bend your elbows and work with your hands in front of your body.

But in *H. floresiensis*, the humerus appeared only slightly twisted. Last fall, Michael Morwood of the University of New England in Armidale, Australia, co-discoverer of the Flores bones, asked Larson, known for her work on the upper arm, how this could work in a toolmaking hominid. "I told him I didn't know," says Larson. "It *wouldn't* work."

So at the invitation of Morwood and Tony Djubiantono of the Indonesian Centre for Archaeology in Jakarta, Larson flew to Jakarta last fall to study the bones with her Stony Brook colleague William Jungers, who was to work on the lower limbs. The pair is among the handful of researchers who have studied the original specimens.

Larson found that the LB1 humeral head was in fact rotated only about 110 degrees. (No rotation would be expressed as 90 degrees.) Curious, she examined LB1's broken collarbone plus a shoulder blade from another individual.

Larson concluded that the upper arm and shoulder were oriented slightly differently in *H. floresiensis* than in living people. The shoulder blade was shrugged slightly forward, changing its articulation with the humerus and allowing the small humans to bend their elbows and work with their hands as we do. This slightly hunched posture would not have hampered the little people, except when it came to making long overhand throws: They would have been bad baseball pitchers, says Larson.

When Larson looked at other human fossils for comparison, she found another surprise: The only *H. erectus* skeleton known, the 1.55-million-year-

old "Nariokotome boy" from Kenya, also has a relatively untwisted humerus, a feature not previously noted. Larson concluded that the evolution of the modern shoulder was a two-stage process and that *H. erectus* and *H. floresiensis* preserved the first step.

H. erectus expert G. Philip Rightmire of Binghamton University in New York, who works on fossils from Dmanisi, Georgia, supports this view. Larson's and Jungers's analyses "make it clearer and clearer that *Homo floresiensis* is not some sort of dwarf modern human. This is a different species from us," he says.

In a separate talk, Jungers reported more unexpected findings. He was able to reconstruct the pelvis, which had been broken when the bones were moved to a competing lab in Indonesia (*Science*, 25 March 2005, p. 1848). Although previous publications had described the pelvis as similar to those of the much more primitive australopithecines, Jungers found that the orientation of the pelvic blades is modern. The observation adds weight to the notion that hobbits had *H. erectus*, rather than australopithecine, ancestry.

The skeleton was first described as female, although the competing Indonesian-Australian team described it as male in press accounts. Now Jungers says he is "agnostic" about its sex. He notes that limb bones from other individuals from Liang Bua are even smaller--"they make LB1 look like the Hulk," he says--raising the possibility that males and females differed in size, with LB1 in the role of big male.

More surprises are still to come. Jungers said in his talk that LB1 includes an essentially complete foot; something not identified previously, and hinted that the foot is extremely large. Indonesia's hobbits, like J. R. R. Tolkien's fictional creatures, may have trekked about on big hairy feet.

Field Trip to Ada, Oklahoma June 2006

By Ed Elliott

We met again at the Callixylon Tree on East Central University in Ada, Okla. The morning

was dark and dreary, raining lightly and wonderfully cool. I had expected 100 degrees and to be baked by the sun. The overcast and light rain lasted most of the day and was certainly welcome. Ten members met that morning: Tom Bowers, Bruce and Linda McCall, Eric and Emilia Rose, Mike Smith, Bill Kidd, Dr. James Sprinkle and myself, Ed Elliott. John Hinte joined us later.

Our first stop was Jennings's Quarry in Fittstown. This site is Haragan Formation, Hunton Group, Heldabergian Series. It is one of the few sites I know of that we all approach looking for one fossil. Camarocrinus is the name given to the crinoid bulb and the probable name of the crinoid is Scyphocrinites ulrichi. Even with the unexpected cool, digging these bulbs is hot work, but the laughter of friends takes the drudgery out of it. Add to that the fun of finding the treasure and I call it a great time. Along with 67 bulbs paid for, we also found gastropods, brachiopods, nautilus pieces and solitary corals. I also found a piece of a big crinoid cup. A great site!

We had a surprisingly good lunch at a convenience store called "Bob's" in Fittstown. Then on to Dr. Sprinkle's Quarry. The Wrigley Quarry is Ordovician in age. The overlying formation is the Bromide; the lower is the McLish. Both are of the Simpson Group and are Mohawkian Series and Chazy series respectively. Most of our time was spent in the Bromide. As he did last year, Dr. Sprinkle provided a short lecture on the area and made himself available for all of our questions. Since most of us are neophytes in the older Paleozoic, this is greatly appreciated. The questions "What do you think this is?" was probably asked a couple a hundred times over the weekend. We did a lot of climbing over loose rock, stood on top of a hill during a lightning storm and had a great time picking up parts and pieces of ancient echinodermata. Dr Sprinkle also picked up the find of the day with a virtually complete crinoid crown. *Apodasmocrinus daubei* We also found brachiopods, a few corals, trilobites, huge bryozans, holdfast edrioasteroids, and in the McLish, I found the best gastropods I've seen

from this area. It is exciting to me to hunt in rocks that are 450 millions years old.

Sunday morning we met back at the Callixylon Tree and headed for "Yellow Bluff", a Bois d'Arc Formation, Hunton Group, Helderbergian Series site. We had clear skies, so we were quickly looking for shade as well as fossils. This Devonian site is incredibly fossiliferous. Several complete and many partial trilobites were found. Several types of rugose coral, bryozoans, and incredible number of brachiopods (I picked up at least a dozen different species) and lots of echinoderm material, mostly crinoids were found. This is definitely a wonderful site. Sitting high on a hill overlooking lovely country surrounded by fossils-not bad.

The final site was Silurian, Henryhouse Formation of the Hunton Group, Niagaran series; a roadside cut, also known as Dr. Amsden's P.F. site. Trilobites, crinoids, corals, brachiopods and bryozoans were all found.

Thus ended the annual Oklahoma trip. I can't wait to go back. This area has a great many sites, most of which we haven't gone to yet. We all had a great time as far as I could tell. Thanks again to Dr. Sprinkle-both for getting us into the Wrigley Quarry and for putting up with our questions.

See you next time.



Hope you had a happy 4th of July

Happy 230th Birthday, America

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Club Information

The Central Texas Paleontological Society is a scientific, non-profit, community-based organization devoted to the study of fossils, advancing the state of the science, educating the public, and collecting fossil specimens. Most of us are amateurs, fascinated by fossils, who love to collect.

Meetings are held on the second Tuesday of each month at the LCRA building, 3700 Lake Austin Blvd. (between Redbud Trail and Enfield Ave.) at 7:00 PM in the LCRA Offices Board Room of the Hancock Bldg. **The public is cordially invited** to attend these meetings as well as our field trips held throughout the year.

Annual dues are: \$15 per person or \$18 per family, which includes a subscription to this newsletter, membership in the South Central Federation of Mineral Societies, and liability insurance coverage for club activities. Associate membership is \$10 per year and includes a subscription to this newsletter.

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About the Newsletter

Fossil Footnotes is distributed once a month prior to each meeting. Contact the Membership Chair to subscribe or obtain a sample-issue. If your mailing-label has a date marked with a colored pen, it means your membership has or is about to expire. Please send your check to the club Membership officer or bring it to a meeting.

We accept material from club members (and non-members at our discretion) including, but not limited to, information relevant to club activities, fossil collecting, paleontology & geology, and science education. Feel free to reproduce original material contained in this newsletter for educational purposes (including other club newsletters), so long as you credit the newsletter issue and author, if applicable. Send submissions by e-mail or hardcopies to the Editor (see above) at least two weeks before the meeting. Expect some publication delays for exotic formats.

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