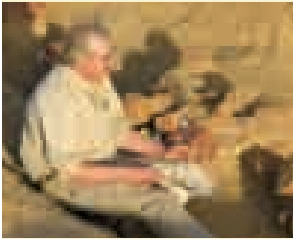


A WHALE OF A DISCOVERY



PHILIP D. GINGERICH

U-M paleontologist Philip D. Gingerich struck gold recently when he unearthed the skeleton of the 40 million-year-old fossil whale *Basilosaurus isis*. Gingerich and his colleagues at the Egyptian Environmental Affairs Agency found the 50-foot-long skeleton in the remote valley of Wadi Hitan, Egypt.

Located in the Western Sahara, Wadi Hitan contains hundreds of fossil whale skeletons that are being exposed by the wind. Gingerich's find, however, is the first full skeleton of the *Basilosaurus* fossil to be discovered.

The new skeleton is being shipped to Michigan for preparation and preservation, according to Gingerich. Once a casting material replica is made, the original bones and cast will be returned to Egypt for exhibition. Gingerich hopes to also mount a complete cast at the U-M Exhibit Museum.

"*Basilosaurus* is an enigma of whale evolution because of its unusually long serpentine body," says Gingerich. "The research team will use the skeleton to study how it lived and swam and, possibly, to learn why it is so abundant in Wadi Hitan."



Philip D. Gingerich

COMPLETED EXCAVATION OF THE SKELETON OF 18-METER LONG WHALE *BASILOSaurus* ISIS IN THE WESTERN DESERT OF EGYPT.

Bendable Concrete Saves Roads

Tired of having your tax dollars go toward improving roadways? U-M scientists have developed reinforced, bendable concrete that was used for the first time in Michigan this summer. The new concrete is 40 percent lighter in weight and 500 times more resistant to cracking than traditional concrete. It is designed for maximum flexibility and is more cost efficient than regular concrete.

The University's Engineered Cement Composites is made mainly of the same ingredients as regular concrete but is missing the coarse aggregate. It also looks exactly like regular concrete but has a network of microscale fibers that bond to the concrete more tightly, which avoids the inflexibility that causes brittleness and breakage.

The ECC technology has already been tested on projects in Japan, Korea, Switzerland and Australia. The Michigan Department of Transportation will use the new concrete for a section of the Grove Street bridge deck over I-94 in Ypsilanti, Michigan. State suppliers are currently being trained on how to create ECC concrete.

IT Career Plus MBA Equals More Money

In the world of information technology, it pays to have an MBA. A new U-M study revealed that IT executives with MBAs are paid 8.2 percent more than their peers with comparable job experience. The study examined total annual compensation for more than 55,000 IT professionals in the United States from 1999 through 2002. The findings reflect the "ever-increasing competitive intensity" of the IT field, according to study co-author M.S. Krishnan, professor of business information technology at the Ross School of Business. The study also found that female IT professionals earn about 7.8 percent less than men regardless of their age, job level, education and work experience.

Minds at Play Solve Problems

U-M researchers are using the mathematical concept of fictitious play to tackle the problem of traffic congestion. The method—similar to real-life problem-solving because it seeks the optimal result, such as the quickest route from work to home—is related to the work of John Nash (the subject of the movie "A Beautiful Mind"). Fictitious play models how people might cooperate to discover a Nash equilibrium, which is the best joint strategy for games with two or more players that reach a mutually beneficial outcome.

U-M engineers utilized computer modeling to simulate traffic conditions through 75 stoplights in Troy, Michigan. Traffic signal adjustment alone reduced travel time by 20 percent. The fictitious play method is much faster than computer number crunching because it anticipates decisions and weeds out all but the best options.

Getting Stroke Victims Faster Treatment

The only drug that can treat victims of a stroke must be administered within three hours of a stroke. Given that time constraint, it's imperative that people correctly identify stroke symptoms and seek treatment.

For many, the typical stroke symptoms are numbness in their arms, legs or face, a rush of confusion or dizziness or even the inability to speak or walk. But some people don't experience typical stroke symptoms. That's especially true for women, who are more likely than men to get to the hospital too late to receive stroke treatments and are more likely to die or be disabled by a stroke.

A U-M team of researchers is working to figure out the cause of this disparity. Through a new project at the U-M Emergency Department, all patients with any signs of a stroke will be interviewed about what they felt, asked about symptoms not normally related to strokes, and how they described their symptoms to others. The researchers will also ask to review the patients' records. All this information will be used to build a detailed picture of what a stroke victim may experience and to determine if non-traditional symptoms really do play a role in delaying treatment.