

Science News, a weekly magazine which aims to keep the general public informed of recent events in the scientific world, featured in its November 7, 1987, issue three articles of great interest to classicists and archaeologists. One article, entitled "Pharaoh's boat found in ancient pit", brings readers of Labyrinth up-to-date on a topic featured in our January 1986 issue. Last October, Egyptian and American scientists succeeded in drilling into the large, sealed pit at the base of the Great Pyramid associated with Cheops. They were trying to achieve two things: 1) discover what was sealed in the pit by the ancient Egyptians, and 2) obtain a sample of the air inside the pit to see if it differed from our modern atmosphere. The first aim was easily accomplished: a miniature video camera was successfully inserted into the pit and revealed exactly what the archaeological world had hoped to find - a disassembled, but well-preserved wooden boat (about 4600 years old) similar to the one found in an adjoining pit in 1954. The purpose of these boats remains controversial, although most authorities believe that they were used to transport the body of the deceased pharaoh to the pyramid itself.

The second aim of the scientific team was also successful, but at the same time disappointing: a sample of the air trapped inside the pit was indeed obtained, but it was discovered that the limestone block that covered the pit was extremely porous; thus it may well be that the air inside had not been sealed in effectively and that "modern" air has been penetrating the covering block. As team member Pieter Tans put it, "It is unlikely that the air in the pit remained unchanged for 4600 years."

Nonetheless, the entire project was a victory for non-destructive techniques of archaeology, since nothing was disturbed and, in fact, the 3 1/2 inch diameter hole drilled into the covering stone has been successfully resealed. According to scientist Kamal Baraket, it is now clear that "artifacts no longer need be removed from their natural sites to make them meaningful."

The second archaeological item in the magazine also pertains to ancient Egypt, specifically to the current problems of the famous Sphinx that guards the Great Pyramids at Giza. Simply put, this amazing sculpture is disintegrating because of high concentrations of salt in the natural limestone out of which it was carved. A team from the University of Louisville is engaged in a "rescue project", but first needed to understand exactly what is happening inside this noble, 5000 year old creature. A first step has been taken, since the experts now know how the salts are causing the stone to decay. To quote from the article itself, "During the cool desert nights, moisture condenses inside the pores of the limestone and dissolves the embedded salts. Then when the sun heats the stone in the day, the salts recrystallize, creating pressure in the pores of the stone that can break the limestone apart." With this new understanding, the team hopes to be able to find appropriate replacement blocks in order to restore the Sphinx as much as possible.

The final item reported on falls into the category of "adventure archaeology". Inspired by the famous Greek myth of Daedalus - the inventive craftsman who put on wings of wax and

feathers to flee from the island of Crete - researchers from the Massachusetts Institute of Technology have built an experimental aircraft (appropriately named Daedalus) which a trained cyclist will pedal into the air and out of Crete for a flight to the Greek mainland, some 70 miles away. The craft itself is extremely light-weight (only 68 lbs.), with a skin of plastic and ribs of foam; its wingspan measures about 114 feet, and the entire plane is just 35 feet in length. Power is provided by one person pushing a set of bicycle pedals joined to rods which in turn, rotate a 12 foot long propeller. Three cyclists have been busy training as pilots, although only one will have the honour of imitating Daedalus. The attempt will be made this coming spring, when the weather in

the area will be agreeable (one hopes!). If the experiment succeeds, the pilot will find himself the holder of a new record for the longest distance flown using only human power; the present record distance is only 37.2 miles, and took a little over two hours in a plane called Light Eagle, which in 1987 flew low above the desert of the Edwards Air Force Base in California.

The fact that a single issue of a respected science magazine contains three such items connected to the ancient world demonstrates clearly the continuing fascination of antiquity for modern scientists, and should make all readers of Labyrinth proud of their own interest in what some scoffers used to call the "dead past"!