

Autopsy on mummies aids research

By CAROL HASKIN

Since Tutankhamen's tomb was opened in the 1920s, the mummy has been one of America's favorite monsters.

A half century of film tributes have cast Lon Chaney Jr., suffocating under three miles of surgical bandages, as the semi-decomposed but lively three-thousand-year-old with a grudge.

Who would have thought that this dedicated desperado would end up helping modern man?

Six years ago Bloomfield Hills resident Dr. Robin Barraco, an assistant professor of physiology at Wayne State University Medical School, decided he'd like to perform some medical research on mummies in his spare time.

Today, seven mummies later, Barraco, 30, and his two associates have published some important medical findings with implications for modern man and his ability to adapt to disease.

Barraco said the initial goal of the mummy project was to look at certain types of diseases and see how they have changed in the last few thousand years.

"WE ALSO looked at the relationship between disease states and geography, heredity and diet. If we can understand how disease interacted with these factors thousands of years ago, we can get an insight into how diseases interact with these factors today."

In February 1973, Barraco and his two colleagues, Dr. T. Aiden Cockburn, the medical health director for the Mayor's Committee on Human Resources Development and a research associate of the Smithsonian, and Dr. Theodore A. Reyman, chief of pathology at Mt. Carmel Hospital, performed an autopsy on Pum II.

Pum II was their fourth mummy, the second from the Philadelphia University Museum for which it was named, and the one who made all the headlines.

The researchers hypothesized that Pum II was a religious man, because his nails were painted red and the bottoms of his feet were painted white. He lived in the 2nd or 3rd Century, B.C., and was about 40 years old when he died.

Barraco and his associates were joined by an interdisciplinary team of scientists from around the world. When the autopsy was completed, each scientist took tissue home to perform further tests. The completed results were published in a recent issue of "Science."

THE SCIENTISTS found a cache of diseases in Pum II. Barraco said that Pum suffered from hardening of the arteries on the same level that exists today, which indicates that heart disease existed two thousand years ago.

Pum also had silicosis, sand in the lungs, probably from breathing in desert dust storms. His lungs showed traces of carbon, today known as miners' black lung disease, that perhaps resulted from burning fires in close places.

As for infections, Pum had them in an ear, a leg and in his intestine.

The researchers wanted to investigate the problem of pollution, Barraco said, so they examined the heavy metals in the mummy's tissues.

"In order to know what pollution is," he explained, "you have to have baseline standards, determined by pre-industrial levels in tissues."

THE TESTS showed that all heavy metals appeared in Pum at the same level at which they appear in modern man, except for lead. Lead values, in 20th Century tissues, Barraco reported, are 100 times higher.

"Therefore modern man is being polluted by lead," he said, "probably from automobiles - gas."

He said that according to some theories, the fall of the Roman Empire could be attributed in part to lead pollution which causes mental deterioration.

A non-medical bonus uncovered by the autopsy was the discovery that Pum bore the oldest evidence of cotton in the West, a fact that implied the Egyptians traded in the Far East or India at least during and perhaps even before Pum's time.

Pum II is again at rest - this time in a display case in Washington's National Museum of History. The three Detroit doctors, however, are now kept busy due to the international re-

pulse Pum brought them.

WIRE SERVICE stories about the autopsy were carried in newspapers around the world. Barraco told the story of the operation on television in Toronto, London and Rome. Major museums have offered them mummies to study, and they received research grants for expeditions to Egypt, South America and Alaska.

The doctors continue their work through the Paleopathology Association which they founded. Last summer, the team went to Alaska and brought back a 2,000-year-old Eskimo woman, frozen, who had died in an avalanche.

Barraco said they are currently working on a 3,300-year-old mummy in Toronto. The mummy is that of a 16-year-old boy named Nach who was a weaver for the Pharaoh in the 12th Century, B.C.

In studying more mummies, the team hopes to add to their present findings concerning disease and pollution. They also hope to learn more about aging, Barraco said, since, de-

spite all his frailties, Pum II probably died of old age.

Discovering why the aging process was accelerated then may help prolong life now. So, in a final irony, the decaying denizens of the crypt might prove a fountain of youth.



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Students write winning essays

BIRMINGHAM—Two sophomores from Brother Rice High School were named second and third place winners in the recent essay contest sponsored by the Oakland County Lincoln Republican Club.

The contest was open to all students in the county and required them to write an essay on "Lincoln the Man." Randy Black, 16822 Wetherby, Beverly Hills, won second place and \$50 in the contest and John Bradtke, 2538 Chelsea Lane, Troy, won third place and \$25.

Both students are in an honors English class taught by Dave Field.