Further Information on the Health and Longevity of the Gila Monster (*Heloderma suspectum* Cope)

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This short paper is a follow-up of a report on the occurrence of a melanoma in a captive specimen of the Gila Monster (Cooper, 1968). The reptile under study was obtained in August of 1945. Beginning in 1963 it developed a melanotic malignancy which was removed from the dorsal surface of the base of the tail on March 9, 1968. Procedures for the surgery and accompanying pathology were described in the above report.

The specimen under observation died October 8, 1977. It was taken to the laboratories of the department of pathology of Ball Memorial Hospital, Muncie, Indiana for post-mortem examination and pathological studies by Dr. Mark V. Braun and Dr. George E. Branam. Numerous kodachrome photographs were taken of both external and internal structures. Dr. Branam supervised the original studies in 1968.

The total length of the specimen was 510 mm as compared to 497 mm when the surgery was performed in 1968. Photographs were taken of the irregular hypopigmented scar from that surgery on the dorsal aspect of the tail. The scar measured 7 mm by 8 mm as compared to the 51 mm by 35 mm size of the original tumor. There were no other discernable superficial lesions on the animal. None of the thoracic or abdominal organs revealed gross evidence of primary malignancy. Biopsy samples were obtained from all organ systems and submitted for microscopic sections. Sections were also taken from the site of the original tumor. Microscopic examination demonstrated clusters of possible melanoma cells within the lymphatic structures of the lung, liver, and spleen. Dr. Branam felt that the cells were markedly similar to those of the original lesion, but the specific cause of death of the Gila Monster could not be determined from the examination findings, either gross or microscopic. There was little abdominal fat, which might reflect a state of malnutrition. The pigment-laden cells could represent an accumulation of melanin within the reticuloendothelial system as a normal process of aging.

The age of this reptile is of note. It was in captivity at Ball State University in the Biology Department for 32 years and 2 months. It was an adult of the same approximate size when received from Arizona in 1945. Bowler (1977) lists a November 1, 1975 record of *Heloderma suspectum* in the Little Rock Arkansas Zoo with an age of 27 years and 10 months. There is a second Gila Monster living at the present time in the Ball State University collection that was received also as an adult in August of 1945 and is still in good health. This appears to be the maximum known longevity for the species. A report has been sent to J. Kevin Bowler, Curator of Reptiles at the Philadelphia Zoological Gardens, of the ages of the above reptiles.

Kodachromes and microscopic sections are on file at the Ball Memorial Hospital Laboratories and at the Ball State University, Department of Biology.

Acknowledgment

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Literature Cited

1. BOWLER, J. Kevin. 1977. Longevity of Reptiles and Amphibians in North American Collections. Herp. Circ. No. 6, Soc. Stud. Amph. Rept., 32 pp.
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