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# FREDERICK VON HOFE GRADY (1948-2023)

# – AN APPRECIATION-

E. Ray Garton and H. Gregory McDonald

The June 2022 National Speleological Society (NSS) Convention held in Rapid City, Black Hills, South Dakota, included a Paleontology Session focusing on the importance of caves and other karst features on the preservation of fossils critical to understanding the environmental change that has occurred in the Northern Hemisphere. Given the positive response and participation in the session it was decided to pull together and publish formal articles based on the talks highlighting the significance about caves being not only a warehouse of fossil information but also non-renewable resources, and often hidden in plain sight. This special issue of the Journal of Cave and Karst Studies presents some of these cave paleontological discoveries. During the review and editing of the manuscripts for this volume it quickly became clear that there was one individual whose many contributions over the years to the study of fossil vertebrates, their collection from caves, and the preservation of caves containing fossil vertebrates stood out, Fred Grady. Thus, it was decided that in recognition of his many contributions to the unique combination of caves and fossil vertebrates, the volume resulting from this session would be dedicated to Fred in recognition of his many contributions to the field. While Fred regularly attended the annual convention of the NSS and participated in previous sessions on paleontology and caves, due to his health he was not able to attend the one in Rapid City. While we had hoped to have the special volume completed in time to present to Fred, unfortunately this was not the case, with him succumbing to leukemia before the volume could be completed. The volume was never intended as a Festschrift, as is often the case in these situations, but rather a testament, recognition and appreciation of all the various ways Fred had contributed to both scientific caving and the science of vertebrate paleontology. Anyone who studies fossil vertebrates from caves, in one way or another, has benefited from Fred's efforts. We therefore present this volume as a recognition of those efforts.

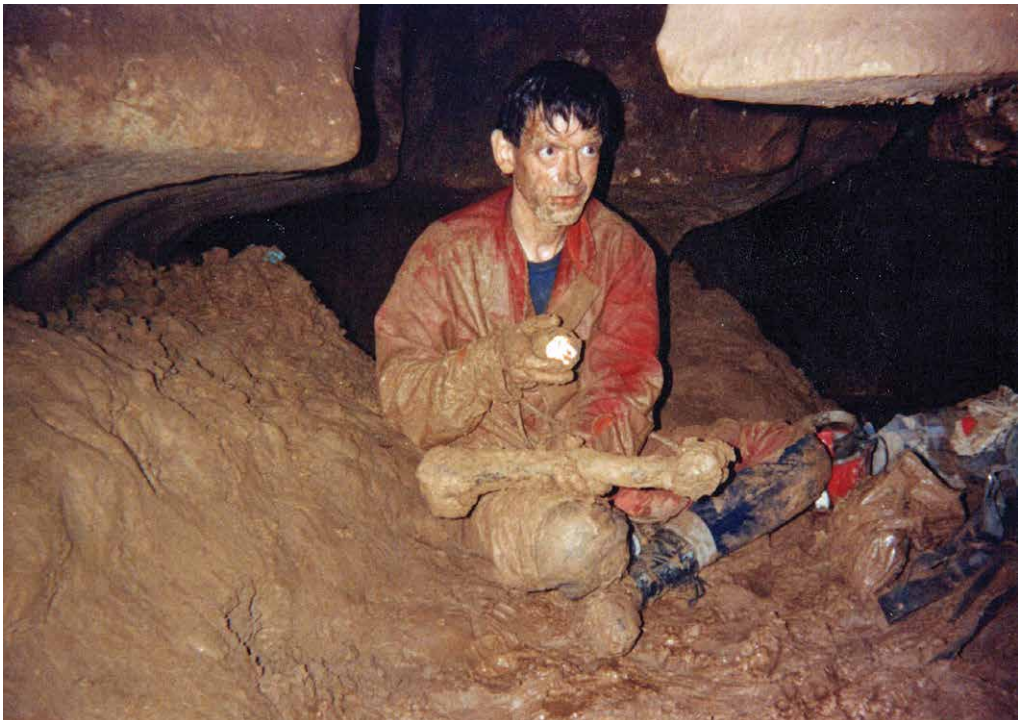

Fig. 1. Fred Grady in Island Ford Cave, Virginia recovering the skeleton of the giant short-faced bear, *Arctodus simus*. Photo by Mary Sue Socky NSS 24206.

Fred Grady began his life's work in Pleistocene vertebrate paleontology with excavations in Durham Cave, Pennsylvania in 1968. There he learned excavation techniques, specimen sorting, labeling, and identification, with much mentoring from John E. Guilday, a curator of vertebrate paleontology at Carnegie Museum of Natural History in Pittsburgh, Pennsylvania. Fred graduated in 1970, with a Bachelor of Science Degree in Biology, from Lafayette College, in Easton, Pennsylvania. He then completed two years of graduate work at the University of Michigan.

Fred joined the staff of the U.S. National Museum (Smithsonian) Section of Vertebrate Paleobiology in 1975 as a vertebrate fossil preparator, where he worked for 28 years. He was the lab supervisor for 14 of those years. Upon his retirement, Fred returned to the Smithsonian as a volunteer in the same department and lab for an additional 15 years. During his tenure at the Smithsonian, Fred worked on the preparation of Oligocene mammals and reptiles as well as dinosaurs and spent hours acid etching fossils from limestone deposits. In addition to his decades of preparation efforts on behalf of the National Museum of Natural History (NMNH) in both research and exhibits, he was a regular member of the team that set-up identification tables at fossil fairs, where he

drew upon his encyclopedic knowledge of mammal anatomy. He was an enthusiastic and accomplished fossil collector with his efforts resulting in nearly 3,000 lots of specimens that are now part of the NMNH paleobiology collections. In recognition of this contribution, he was awarded the Morris F. Skinner award of the Society of Vertebrate Paleontology in 1999. Many of these collections were a byproduct of another passion of Fred's: caving. He mapped hundreds of miles of caves, many of which contained significant Pleistocene fossils in Virginia, West Virginia, and elsewhere. He was often the first human being in those spaces, where he would fearlessly squeeze himself through the smallest of cracks to document the unexplored passages and subsequently hauled hundreds of pounds of matrix out the cave for screenwashing for microvertebrates. Most of these collections were made when Fred was not working at the museum. He regularly spent his weekends discovering, digging, processing, cataloging, and identifying Pleistocene fossils from dozens of cave sites in West Virginia and Virginia, as well as several other states. He also spent many weekends as a volunteer working at the New Paris field station of Carnegie Museum of Natural History.

Fred's first big discovery and project was the Pleistocene bone deposit in New Trout Cave, found in February 1979. This led to dozens of trips into the cave and the subsequent removal of over seven tons of bone bearing matrix for processing and study. He identified nearly 100 taxa of vertebrates including mammals, fish, birds, reptiles, and amphibians. In addition to discoveries in New Trout Cave, Fred discovered and identified three large Pleistocene (Irvingtonian) cats from Hamilton Cave. The cats included the saber-tooth cat *Smilodon gracilis*, the cheetah-like cat *Miracinonyx inexpectatus* and the jaguar *Panthera onca augusta*.

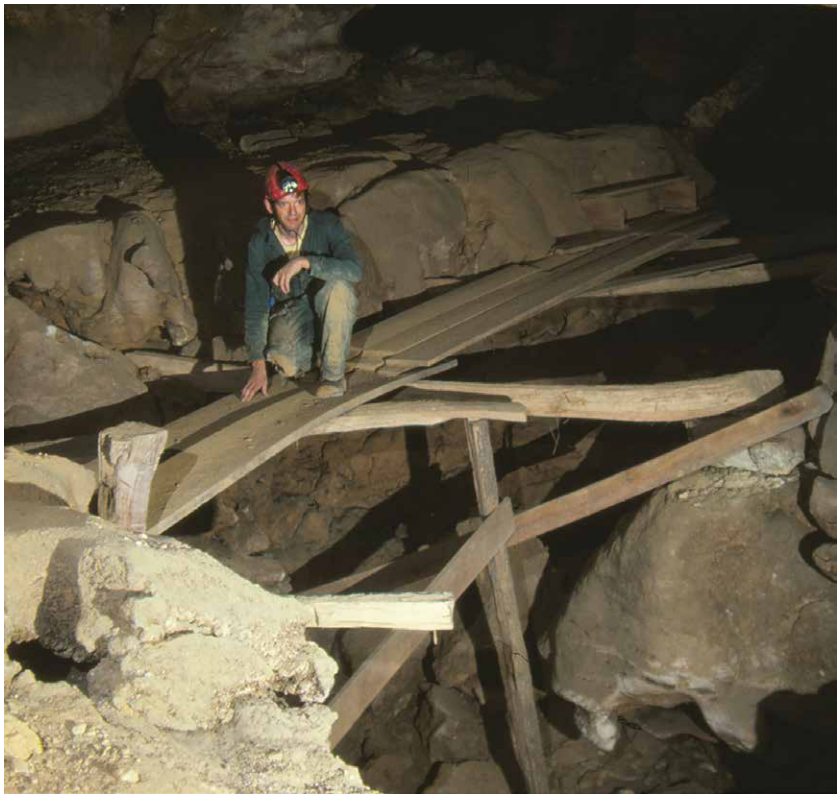

Fig. 2. Fred on saltpetre works in Haynes Cave, West Virginia where the first specimens of *Megalonyx jeffersonii* was found, and where he found a *Megalonyx* scapula. The cave was purchased by Fred and donated to the West Virginia Cave Conservancy. Photo by Cliff Lindsay NSS 11224.

Fred began caving with the Monongahela Grotto and moved to the Washington DC area around 1978. He joined the Potomac Speleological Club in 1978 and was assigned PSC #402 in 1980. He joined the DC Grotto in 1978 or 1979 and the NSS in 1978 (NSS # 19586) and was a Life Member. Fred became a Fellow of the NSS and received a Certificate of Merit for his efforts in acquiring the Trout Rock property, now the John Guilday Caves Nature Preserve. He received the American Spelean Association's Peter Hauer Spelean History Award for his contributions to research and publication of spelean history. Most prominent of this research was determining the location of the cave that yielded the specimen of the ground sloth *Megalonyx*, described by Thomas Jefferson. He purchased the property with Haynes Cave and in 2012 donated it to the West Virginia Cave Conservancy. In recognition of his many contributions, in 2016 Fred was presented the Science Award of the National Speleological Society, which is presented to a NSS member who, over time, has demonstrated outstanding dedication to the scientific study of caves.

A new species of extinct owl, *Aegolius gradyi*, the Bermuda Saw-whet Owl was named in honor of Fred in 2012 by Dr. Storrs Olson, a biologist and ornithologist at the Smithsonian and one of the world's foremost avian paleontologists. Olson had this to say about Fred in his dedication "To Frederick V. Grady, my companion in the field on many trips to Bermuda, Hawaii, and the West Indies. A diligent and indefatigable collector of vertebrate fossils, Grady's extraordinary ability and perseverance in identifying and sorting small fossils from vast amounts of washed and screened matrix have added immeasurably to the knowledge of paleoenvironments everywhere he has worked."