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HAM, A Space Pioneer

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In the race with Russia to put the first man in orbit around Earth, National Aeronautics and Space Administration (NASA) trained several chimpanzees to participate in flight simulations. One such chimpanzee was named HAM, who became the first chimpanzee to be launched into space. His name is an acronym for the laboratory that trained him for his historic mission, the Holloman Aerospace Medical Center, located at Holloman Air Force Base in New Mexico.

U.S. Army Colonel (Ret.) Joseph V. Brady, a behavioral neuroscientist with the Walter Reed Army Institute of Research, collaborated with NASA to train HAM to operate a system of lights and levers, training him to flip at least one lever every 20 seconds to avoid an electric shock to his foot. This research provided verification that live animals aboard a spacecraft could carry out their tasks during launch, weightlessness, and re-entry.[1]

As the first "chimp-o-naut," HAM was blasted 155 miles into space during the Mercury-Redstone 2 mission on January 31, 1961. He performed the tasks that he was trained to do and was found to be in good health after recovery from the flight (Fig. 1). The success of his Mercury capsule flight led directly to the launch of Commander Alan B. Shepard Jr., a Navy astronaut, on America's first human suborbital flight on May 5, 1961.

HAM retired from research in 1963 and was transferred to the Smithsonian's National Zoo in Washington, DC. In 1980, he was loaned to the North Carolina Zoological Park, where he died 3 years later of chronic heart and liver disease at age 26.

FIGURE 1. HAM retrieval. The famous "hand shake" welcome. After his flight on a Mercury-Redstone rocket, chimpanzee HAM is greeted by the commander of the recovery ship, USS Donner (LSD-20), January 31, 1961.[2]

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FIGURE 2. Skeletal remains of HAM, Chimpanzee no. 5 (AFIP 1871496), Anatomical Division, National Museum of Health and Medicine.

After he died, HAM was sent to the Armed Forces Institute of Pathology in Washington, DC, for necropsy. There, it was determined that he did not suffer any long-term effects from space flight. A controversy arose over what to do with HAM's remains. The Smithsonian had planned to do a taxidermy preparation and permanently display him in the Great Ape House. This resulted in a public outcry. In fact, a sophomore from West High School in Painted Post, New York, wrote that she was shocked that HAM would be "stuffed and displayed ... A chimpanzee is not a green pepper." In 1983, HAM's soft tissue and hide were buried at Holloman Air Force Base,[3] and his skeleton was entrusted to the care of the anatomical collections at the National Museum of Health and Medicine, where it remains today (Fig. 2).

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