Chantek, a male orangutan that learned to communicate in sign language, has died at the age of 39, a US zoo announced.

Veterinarians at Zoo Atlanta had been treating Chantek for heart disease, but officials were reluctant to give a firm cause of animal's death on Monday.

Chantek was born in Atlanta in the southern US state of Georgia but raised as a human child by an anthropologist in Tennessee who taught him American Sign Language (ASL).

He was the subject of a 2014 documentary titled "The Ape Who Went to College."

The orangutan moved to Zoo Atlanta in 1997.

The zoo said Chantek "frequently used ASL to communicate with his caregivers, with whom he developed close personal bonds throughout his years at Zoo Atlanta."

However "he was shy about signing with individuals he did not know and often chose forms of communication which are more typical of orangutans, such as vocalizations and unique hand gestures."

Orangutans "are considered geriatric after the age of about 35," making Chantek "one of the oldest living male orangutans" in North America, the zoo said in a statement.

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