



Chris Martin

Indianapolis Zoo

CISAB

Luddy Hall, Rm. 1106
700 N. Woodlawn Ave.

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3:00 PM

Computer Games for Great Apes: Opportunities for Research, Enrichment, and Educational Outreach

Abstract: In 2014 Indianapolis Zoo opened a new orangutan exhibit and initiated a cognition program with six apes working on research tasks in full view of the public. The program is modeled to have the following goals: 1) to examine orangutan cognition using touch-panel tasks, 2) to promote public education about the intelligence of orangutans, and 3) to raise conservation awareness and encourage donations toward a reforestation effort in Borneo. Elements of the program include a touch-panel equipped laboratory with an audience seating area, a portable touch-panel device for use by apes around the exhibit and holding spaces, and several conservation kiosks where guests can make reforestation donations after viewing infographic videos about the extinction crisis facing wild orangutans. Research tasks for the orangutans are conducted daily and are targeted at examining visuospatial memory, cognitive flexibility, and strategic reasoning. In parallel with the cognition work, additional research efforts are aimed at understanding the impact of the exhibit on guests' conservation attitudes and donation patterns. It is anticipated this new exhibit model, which combines cognitive demonstrations with education and conservation outreach, might serve as a widely replicable platform for promoting research, enrichment, and conservation at zoos.

Biography: Dr. Christopher Flynn Martin began his career in animal cognition at the University of Pennsylvania, where he earned a bachelor's degree in psychology in 2006. He continued his education in Japan, enrolling in graduate school at Kyoto University Primate Research Institute.

Over a seven year period there he earned his master's and doctorate in biology and spent an additional two years as a postdoctoral researcher. His research consisted of comparative cognition studies with chimpanzees that were experts at using computer touch-panels. During this period, he also traveled frequently to Guinea, West Africa, to pursue an interest in wild chimpanzee behavior and cognition, and he also spent time in Borneo observing wild orangutans.

Dr. Martin's research interests include great ape social cognition, communication, imitation and strategic reasoning. His doctoral dissertation examined the way chimpanzees understand and utilize social cues, and the way they strategize during competitive interactions. For his doctorate studies, he created a novel method of shared touch-panel tasks, which involved two apes completing social tasks over a single shared touch-panel screen. Using this method, he found that chimpanzees played competitive games in a manner that is different from humans and is in accordance with game theoretic principles.

After completing his doctorate, he spent two years as a postdoctoral research associate at the Kyoto University Center for International Collaboration and Advanced Studies in Primatology, where he continued to research chimpanzee comparative cognition. In March 2014, he joined the Indianapolis Zoo as a postdoctoral research associate where he is now a research scientist. At the Zoo, Dr. Martin conducts touch-panel research with the orangutans at the Simon Skjoldt International Orangutan Center, which is equipped with a shared touch-panel system that follows the method he developed in Japan. The system at the Zoo accommodates visitor/orangutan interaction over shared touch-panel software, creating an immersive educational opportunity for the public and advancing the Center's goal of orangutan conservation.

