

increases in testosterone, but a rise in testosterone concentration was not associated with the onset of musth signs. The age of first recorded musth was 12 years. The age range was 8-50 years, so calves and juveniles were not assessed. For younger males we have not yet defined “normal” testosterone concentrations, so we cannot determine what is baseline versus elevated in order to describe the timing of onset of musth with elevated concentrations. The ultimate goal of this study is to further our understanding of the relationship between physiological changes in young males and their social environment. There are currently 5 subjects in the study: 1 male at Oregon Zoo (age 9 months to 8 years), and 4 males at African Lion Safari (age range 5 to 15.5 years). Age categories are: Calf (0-1 yr), Juvenile (1-5 yr), Sub-adult (5-15 yr) and Adult (>15 yr). Testosterone is measured as part of routine management and musth signs are documented in management records. At both the Oregon Zoo and African Lion Safari male calves and juveniles have interactions with adult bulls, which reflects the situation in a typical elephant herd where dominant bulls come into the herd to breed cycling females, and therefore provides a good model for studying testosterone profiles in the early development of males. This study will provide testosterone profiles, age of first musth, musth signs, and a general description of the social management of each young male. This information will contribute to baseline data needed to investigate the relationship between testosterone concentrations and onset of musth among young males that have exposure to adult bulls and those that do not, which may ultimately influence the social management of young male Asian elephants in captivity.

World Rhino Day in Japan

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Promotion of rhino conservation is our most important aim. Japan maintains three species of rhinos, 9 greater one-horned rhino (*Rhinoceros unicornis*) at 4 zoos, 23 eastern black rhino (*Diceros bicornis michaeli*) at 11 zoos and 40 southern white rhino (*Ceratotherium simum simum*) at 14 zoos, amounting to 72 rhinos at 24 zoos (as of August 2016). However many citizens don't know much about rhinos. To make Japanese people more familiar with rhino, we are sending a message through World Rhino Day (WRD). WRD was first announced by WWF-South Africa in 2010. The next year Lisa Jane Cambell of Chishakwe Ranch in Zimbabwe and Rhishja Cota-Larson of ANNAMITICUS made WRD a day of celebration for all five species of rhino. WRD has been celebrated on September 22 every year. It has grown to become a global campaign. In Japan, we started WRD in 2013. We took two approaches. First, with a grant from the wildlife animal fund of Japanese Association of Zoos and Aquariums (JAZA), we made posters and leaflets and distributed them to all zoos keeping rhinos. Each zoo put up the poster and passed out the leaflets to raise public awareness. The Japanese poster gave a rhino overview and a message "There are facts you don't know about rhinos". Leaflets contained information - physical, ecology, life cycle, behavior, diet, communication and breeding of rhinos. Second approach, each zoo held an WRD event on September 22 - for example, special keeper talk, behind the scenes tour, feeding and touching a rhino, quiz tournament, panel exhibition, joint projects between zoo and library, comparison two species of rhino and so on. Some Zoos used websites and social networking services (SNSs) like facebook and twitter for celebrating WRD. Many people participated in the event and learned about rhino. In 2013, when we started joining WRD, half of zoos keeping rhino in Japan, held an event. These events have been taken up by media including TV news and newspaper. Since then, we hold this event every year on September 22.