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BREEDING AND REPRODUCTIVE PERFORMANCE OF THE

AFRICAN PENGUIN (*Spheniscus demersus*) AT UNDERWATER

WORLD LANGKAWI (UWL) MALAYSIA

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ABSTRACT

This paper provides a demographic analysis of six years information collected on an African penguin (*Sphenicus demersus*) colony of Underwater World Langkawi (UWL) at Langkawi

Island, Kedah, Peninsular Malaysia. These information include reproduction, sex ratio, seasonality, egg-laying date interval and age range of breeding. From the period of 2006 to 2011, 27 chicks survived while 16 chicks died within six years. The sex ratio favoured the female with 1.8:1 in 2006 and 1.38:1 in 2011, although the gender of about 14 second-generation individuals was unknown. Eggs were laid in all months of the year, but a higher frequency was observed between August and January or between autumn and winter (in the southern area). The calculated interval of egg-laying dates for each egg production was 6.719 ± 4.18 months. The mean intervals of egg-laying dates for identified females were 9.239 ± 4.26 months and 5.196 ± 3.34 months for rear infants and non-rear offspring, respectively. The age at first female egg production ranged between six and twenty years and the males that are actively involved in brooding at the age between three and twenty years. The age of the mother at first weaning of the offspring ranged from six and twenty years ($n=43$), while the males had first paternity between the ages of three and twenty three years ($n=43$). Monogamous breeding in the first two years (2006 and 2007) of this study was due to imbalance sex ratio between male and female (2:1) and respectively 1:1 or 1:2 between male to females. The captive colony grew at an average rate of 1.172 per individual per year. In 2011, the calculated rate was 1.15, indicating that the rate remained almost constant. Infant mortality in the first two months was 32.5%. This information is beneficial to increase the effectiveness of the management and conservation of African penguins in captivity.

Key words: African penguin, *Sphenicus demersus*, breeding, mortality, conservation and management