

ANALYSIS OF THE STELLER'S SEA EAGLE SURVIVAL CURVES. DO MALES AGE FASTER THAN FEMALES?

M. S. Romanov¹, V. B. Masterov², L. Y. Kurilovich³

¹ *Institute of Mathematical Problems of Biology, Keldysh Institute of Applied Mathematics, Russian Academy of Sciences, Pushchino, Russia*
E-mail: romanov.eagle@gmail.com

² *Lomonosov Moscow State University, Faculty of Biology, Moscow, Russia*
E-mail: haliaeetus@yandex.ru

³ *Moscow Zoo, Moscow, Russia*
E-mail: kurilovich@moscowzoo.ru

Abstract. This study presents a preliminary analysis of the survival of 428 Steller's sea eagles in captivity based on the data of the European Studbook of this species. We analysed survival rates of 212 males and 216 females and found that females live 6–8 years longer. This phenomenon is explained by parameterization of Weibull ageing model, which reveals higher rates of ageing in males, while the extrinsic (not related to age) mortality does not differ between sexes. An individual's ageing is followed by decline in its condition. This process can be traced by changes in fecundity, which gradually decreases after the age of 27. Maximum recorded reproduction age of males and females is 34 and 35, respectively.

Keywords: Steller's sea eagle, *Haliaeetus pelagicus*, captive population, aging, Weibull model