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FEEDING OF OTÁRIA-DO-CABO (*Arctocephalus pusillus pusillus*) IN A ZOO PARK: ENERGY ASPECTS, DIGESTION AND BEHAVIORAL VARIATIONS

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A good practice of maintaining marine mammals in artificial conditions it is important to carefully monitor feeding and its effects on the evolution of animal weight, in conjunction with other environmental variables. This work consists of a feeding study with ten (10) sea lions of the species Arctocephalus pusillus pusillus (five adult males, two adult females and three juvenile males) in the Zoomarine Oceanographic Park (Albufeira, Portugal). The objectives were to determine the caloric values of the fish product species used to feed these animals and their effects on the evolution of body weight according to age, weight and behavioral history. The study spanned four years and was divided into three phases. In the first, the caloric value of the food actually taken by each individual was quantified. In the second phase it does not hear caloric control, having only been recorded the total quantity in kilos of food. In the third and last phase, the animal feeding was based on caloric values. In addition to the food taken by each subject, air and water temperatures and relevant behavioral events (such as incidents of aggression) were daily recorded. Some methods of measuring the passage times of different types of food were also tested in the digestive tract of three adult males with the use of radiopaque spheres for radiographic visualization. In general terms, the species *Scombrus japonicus*, *Trachurus trachurus* e *Sprattus sprattus* showed higher but very variable caloric values, whereas the species *Loligo vulgaris* and *Trisopterus minutus* showed lower but more stable values. The highest caloric species showed the highest passage time through the digestive tract, with a maximum of 33 hours for *Sprattus sprattus*. Water and air temperatures showed a predictable relationship with the oscillations in animal weight, which showed an inverse relationship with the annual temperature oscillations. This work contributes to a better understanding of the caloric content of the different fishery products provided to sea lions, as well as the relevance of food planning according to the calorific values regarding the care and welfare of the animals displayed.

Keywords: Sea lions; Calorific value; Behavior.

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