

## Diet selection by the White-naped Pheasant Pigeon *Otidiphaps nobilis aruensis* at the Barcelona Zoo.

Helena Marqués<sup>1</sup>, Maria Dolores Baucells<sup>2</sup>, Elena Albanell<sup>2</sup> and Gemma Navidad<sup>1</sup>

<sup>1</sup>Parque Zoológico de Barcelona, Parque de la Ciudadela s/n, 08003 Barcelona, Spain

<sup>2</sup>Departamento de Ciencia Animal y de los Alimentos, Facultad de Veterinaria, Universitat Autònoma de Barcelona, Bellaterra, Barcelona Spain.

*Otidiphaps nobilis aruensis* is an endemic columbiforme from Aru Isle (South-West of New Guinea). It is poorly represented in captivity and there is not enough information known about the biology and wild status of this endangered specie. However, due to its insular situation, its wild status may be critical.

The Barcelona Zoo holds 18 individuals (53 %) of the total European captive population, with two wild caught breeding pairs. The aim of this study was to determine the diet consumed by the captive population of these birds at the Barcelona Zoo, and some of the factors that could have an influence on diet selection.

The study was carried on at the Barcelona Zoo with 11 (8.3) captive born individuals (descendants from the two breeding pairs), between 5 and 20 months of age at the time of study. The animals were housed individually and the intake was evaluated through three experimental periods (see Marques *et al.*, 2000 for further details on housing and methodology). The diet consisted on 10 ingredients grouped in 4 categories: grains (wheat, millet and canary seed), commercial feeds (Zeigler Frugivore Supplement, Universal Insectivorous Diet – Witte Molen, Egg rearing Food With Hedgerow Plants – Kasper Faunafoods), animal protein (mealworms, hard boiled egg), and vegetables (lettuce and fruit mix: apple, pear, banana, carrot). All ingredients were offered close to ad libitum, except for the mealworms (*Zophoba* sp.), which were used to encourage birds to go on a weighing scale. The animals on this diet kept growing normally and looked healthy. The data obtained were analyzed by Proc Tabulate and Proc Mixed of SAS.

The animals consumed a total of  $33,2 \pm 0,82$  g of diet ( $22 \pm 1,30$  g on a dry matter basis, DMB). This amount was 4 times lower than the offered. Great differences among individuals were observed on diet selection, but the mean diet composition was: 38 % grains, 25 % commercial foods, 19 % animal protein, and 18 % vegetables. None of the ingredients was consumed more than 40 % of the amount offered, except for the mealworms.

There were significant differences on ingredient selection among ages (juveniles 20 – 35 weeks old, n=7; elders 43 – 82 weeks old, n=4). The younger animals consumed significantly less grains than the older animals ( $10,3 \pm 1,27$  g vs.  $17,2 \pm 2,27$  g;  $P < 0,001$ ). The younger animals, had instead, a tendency to eat more commercial foods ( $P = 0,07$ ). Additionally, some differences were observed among individuals that came from different progenitors in the consumption of some grains (i.e. wheat and canary seed). Whereas no differences in any of the other ingredient groups was detected. Curiously, males consumed significantly more lettuce than females ( $1,67 \pm 0,5$  g vs.  $0,56 \pm 0,5$  g;  $P < 0,01$ ).

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