

SUPPLEMENTARY MATERIAL

Table S1. Nutritional content of the standard captivity diet (dog pellets) for mynas.

Ingredient (%)	SUPERCOAT® Puppy With Real Meat
Crude Protein	29.00
Crude Fat	14.00
Salt (NaCl)	1.80 (max)
Crude Fiber	6.00 (max)
Omega Fatty Acids	1.40 (min)
DHA	0.05 (min)

Table S2. Ingredients and calculated nutrient composition of the three foods provided during the experiment (from Machovsky-Capuska et al., 2016).

Ingredient (%)	High Protein	High Lipid	High Carbohydrate
Corn starch	-	-	42
Corn gluten meal	40.00	-	-
Meat and bone meal	10.00	-	-
Poultry by-product meal	20.00	-	-
Powdered cellulose	23.96	63.52	39.26
Soy protein concentrate	1.28	-	-
Poultry fat	-	15.61	-
Soy oil	2.62	15.00	-
Sodium chloride	-	0.37	0.30
Sodium bicarbonate	0.16	0.28	0.27
Potassium bicarbonate	0.60	1.04	1.28
Potassium sulphate	0.50	0.75	0.50
DL Methionine	-	-	-
Lysine HCL	-	-	-
Threonine	-	-	-
Limestone	0.38	0.95	0.91
Monocalcium phosphate	-	1.98	2.00
Vitamin/Mineral Premix*	0.50	0.50	0.50
Metabolizable energy (kcal/kg)	2600.00	2600.00	2600.00
Crude Protein	42.00	0.21	0.42
Total Calcium	0.90	0.90	0.90

Total Phosphorus	0.53	0.42	0.43
Digestible Phosphorus	0.40	0.40	0.40
Digestible Lys	1.27	0.00	0.00
Digestible Met+Cys	1.36	0.00	0.00
Digestible Thr	1.34	0.00	0.00
Sodium	0.22	0.22	0.22
Potassium	0.58	0.58	0.58
Chloride	0.23	0.23	0.23

*dosed to supply per kg: ethoxyquin, 100 mg; biotin, 0.2 mg; calcium pantothenate, 12.8 mg; cholecalciferol, 60 µg; cyanocobalamin, 0.017 mg; folic acid, 5.2 mg; menadione, 4 mg; niacin, 35 mg; pyridoxine, 10 mg; trans-retinol, 3.33 mg; riboflavin, 12 mg; thiamine, 3.0 mg; dl- α -tocopheryl acetate, 60 mg; choline chloride, 638 mg; Co, 0.3 mg; Cu, 3 mg; Fe, 25 mg; I, 1 mg; Mn, 125 mg; Mo, 0.5 mg; Se, 200 µg; Zn, 60 mg.



Figure S1. Standardized photographs of a bird's eye patch at (A) capture and (B) after eight weeks in captivity.

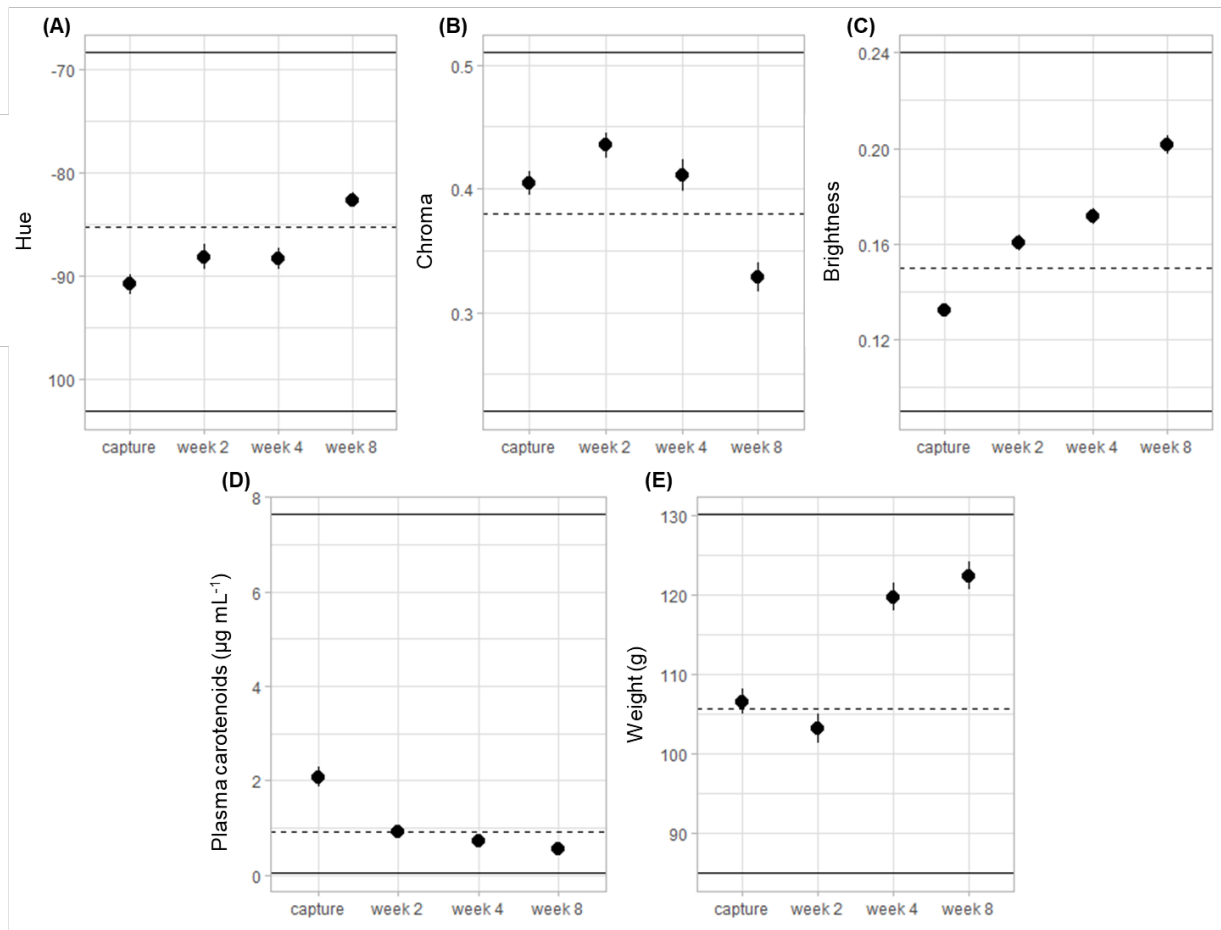


Figure S2. Change in coloration, plasma carotenoid levels and weight during the fading period (mean \pm standard error). Measurements were taken at capture and following 2 weeks, 4 weeks and 8 weeks in captivity. Hue (A), chroma (B) and brightness (C) are standard parameters scored to quantify coloration. Hue and brightness increased over time, while chroma decreased – taken all together, this show a decrease in eye patch coloration over time. Plasma carotenoid levels (D) also decreased during time in captivity. Individual body weight (e) increased after a month in captivity. The dotted line represents average population value under natural conditions while the solid black lines show the maximum and minimum values found in populations of common mynas (C Peneaux, unpublished data).

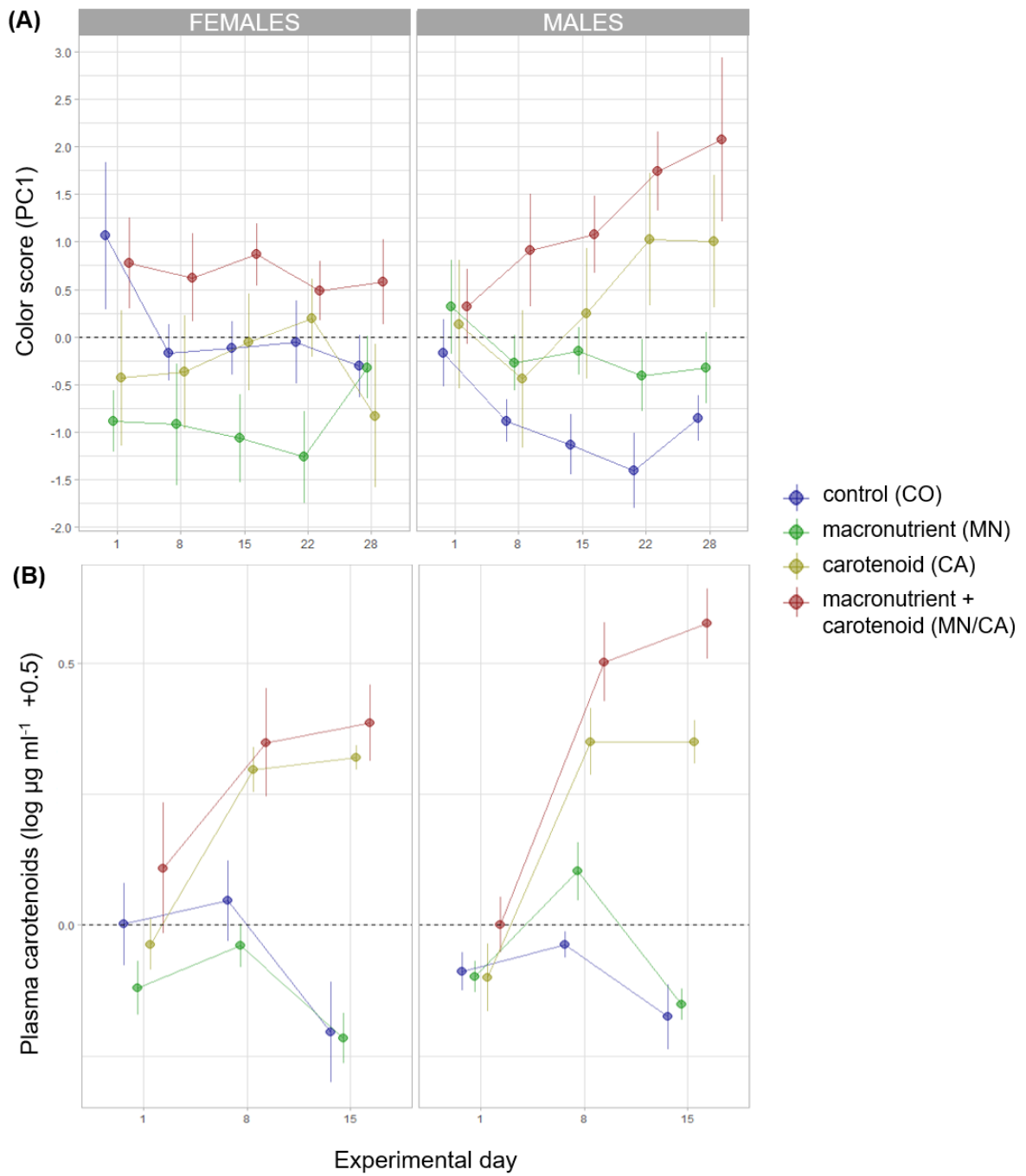


Figure S3. Change in eye patch coloration (A) and plasma carotenoid concentrations (log $\mu\text{g ml}^{-1} + 0.5$) (B) over the experiment period in females (F) and males (M) for each treatment group (mean \pm standard error).

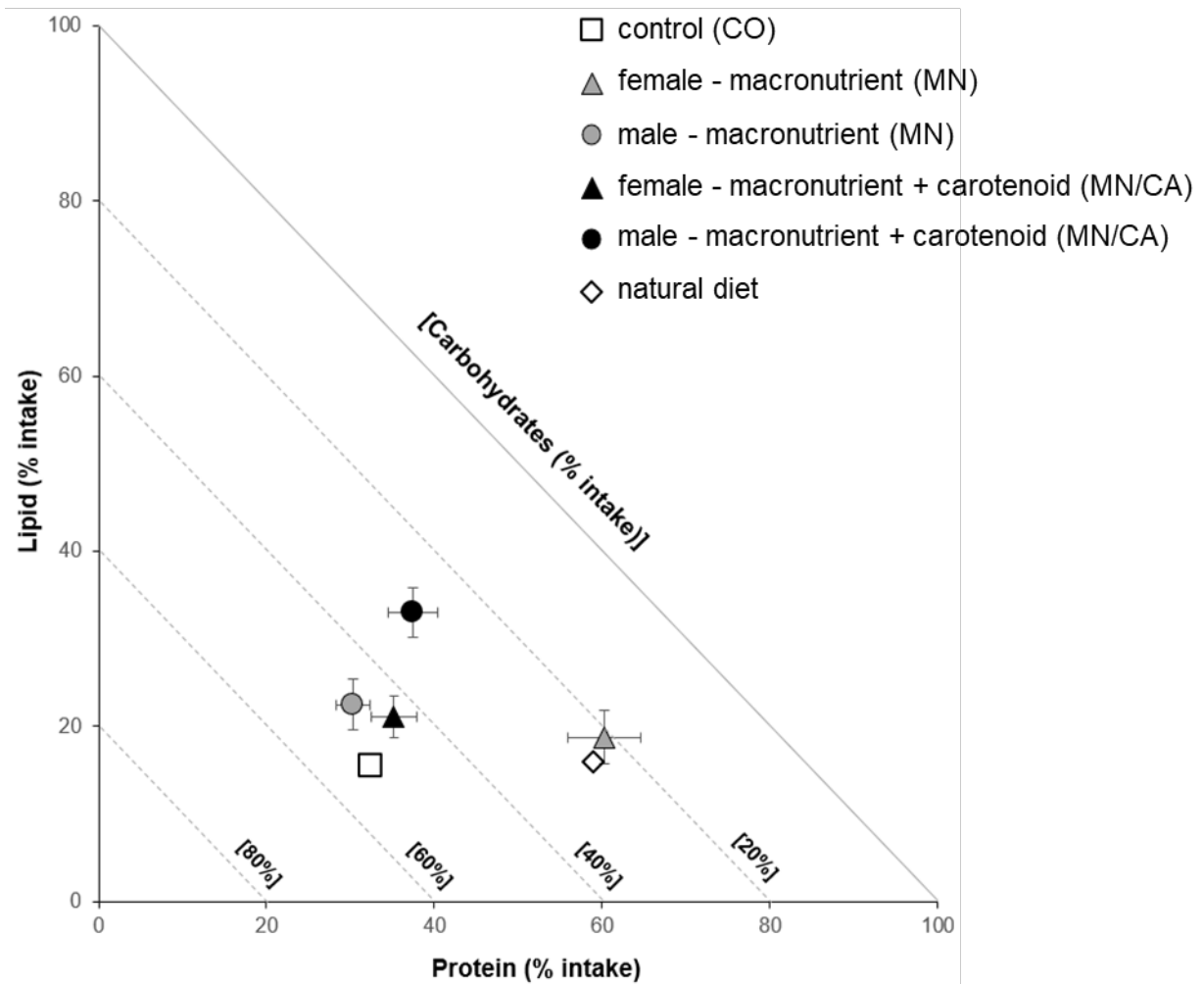


Figure S4. Proportion-based nutritional geometry plots showing the mean (\pm standard error) diet balance of macronutrient intake (protein, lipid and carbohydrates) selected by male and female mynas from free choice food groups (macronutrient and macronutrient + carotenoid) and dog pellets (control and carotenoid). Natural diet of mynas in the wild (see Machovsky-Capuska et al., 2016) was also included. Nutritional intake in MN males and MN/CA females did not differ from control birds. MN females ingested nutrients in proportions similar to the ones of wild birds, characterized by high protein intake. MN/CA males consumed a high proportion of lipids compared to other groups. To geometrically define diets, % Protein is plotted against % Lipid. Considering that the three macronutrients in the mixture ingested sum to 100%, plotting % Protein (first axis) and % Lipid (second axis) will automatically reflect the value of % Carbohydrate in the third axis (Raubenheimer, 2011).