

REPRODUCTIVE APPARATUS APPRECIATION OF GREAT ALEXANDER PARAKEETS

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Abstract

Research aimed to establish the anatomy of female and male at Great Alexander parakeets. Determinations were carried out on a total number of 10 individuals: respectively 5 females and 5 males. The main aimed parameters were represented by: ovary position, ovary weight, oviduct weight and oviduct length, testicles weight, dimensions of deferent tract, respectively the weight of deferent tract. At the Great Alexander studied females, ovary was situated in the abdominal cavity, under the ventral side of left kidney. Average ovaries weight reached 3.0458 ± 0.0616 g, with minimal value of 2.873 g and a maximal one of 3.215 g. Oviduct weight reached an average of 1.0936 ± 0.0705 g with a minimal value of 0.937 g and a maximal one of 1.294 g. Regarding the oviduct length, the mean established value, for the studied birds, was 74.6166 ± 1.4802 mm, with limits between 69.526 mm and 78.231 mm. Exploring the male reproductive system of budgerigars, the testicles were found in the abdominal cavity, at the level of the last 3 ribs. In all situations, the weight of the right testicle was higher than the left one. So, the average weight of the left testicle reached 2.5481 ± 0.1276 g, with a minimal of 2.2267 g and a maximal of 2.9758 g. Speaking of the deferent tract size, its medium length reached 72.6924 ± 0.4262 mm while trait variability was very low ($V\% = 1.8541$). Weighting of both deferent tracts oscillated between 0.2125 g for the right one and of 0.3016 g for the left one, with an average of 0.2640 ± 0.0086 g.

Key words: ovary weight, oviduct weight, oviduct length, testicles weight, dimensions of deferent tract, weight of deferent tract

INTRODUCTION

Great Alexander parakeet (*Psittacula Eupatria*) is one of the most loved pet bird both for its intelligence and also for its imposing attitude, vivid colouring of plumage and ability to imitate human speech [1].

Despite the high acquisition prices the above mentioned bird could be founded in the families of numerous animal lovers, as pet birds and also at specialized breeders whom have the intention of capitalize the birds by selling [2].

Great Alexander is a particular companion but for assuring the welfare of birds, it is suitable to grow the birds in pairs. From the above mentioned reasons, we considered useful to realise a study which to describe and to appreciate the reproductive apparatus at this breed.

MATERIAL AND METHOD

Investigations were made on a number of 10 Great Alexander individuals, respectively 5 female and 5 males; birds were healthy, with close ages and were able for reproduction.

The values of the analysed indicators were determined by weightings and measurements, this operation being made using analytical balance and electronic calliper.

The main studied parameters were:

- position of female reproductive apparatus;
- weight of ovary;
- weight of oviduct;
- length of oviduct;
- position of male reproductive apparatus;
- weight of testicles;
- weight of deferent tract;
- length of deferent tract.

To establish the significance of differences between the obtained means, was made variation analysis through mono-factorial ANOVA analysis.

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RESULTS AND DISCUSSIONS

1. For females

At Great Alexander studied females, *ovary* was situated in abdominal cavity, underneath the ventral side of left kidney, suspended through a short ligament.

Data regarding ovary weight enlightened a mean value of 3.0458 ± 0.0616 g, in conditions in which the minimum weight was 2.873 g, and the maximal one was 3.215 g. Variation coefficient recorded a low value (4.5276%) proving a very good homogeneity of the studied character (table 1).

Table 1 Ovary weight (g) in studied Great Alexander parakeet

Specification	n	$\bar{X} \pm S_{\bar{X}}$ (g)	V%	Min. (g)	Max. (g)
Ovary weight (g)	5	3.0458 ± 0.0616	4.5276	2.873	3.215

At determination of oviduct weight at analysed birds was enlightened a mean value of 1.0936 ± 0.0705 g, with a minimum of 0.937 g and a maximum of 1.294 g. Variability of the studied character was medium (V=14.4159%) (table 2).

Regarding the aspect of oviduct length, the mean value establish for the studied birds was 74.6166 ± 1.4802 mm, in conditions of calculating a variation coefficient of 4.4358% (table 3).

Table 2 Oviduct weight (g) in studied Great Alexander parakeest

Specification	n	$\bar{X} \pm S_{\bar{X}}$ (g)	V%	Min. (g)	Max. (g)
Oviduct weight (g)	5	1.0936 ± 0.0705	14.4159	0.937	1.294

Table 3 Oviduct length (mm) in studied Great Alexander parakeets

Specification	n	$\bar{X} \pm S_{\bar{X}}$ (mm)	V%	Min. (mm)	Max. (mm)
Oviduct length (mm)	5	74.6166 ± 1.4802	4.4358	69.526	78.231

2. For males

Position of testicles was normal, in the abdominal cavity, at the level of the last three ribs, in direct contact with the anterior lobe of kidneys and suspended by a ligament. Testicles' form was ovoid and their colour was white-yellow.

variation limits between 2.2267 g and respectively, 2.9758 g.

In the case of right testicle, minimum determined weight was 2.5862 g, maximum one was 3.2546 g, mean value being 2.8862 ± 0.1092 g (table 4).

Effectuated determination shows a superior weight of right testicle face to the left one. So, the mean established weight for left testicle was 2.5481 ± 0.1276 g, with

Mean average for both testicles was 2.7171 ± 0.0922 g, with a minimum 2.2267 g, and variation coefficient recorded a value of 11.3114%, shown an acceptable homogeneity for the studied character (table 4).

Table 4 Testicles weight (g) in studied Great Alexander parakeets

Specification	N	$\bar{X} \pm S_{\bar{X}}$ (g)	V%	Min. (g)	Max. (g)
Left testicle	5	2.5481 ± 0.1276	11.2015	2.2267	2.9758
Right testicle	5	2.8862 ± 0.1092	8.4628	2.5862	3.2546
Mean	10	2.7171 ± 0.0922	11.3114	2.2267	3.2546

Determination of deferent tract length shows a value of 73.6656 ± 0.5118 mm for the right one and 71.7192 ± 0.2864 mm for the left one (table 5).

Mean length for both deferent tracts was 72.6924 ± 0.4262 mm, in conditions of a very good homogeneity of character (V%=1.8541) (table 5).

Table 5 Dimensions (mm) of deferens channels in studied Great Alexander parakeets

Specification	n	$\bar{x} \pm s_{\bar{x}}$ (mm)	V%	Min. (mm)	Max. (mm)
Left tract	5	71.7192±0.2864	0.8929	70.938	72.592
Right tract	5	73.6656±0.5118	1.5535	72.159	75.183
Mean	10	72.6924±0.4262	1.8541	70.938	75.183

Mean weight of both deferent tracts was between 0.2125 g (right tract) respectively 0.2640±0.0086 g, with limits of oscillation 0.3016 g (left tract) (table 6).

Table 6 Weight of deferens tracts (g) in studied Great Alexander parakeets

Specification	n	$\bar{x} \pm s_{\bar{x}}$ (g)	V%	Min. (g)	Max. (g)
Left tract	5	0.2542±0.0123	10.8343	0.2125	0.2826
Right tract	5	0.2739±0.0116	9.4997	0.2359	0.3016
Mean	10	0.2640±0.0086	10.3440	0.2125	0.3016

CONCLUSIONS

From the angle of structure an positioning of reproductive apparatus could be affirmed that this one is specific to aviary breed, having the same particularities.

Ovary weight recorded a mean value of 3.0458±0.0616 g, and the one of oviduct was 1.0936±0.0705 g in conditions of obtaining a length of it of 74.6166±1.4802 mm.

Mean weight for both testicles was 2.7171±0.0922 g, with a minimum of 2.2267 g.

Mean length of deferent tracts was 72.6924±0.4262 mm, and their weight was 0.2640±0.0086 g, with oscillation limits between 0.2125 g (right tract) respectively 0.3016 g (left tract).

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