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# EXTERIOR EVALUATION OF SELECTED BREEDS OF PIGEONS: OWLS AND FRILLS

Adamčík, M.<sup>1</sup>, Zigo, F.<sup>1</sup>, Kolenič, P.<sup>2</sup>, Ondrašovičová, S.<sup>3</sup>

<sup>1</sup>Department of Nutrition and Animal Husbandry University of Veterinary Medicine and Pharmacy, Komenského 73, 041 81 Košice <sup>2</sup>Slovak Breeders Association, Krížna 44, 824 76 Bratislava <sup>3</sup>Department of Biology and Physiology, University of Veterinary Medicine and Pharmacy Komenského 73, 041 81 Košice Slovakia

frantisek.zigo@uvlf.sk

### ABSTRACT

Owl and frill pigeons are considered one of the oldest breeds of domestic pigeons and for breeders they mean the embodiment of beauty, pride, elegance and temperament. The common feature of the whole group of owl and frill pigeons is the presence of vertically growing feather adornment-frill and a significant refinement of exterior features on the head. The main goal of this study was to record the current situation in the exhibition sector and to compare the exterior of selected breeds of owl and frill pigeons with the relevant European standard at top breeder's exhibitions. Altogether 722 short-beaked owl and frill pigeons (Oriental frill, African owl and Turbit) raised by breeders from seventeen European countries were evaluated at five important exhibitions in Europe. The examination of the exterior showed that the most common exterior faults on the body of oriental frills were defects in colour pattern or lacing, poorly developed frill, faults in figure as well as defects in positioning and body posture. Exterior faults observed on the heads of oriental frill included: short top or forehead, defects in shape or length of the beak, as well as defects in its line. In addition to the faults in the oriental frills, there were observed imperfections in the rounding of the head and in the length of the wings and tail in the African owls. Turbits frequently exhibited deficiencies with respect to the length of the top or forehead. The exterior evaluation of owl and frill pigeons for breeders in the future shows the need for systematic elimination of deviations from physiological and physical development with culling of individuals transmitting morphological defects.

Key words: African owls; assessment; oriental frill; pigeon breeds; standard; Turbits

## INTRODUCTION

The aim of modern pigeon farming is to preserve individual breeds of pigeons, which are without a doubt part of our cultural and social heritage. The task of enthusiastic breeders is to refine the characteristic breeding traits in



Fig. 1. Feathered ornaments of owl pigeons—frill and crest Photo: Adamčík (2018)



**Fig. 2. Oriental frill** Photo: Adamčík (2019)

accordance with the relevant breed standards and also enhance and extend the wide range of breeds. Pigeon breeders are currently divided into two groups [4, 7].

The first group consists of breeders of carrier pigeons. The most important selection and breeding criterion in the breeding of carrier pigeons is their performance, i.e. the speed at which the pigeon can return from the race to the loft [16]. The second, much more diverse group consists of breeders of fancy breeds of pigeons. The most important selection and breeding criterion in this type of breeding is the need to comply with the prescribed standard of the respective breed in terms of exterior and, in the case of high-flyer and roller pigeons, also in terms of their performance [9, 11].

According to the current division of pigeon breeds based on the differences in exterior features and uses, experts have divided breeds of pigeons into ten groups which currently include 576 breeds in Europe [15].

The above division is binding for all member states of the European Breeders' Association (Entente Européenne d'Aviculture et de Cuniculture—EE) and the European Pigeon Standards Book complies with this division. According to this division, pigeons are displayed at all exhibitions organized under the auspices of EE [5].

The main groups of pigeons include utility pigeons (e.g. Texan Pioneer, Carneau, French Mondain, Runt, Piestanau giant pigeon and other) with homer pigeons (e.g. Giant Homer, Show Racer, German Beauty homer and other), wattle pigeons (e.g. Scandaroon, Dragoon, Barb, carrier and other), utility pigeons—Huhntauben (e.g. King, Modena, German Modena, Maltese and other), pouters and croppers (e.g. Slovakian Cropper, Pommeranian



**Fig. 3. African owl** Photo: Adamčík (2019)



**Fig. 4. Turbit** Photo: Adamčík (2019)

Cropper, Bohemian Steller cropper, Hana Pouter and other), colour pigeons (e.g. Gimpel, Bohemian Wingpigeon, Czech spot whitetail, Franconian field pigeon and other), trumpeters (e.g. Arabian trumpeter, German double crested trumpeter, Bokhara trumpeter, Bohemian trumpeter and other), structure pigeons (e.g. Chinese owl, Fantail, Frillback, old Dutch Capuchine, Jacobin), owls and frills (e.g. Oriental frill, African owl, Italian owl, French owl, English owl), tumblers, highflyers and rollers (e.g. Slovak highflyer, Wiener highflyer, Kosice highflyer, Kosice roller, East Slovakian roller and other) [1].

Due to the large number of breeds, this study focuses on the description and evaluation of the standards of three breeds included in the eighth group of pigeons, which are owl and frill pigeons. Owl and frill pigeons are considered one of the oldest breeds of domestic pigeons (*Columbia liv*- *ia domestica*). The common feature of all owl pigeons is the presence of a vertically growing feather adornment—frill, and a significant refinement of the exterior features on the head (Fig. 1). Owl and frill pigeons are an object of interest of top specialists who have brought their appearance to its current form. They are popular all over the world but they are becoming increasingly rare [13].

Owls and frills breeds are divided according to the length of the beak to short-beaked breeds and breeds with middle-size beaks. Short-beaked breeds include: Oriental frill (Fig. 2), African owl (Fig. 3), German shield owl, German colourtail owl, Turbit (Fig. 4), Turbiteen, Polish owl, Russian owl, Bulgarian shield owl, Anatolian owl, English owl and Domino frill. Middle-size beak breeds include: Antverp Smerle, Flanders Smerle, Old Dutch Turbit, Old German owl, Aachen luster shield, Italian owl, Hamburger Sticken, French owl, Ghent owl, Luttich owl, Swedish owl, Tunesian owl, Figurita frill, Barbarisi owl, and Barbet of Liège [8, 10, 13].

Of these breeds, the best-known and most popular breed is undoubtedly the oriental frill pigeon without which no major exhibition on all continents of the world can do [12]. Exhibitions are one of the most effective measures aimed at improvement of the level of pigeon breeding. The determination of the breeding value by assessing pigeons has always been a major issue. The breeding efforts involving any species of animals require certain limits within which the given field must be oriented. The relevant indicators are the standards of breeds that serve as the tools which help the breeders to achieve a more optimal exterior as similar as possible to the ideal of the breed [2].

The main goal of this study was to point out the most common exterior deficiencies of owl pigeons and summarize the faults of selected short-beaked owl breeds observed at top breeding events.

### MATERIALS AND METHODS

### Selection of owl pigeon breeds

Due to the high number of owl and frill pigeon breeds and the extensive definitions of their standards, three breeds of short-beaked owl and frill pigeons were selected for this study. They are those most often presented at exhibitions and represent the most valuable breeding core of the whole group. Our study included short-beaked breeds: Oriental frill pigeon (Satinette and Blondinette), African owl pigeon and Turbit. The exterior of 722 owl pigeons of selected breeds was judged at 5 European exhibitions during the years 2018 and 2019. Their breeders came from seventeen European countries. Of the 722 owl pigeons on display, 591 were Oriental frills, 113 were African owls and 18 were Turbits (Table 1).

### Assessment of owl pigeons

The assessment of pigeons at these shows takes place before the start of the show without public access. Unlike in exhibitions of other animal species, in small-animals (e.g. poultry, rabbits) exhibitions the judge does not know the name of the owner of the animal, which in some cases contributes to the objectivity of the report [17].

Pigeons are evaluated by trained assessors who have

Table 1. Representation of exposed pigeons
from individual countries

Country/pcs	Oriental frill	African owl	Turbit
Slovakia	114	36	7
Czechia	9	10	4
Hungary	109	5	0
Poland	48	24	0
Austria	23	0	0
Germany	61	6	1
Denmark	27	8	6
Romania	69	8	0
Bulgaria	63	12	0
Belgium	21	0	0
Italy	10	0	0
Netherlands	19	0	0
Norway	0	4	0
Croatia	6	0	0
Bosnia and Herzegovina	4	0	0
Serbia	2	0	0
Macedonia	6	0	0
Total	591	113	18

successfully passed theoretical and practical assessment exams, participate in trainings organized by the breeders' association and are active pigeon breeders. The assessment of a pigeon is a detailed comparison of a specific exposed individual with the relevant European standard. For a correct assessment of individual details and body proportions, many years of experience, a refined eye and knowledge of the specifics of individual breeds, plumage pigmentation and colour pattern, as well as the current trend or direction in breeding, are required. All exterior errors and advantages are processed in the judges' evaluation sheets and recorded on a pigeons' assessment card which is placed on each cage [13].

The European system for the assessment of the pigeon's exterior at shows emphasizes the main advantages and does not only point out the faults of the exhibited individuals. Each individual at the show is assigned a pigeons'



Fig. 5. Assessment of the pigeon's exterior with description of advantages and the final score Photo: Adamčík (2019)

Points	Symbol	Verbal expression	Positive points	Wishes	Faults	Disqualifying faults in condition
97	E	excellent	4 and more	-	-	-
96	F	fine	3	1	-	-
95	VG	very good	3	2	-	-
94	VG	very good	3	3	-	-
93	VG	very good	2	4	-	_
92	G	good	2	2	1	-
91	G	good	1	3	2	-
90	S	satisfactory	1	3	3	-
0	US	unsatisfac- tory	-	-	4	1
0	NR	not rated	-	-	-	1

Table 2. Method of filling the assessment card—European approach

Source: B o c k o [12]

assessment card on which the following is listed: cage number, ring number (it also shows the year of hatching), sex (given by the breeder), breed, colour character, advantages, recommendations (small faults), deficiencies (major faults), exclusion deficiencies or deficiencies in breeder's care, evaluation (verbal), points and any award obtained, stamp of the show, date and stamp of the judge (Fig. 5). Table 2. shows the method of filling the assessment card—European approach. The evaluation system is set so that the highest possible award that a pigeon can get without even one recommendation is 97 points with a verbal expression on the assessment card—a typical representative of the contemporary breeding [2].

### Statistical analysis

Exterior faults and positive points in judged breeds were summarized and statistically compared from the judges' evaluation sheets. Statistical analysis was performed using software Microsoft Excel 2007. Chi square test ( $\chi$ 2 test) was used to compare the individual position between the selected breeds of pigeon. The dependence of the individual signs was tested at a significance level of P < 0.05.

The authors declare that there is no conflict of interest.

## RESULTS

Tables 3 and 4 summarize the exterior deficiencies and advantages on the body and the head of the evaluated owl and frill pigeon breeds from the judges' evaluation sheets. The most common exterior faults on the body of oriental frill pigeons included defects in colour pattern or lacing, a poorly developed frill, deficiencies in positioning and body posture, and long wings and tail. Exterior faults observed on the head of oriental frill pigeons included a short

	Oriental frill		African owls		Turbits		
Exterior faults	pcs (591)	%	pcs (113)	%	pcs (18)	%	Р
Poorly developed frill	275	46.5	57	50.4	9	50.0	P < 0.05
Faults of other feathered ornaments	154	26.1	-	-	1	5.6	NS
Defects in colour pattern or lacing	309	52.3	11	9.7	4	22.2	P < 0.05
Faults in figure	179	30.2	52	46.0	8	44.4	P < 0.05
Defects in positioning and body posture	248	42.0	37	32.7	9	50.0	P < 0.05
Long wings and tail	130	22.0	12	10.6	4	22.2	P < 0.05
Drooping wings	7	1.2	2	1.8	-	-	NS
Exterior ideals and advantages							
Correct frill shape	316	53.5	56	49.6	9	50.0	P < 0.05
Correct breast width	412	69.8	61	54.0	10	55.6	P < 0.05

### Table 3. Summary of the most common exterior faults and advantages on the body of selected breeds

NS—non-significant

### Table 4. Summary of the most common exterior faults and advantages on the head of selected breeds

	Oriental frill		African owls		Turbits		
Exterior faults	pcs (591)	%	pcs (113)	%	pcs (18)	%	Р
Short top or forehead	238	40.2	31	27.4	11	61.1	P < 0.05
Long top	12	2.0	-	-	-	-	NS
Low forehead	159	26.9	-	-	-	-	NS
Defects in shape or length of the beak	139	23.5	34	30.0	8	44.4	P < 0.05
Defects in the beak line	156	26.4	30	26.5	3	16.7	P < 0.05
Defects in eye colour	55	9.3	3	2.7	-	-	NS
Exterior ideals and advantages							
Correct length of the top and forehead	341	57.8	78	69.0	7	38.9	P < 0.05
Correct height of the forehead	432	73.1	79	70.0	10	55.6	P < 0.05

Percentage and statistical significance (P < 0.05) are calculated from selected breeds

of owls: 591 oriental frills, 113 African owls and 18 Turbits. NS-non-significant

top or forehead, defects in shape or length of the beak as well as defects in its line. It should be noted that more than 50 % of frills had correct frill shape with optimal length of the top and forehead.

The ratio of head to torso length must correspond to certain limits. The top and forehead of an Oriental frill pigeon are not as short as those in the African owl pigeon but not as long as in the Turbit. In correlation with the total length of the torso it represents a certain "middle path" in the typology of these breeds. In many cases, the course of the beak line (the dividing gap between the upper and lower beak jaws) which passes through the lower edge of the eyebrow and ends at the tip of the crest is some indicator of the correct head length.

### DISCUSSION

Our study is based on 722 short-beaked owl and frill pigeons raised by breeders from seventeen European countries, evaluated at five important exhibitions in Europe. From this group, Oriental frills are currently the most popular, which was confirmed by the number of individuals (591) displayed at all exhibitions. It was evident that neither breeders nor judges prefer owl pigeons with extremely and unnaturally large heads, with faulty formation of the frill or stance or posture deficiencies, as had been the case in the past.

In some Oriental frill pigeons too long forehead was observed and cross-breeding of Turbits in past generations. It was evident in these individuals and it is a very correct action by the judge to point to this fault despite the fact that excessive elongation of the head of Oriental frill pigeons has become a trend for many leading breeders. In order to preserve the typology of the head of short-beaked owl pigeons it is essential that these deficiencies are addressed to also at smaller exhibitions. According to the experience of Helweg [6], the Danish expert on owl and frill pigeons, if these birds have excessively long head they also have a long torso of body. To compensate for such fault, the breeders try to obtain offspring with correct body length by cross-breeding with shorter individuals. In such cases, cross-breeding with width breast individuals may appear helpful as the visual perception of the figure (long body) changes.

The judges of Oriental owl and frill pigeons D a m e r s [3], V e s e l m y [13], emphasized that the correct

proportionality of individual body parts and strong vitality and elegance of the exhibited individuals should be the essential criteria. In addition to the incorrect ratio of the individual parts, a frequent exterior deficiency was a poorly shaped frill or figure as well as defects in colour pattern or lacing which indicates that some breeders pay less attention to frill formation while refining the colour pattern and lacing or vice versa.

A number of exhibited oriental frills (Blondinettes) had figure deficiencies shaping and moderate faults in the purity of colour and pointing, particularly with respect to the arrow pointing on tips of their wings that must be pronounced in laced of frill pigeons. Another recommendation for breeders is to achieve the best possible improvement in the formation of the correct colour pattern or lacing and in the correct formation of feathered ornaments, body posture or height of the forehead.

Similar to oriental frill pigeons, defects in figure, shape, length and in the line of the beak, proportionality of individual body parts, formation of frill and deviation from proper posture were also observed in African owls. Our observations showed that many African owls raised by Danish, Bulgarian and German breeders had considerably longer body, long neck and some of them also longer posterior portion (back). Deficiencies in the formation of the frill and a more horizontal beak line were frequent particularly in German lines.

One can assume that these faults indicate cross-breeding with oriental frill pigeons with the aim to enlarge the head. On the contrary, the exhibited African owls raised by Slovak, Czech and Romanian breeders had short and wide bodies, full and wide forehead, full cheeks and the heads of these birds were properly rounded with a wide set beak. Their deficiencies included faults in formation of the frill and posture. Results of our evaluation allowed us to state that the Slovak and Czech lines of African owl pigeons were advantageous with respect to physique formation compared to other countries. Although the pigeons raised there had bigger heads but also had too long body and the posterior portion.

Unfortunately, the Turbit breed is currently the least bred breed of the selected three breeds of short-beaked owl and frill pigeons. Achieving the required head length in Turbit pigeons while maintaining a harmonic ratio between the head and body length seems to be a breeder's "tough nut", but it was achieved in some individuals as demonstrated in exposed individuals. There are very few high quality Turbit lines in the world, but they can be found mainly among Slovak and Czech breeders. Some Turbit breeders resort to interbreeding to refresh the blood of their pigeons. Some lines of oriental frills with a long crest and forehead and a more horizontal beak line and the show racer breed seem to be suitable for this purpose [14].

According to W h i t e [14], the method of measuring the length of the head and the length of the sternum could be very helpful in future refining of Turbits. Almost 61 % of the representatives of this breed had too short crest and forehead and 50% of individuals had fault in figure (long narrow body) and formation of frill. In addition, many individuals had defects in length and line of beak.

### CONCLUSIONS

Owl and frill pigeon breeders should keep in mind that the breeding should focus primarily on the health of their birds and their natural resistance and vitality. Related to this is the need for the culling of individuals with morphological defects, i. e. the need for systematic eliminations of deviations from physiological development of pigeon figures. The European standards of the investigated breeds are set in a way that allows the breeders to use purposeful targeted refining activities in order to achieve animal lines ensuring success at exhibitions. This involves breeding activities ensuring harmonic body shape and conformity of proportions without the need to achieve unnatural dimensions of the head as was the trend in the past.

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