The Pigeon Genetics Newsletter, News, Views & Comments.

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This Month we take a closer look at the Mutation recessive opal, symbol (o).
We begin with a copy of the article that **Dr. Lester .P. Gibson** wrote for the Issue (2) 1983.

Then we have an article on Indian Breeds by **Dr. M Ashraful Kabir** .

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Recessive opal :

Thanks to **Gerald Ballenger** who responded to my request to Breeders who had recessive opals that could be shared with the membership in this Issue. Note the dimorphism as the hen is darker than the male . These are spread factor blue/Black.
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Editor's featured Genetic Trait . by **Dr. Lester .P. Gibson**

Recessive opal is an autosomal recessive gene which is linked to the pattern gene (C) and the spread gene (S). Thus the genes for recessive opal , pattern and spread are on the same chromosome. There is evidence that the gene for Chinese Owl frill is also on this chromosome. Hollander described this genetic trait in a 1938 paper and assigned the symbol (o) for this monofactorial recessive. He described the trait as follows:

" "Opal" seems widely distributed in Homing pigeons, since it has been obtained or observed by the writer in many separate flocks. Probably Whitman (1919) was dealing with it in his chapter on Color and weakness in Homers (Vol. 11, Chapt. IX) Pictures representing the condition are given in his Vol. I, plate V , A&B. In appearance most opal birds are faded black to grayish ashy in the regions of "smooth" spreading; the remiges generally show less bleaching than the tail band. The "coarse" spread areas generally exhibit a distal edge which is blackish, while proximally a narrow ashy line and then reddening are found. Clumped areas of the wing plumage are practically normal (blue) except in the more extreme cases; In these , the clumped areas are bleached out also, resembling the condition in (Ba). The blue of the rectrices and tail coverts, however becomes bleached to some extent in all cases.

Variability in the degree of "bleaching" in most birds is most striking. Almost every case shows slight banding of the feathers, representing variation in effect at different times while the pigment is being deposited. Definite "banding" is frequent, and easily induced by starving. The starvation is marked by a very light bar across the feathers. Riddle (1908, p. 357) states that "pale - coloured" pigeons are most suited for studies of "fundamental bars". Opal birds were observed by the writer in "Riddle's family 133". At the time, Riddle commented that such a color type was referred to by the term "pale-colored".

Opals sometimes also exhibit marked change of color at different molts. Since such variation seemed due to physiological states, a test was made to see whether thyroid feeding would have similar effect. Just how much of the variation can be accounted for on this basis is questionable, since the "extreme" opals (closely resembling Ba) do not show any fluctuation at different molts or in the individual feathers. The possibility that the extreme condition is due to another opal allele has no genetic support at present.

{ Editor Bob R.- since this was written Steve Sousa showed that the ash red version was a new allele he named "Cherry"}

Opal females have been decidedly poor breeders. The chief point of trouble seems to be the egg; no matter what kind of male is involved, apparent infertility and embryonic death is considerably greater than in eggs from females of other colors. It seems unlikely therefore that the genotype of the embryo is responsible. Further evidence in this direction is afforded by the fact that once hatched, opal and other squabs seem equally hardy, and that the segregation ratios are approximately correct for a simple recessive.

Opal has been found closely linked with the locus of the pattern series treated earlier in the paper; the details of this study are to be published separately.

((It is interesting to note that from 1926 eggs in matings involving opal 637 or 33% did not hatch.))

Levi adds notes on the trait: Hollander adopted the name "opal" " because of a fancied resemblance to the precious stone. The plumage of some opals plays a peculiar colors of delicate tints as in the jewel. The neck blend and upper breast may be an orange or yellowish cast. Opal occurs both in the reddish and a bluish type. The reddish type has the black wing covert edging absent . The bluish type may or may not have the black edging on the wing coverts. It is more present in the juvenile plumage than in the adult. The tail bar is usually good evidence of this character, being bleached with a lighter bar.

((Levi 1941 edition, pages 226 and 227 show good pictures of opal checker and opal bar. Levi 1965 Figure 164 shows a recessive opal checker))

Quinn's note book contains a good resume on recessive opal. Various notes have been published in the APJ and elsewhere on opal. Opal is mainly found in racing homers and show homers. Since recessive opal is linked to the pattern genes, if an opal bar is mated to a blue checker the resultant young are blue checkers. If these (F1) are mated together, their young (F2) will be 3/4 blue checker and 1/4 recessive opal bar.))

Recessive opal produces a variable effect on the coloration of feathers. It changes blue checker to a color varying from near normal to very modified and reddish. Frequently the young recessive opals will show black colored cross stripes in the feathers of the flights and tail. Also the body feathers will show a barring remindful of the barred rock chicken. The head and neck coloration is quite similar to that of the homozygous Indigo. The tail bleaching also resembles some homozygous Indigos. However, indigo and recessive opal are separate traits as proven by breeding experiments. Heterozygous and homozygous indigo recessive opals are quite attractive.

An ash-red recessive opal shows distinct barring of the breast and neck feathers when young but loses this to produce a soft feathered ash-red. The brown recessive opal may show the same barring as a juvenile but loses it to appear normal brown.

The spread blue recessive opal is a very pretty black laced silvery color in varying shades. An odd phenomenon occurs in this combination. The males are silvery but the females are nearly black. This year I bred a female that is genetically silver and she is nearly the same silvery color of the males but lacks the laced effect.

When a black is mated to a recessive opal the young are usually a poor black with the pattern showing through.

When a spread ash is mated to a recessive opal the resultant spread ash young tend to have black speckles over the entire body.))

FURTHER comments on recessive opal in answer to some questions raised by Wendall Ehrhart:

Homozygous indigo ash-red looks like ash red . They also look very much like homozygous indigo blues. I thought perhaps they, (Indigo and recessive opal), might be alleles but they are not. The recessive opal

indigos are very pretty. The heterozygous indigo opal checks are very similar in the juvenile and adult plumage. The homozygous indigo recessive opals look like homozygous indigo in the juvenile plumage and like heterozygous in the adult plumage , and they do have dark or black flecks in the flights and tails.

I also have the "opal laces" and they are definitely spread. I also have the dimorphism between males and females. It is not sex-linkage but I believe it to be sex-induced interaction with blue. The "opal lace" males come in several shades of lace. You say your laces mated to blues produce black selfs. Mine usually produce cruddy black selfs that let the bar or check show through and would automatically be culled by any sighted fancier.

Photos bar and sooty bar by Owner/ Breeder **Gerald Ballenger** with thanks!



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I have been corresponding with my friend **Joe Power** of the U.S.A., and he sent several photos which I decided to share with you here . The reduced birds did not arrive on time for the last Issue. Joe has also been suffering with Atrial Fibrillation , so we have been comparing notes.

The first photo is one of **Doc. Hollander's** first "Embers" back in May 7th. (2003) taken by **Joe's brother Greg**.


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The next one is of two Azuros , left one also smoky which also fools some into thinking sooty is present. **Hollander** discovered this new trait in a feral pigeon. Photo by **Joe's brother Greg.**

Joe's reduced spread split for blue bar Portuguese Tumbler at different ages.

Indian fancy pigeons with their past and present status

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Abstract: India is the top country in the history of pigeons/fancy pigeons. To flourish the pigeon sector, everybody should know its historical background. Emperor Akbar reared many pigeons in his court of Delhi, and his poet Abul Fazl mentioned some pigeons in Ain-I-Akbari (Vol. 1) which Levi quoted in his book '*The Pigeon'.* After studying past and present articles on Indian pigeons, it can conclude that there are 26 Indian pigeon breeds available where in utility group

1(3.85%), flying/tumbler 15(57.69%), structure 3(11.54), colour 2(7.69), feather 3(11.54), and voice 2(7.69) respectively (Table 1; Figure 1).

Introduction

India has a long history to keep pigeons for their flying amusement. Many famous people around the world kept pigeons (Kabir *et al.,* 2019). Abul Fazl first described many pigeons during his service in Emperor Akbar's court. Akbar was famous for collecting many Indian fancy pigeons also (**Kabir, 2014b**). Abul Fazl wrote about Akbar's pleasure at receiving 'fairy-flying' pigeons from the Mughals' homeland Farghana in central Asia, along with a skilled pigeon-fancier, Habib (Asian and African Studies Blog, 2013). Unfortunately, Abul Fazl mentioned some Indian pigeons with short details, so sometimes it was not possible to identify those pigeons with the actual names in the present context. Portugal was the first European country to sail the Cape of Good Hope and reach India. They established the colony of Goa there. In 1676 the French established themselves on the east coast of India in Pondicherry, south of Madras. In those years, several known pigeon authors described the Indian pigeon breeds and they were imported into Europe (**Tanveer, 2011**). East Indian pigeons were sherajee, mookee, goolee, lowtan, and flying pigeons. The sport of pigeons is carried on with great energy in the city of Delhi and Calcutta (**Lyell, 1981**). China boasted a well-organized pigeon post, and the birds were also used in India,

Greece, and Italy (**Brown, 2015**). **Eaton (1858)** described laugher pigeons as scientifically *Columba ridens,* and most were white with bright pearl eyes. He also mentioned pigeon flying amusement in Delhi. Fazl said that the pigeons of the present age have reached a high state of perfection (**Levi, 1992**). Indian Homer Pigeon Association organizes the pigeon race and the National Pigeon Association of India displays a pigeon show every year. The objective of this study is to establish the latest list of pure Indian pigeon breeds after reviewing their past and present information.

Breed-wise observations

Badang: Badang means strong. Indian type carrier pigeon; strongly built with a broad chest; neck length and stance are not exactly English carrier; wattle and eye cere develop with age; very aggressive bird; it has a variety called 'basra' (slightly smaller than badang; beak thinner and longer; wattle is poor than badang; mostly white) (Tanveer, 2011).

Chennai highflyer/Madarasi highflyer: Medium-sized bird; strong bird; base of beak is broad with dominant beak cere; flat and plain headed; clean legged.

Indian lotan: Lotna is a Persian word that means 'roller'. Medium-sized bird; tumbles on the ground by shaking; crested and grouse-legged with very small muff; self-white with bull eyes (Kabir, 2014a); its flying is average type (www.pigeontype.info). Allauddin (1886) described three varieties of this pigeon—dusti, kalami, and havai (Levi, 1992). Lowtan never rolls of themselves, they need proper stimulation (Sell, 2012).

Boori: In the USA, this breed is known as boori tumbler. Boori means kind of cake. This is a typical coloured highflyer bird; with a tippler-like body appearance; small-sized; tight feathers and alertness; the head is rather flat, outlining of head shape as a trapezium (Tanveer, 2011).

Indian gola: The word 'gola' means throat/glutton. Strong flying breeds both speed and endurance; they can fly 10-11 hours without stopping; average flying speed is 65-70 mph (www.pigeontype.info).

Roshan chirag: Roshan chirag means shining light. Tumbler-type bird is very popular because of their role as carrier pigeon in the past. It can be said to be a great pilot; two sub-varieties are available in India—Aaftabi roshan chirag and Mehtabi roshan chirag (www.pigeontype.info). Clean legged; light blue and gray shade and one marking; eye cere is bright red but hard to find; sometimes peak-crested. Same bird with pale eye cere is called the American homer in Kanya Kumari of India (Tanveer, 2011).

Indian pearl highflyer: It has endurance flying skill; it becomes very difficult to see them by naked eyes in the sky (www.pigeontype.info).

Gandawala: This means striped. Young is single coloured. After plucking or moulting, new feathers of wings (wing bar) will be white (Tanveer, 2011).

Lamb duma: This is long-tailed pigeon. Looks European roller; tail is longer than body (Tanveer, 2011).

Lal band Gaghra: It has tiger-like red band on the wings. This is goof flying breed. Only 2-coloured shades with wing bar (Tanveer, 2011).(R. Rodgers 2013) Males have lighter body and tail colour with no sub-terminal tail band. Females have a black sub-terminal tail band. Genetics Published Paper by Jith Peter naming the Colour as "Saffron (Saf) . 2 Photos by Jith Peter.

 Cock Ghagra  hen Lal Band.

Chuva Chandan: Chuva means rain and Chandan means sandalwood. This is small bird; head-neck light yellow and body is shades of gray (lighter or dark); mostly plain-headed, peak crest is rare (Tanveer, 2011).

Goolee/Goolie: Goolie means bullet. Flying breed and most kept in northern India. Smaller size to mookee (www.pigeontype.info); head-neck-tail are coloured, rest of the body is white (Tanveer, 2011); sometimes primaries are shown under the tail (Rahman, 1999).

Guldar shirazi: Guldar means speckled or spotted and Shiraz is the name of a place. Its overall body markings are Lahore/shirazi types (Tanveer, 2011).

Khal: Khal means leader. Most popular flying pigeon in Delhi and surrounding regions; magpie marking with mottles in its wings (www.pigeontype.info); every moult, the mottles in the wings increase; always exceptional coloured squab are found than the parents (Tanveer, 2011).

Gul mehendi: The meaning of ze as shirazi; medium muff; base colour is white and 2 or 3 colour spots (=gul) all over the body; very attractive; in every moults, spots increase (when young, its shields are mottled) (Tanveer, 2011).

Hyderabad neela: Bluish coloured body feathers with black bar or checkered; plain-headed or peak-crested; clean-legged.

Kanniyasthiri: Kanniyasthiri means monk or hood. Oral communication with 'Krishna', the Owner of RGK Pigeon Farm, India, informed me about this breed. This is similar to capuchine breed; its hood feathers are between capuchine and jacobin and loosely arranged; slender body; clean-legged always.

Gulsar (Jacobin): Jacobin means revolution. Medium-sized bird; hooded crest; pearl eyes; it has rose (circular spiral side of the lower neck), mane (rear-neck plumage), hood (upper end), and chain (protruding feathers of cheeks and fore-neck) (Muller and Schrag, 1985); average height is around 14 inches (www.pigeontype.info).

Barpan/Darpan: Barpan means paramount and darpan is mirror. Broad and full chest; mostly self-coloured; shell crested without rosettes; always muffed; eyes are yellow (Tanveer, 2011). In Bangladesh, this breed is called ‘parvin’ (Kabir, 2022).

Indian mondaine: Mondaine means fashion. Grizzle factor and tigering pattern became more strongly fixed in this breed in any other. They resemble the original gola in colour and marking (www.pigeontype.info).

Baghah: Strong flying bird and plumage colours are tiger in pattern. Abul Fazl mentioned this as an Indian breed (Levi, 1992).

Short beak homer: Smaller than normal racing homer. Short beak; wattle and eye cere develops very slowly with their age (Tanveer, 2011).

Kokah: It has a very melodious voice (Levi, 1992). Brick-red coloured; clean-legged with blackish toenails; small, elongated, and light-weighed bird; horizontal posture with 45° angle; primaries and the tail ratio will be the same length; the beak is narrow and nearly straight, blackish; high frontal, eyes are orange coloured; mostly peak-crested (Kabir, 2022).

Yahoo: Yahoo-like voice. Small bird; black or white; sometimes muffed (Tanveer, 2011).

Indian fantail/Luqqan: Lukka means land of lights. Indian fantail is a beautiful pigeon breed in Bangladesh (Kabir, 2015a). Medium-sized; expanded tail; peak-crested, grouse-legged; tail feathers are usually 23-35 (Kabir, 2015b), or 30-32, sometimes as many as 42 (McNeillie, 1993).

Mookee: The meaning of this word is foolish. Small bird with bull eyes; S-shaped neck; peak-crest attaches with the neck feather with the same line; tail to be carried about a one-half inch off the ground (NPA Book of Standards, 2010); usually stands on the tips of toes (www.pigeontype.info).

Table 1. Group of Indian pigeons with their numbers

Group	Pigeon breeds	Number
Utility	Indian mondaine	1
Flying/Tumbler	Chennai highflyer, Indian gola, roshan chirag, Indian pearl highflyer, gandawala, lamb duma, lal ban baghra, chuva chandan, goolee, khal, Hyderabad neela, short beak homer, Indian lotan, boori, baghah	15
Structure	badang, Indian fantail, mookee	3
Colour	gul mehendi, guldar shirazi	2
Feather	gulsar (jacobin), kanniyasthiri, barpan	3
Voice	kokah, yahoo	2
Total		**26**

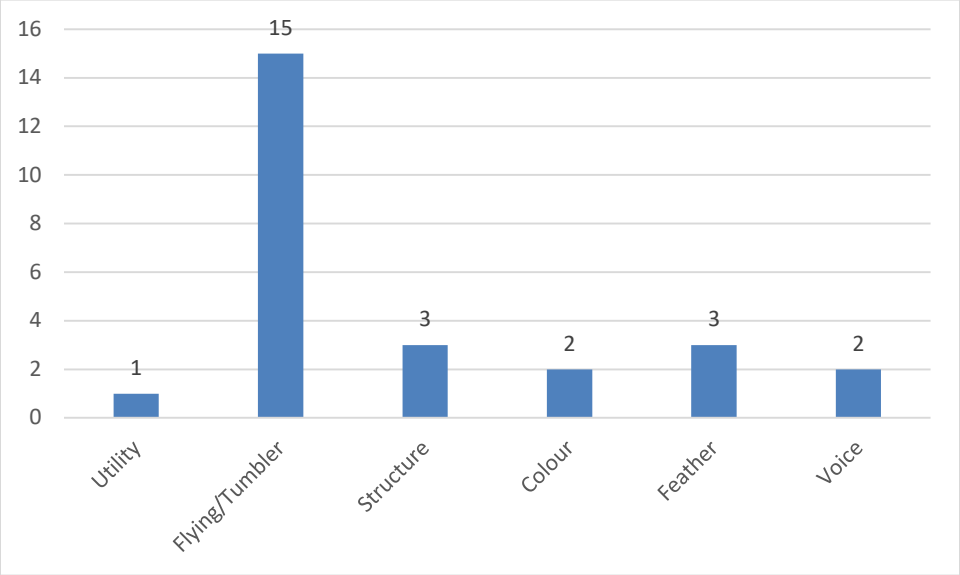

Figure 1. Group of Indian pigeons with their numbers

Discussion

Before the liberation war of Bangladesh, when this region was called the 'Indian Subcontinent' that time many pigeon keepers brought some Indian pigeons to Bangladesh and after rearing for a long time with selective breeding created many mixed breeds, so usually those Indian pigeons got different names in Bangladesh. For instance, Abul Fazl (1590) mentioned kokah pigeons in India, but now in India, there is yahoo pigeon with the same voice. In Bangladesh, there are lots of brick-red coloured kokah pigeons. In addition, maybe somebody brought pigeons from the Bombay City of India, and established a pigeon named 'Bombay pigeon', but strangely these Bombay pigeons are not available now in India. They know it as a mixed foster breed. Abul Fazl mentioned 'porpa' pigeons as an Indian breed, but actually, pouter is a group of pigeons and it has different origins. Abul Fazl noted eight Indian pigeons in his lifetime—gulsar, luqquan, lotan, baghah, kherni, rath, nishawari, and kokah (Blockmann, 1873; **Levi, 1992**). Khirni is a place in Rajasthan, India. Abul Fazl mentioned 'kherni pigeon' but now that is probably teddy Rampuri kamager pigeon of Pakistan. In addition, he mentioned 'nishawari' which was a

great highflyer (fly 1 or 2 days) but in the present context, in India, there is no trace of this pigeon. In the tumbler/highflyer group, sometimes very few pigeons could show this

extraordinary phenomenon. Rath pigeons of Fazl's time are now maybe replaced by badang pigeons. Fazl's mentionable 'gola' pigeon was a wild pigeon as well.

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www.pigeontype.info (khal, goolee, barpan, jacobin, lotan, roshan chirag)

Yahoo. https://www.youtube.com/watch?v=nBbpnVqfe78

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That is it for the month of May 2023 , I hope you enjoyed the extended edition. Special thanks again to Dr Ashraful Kabir., Dr. Lester.P.Gibson., Mr. Gerald Ballenger., Mr. Joe Power., and Mr. Jith Peter, for their contributions to this Issue. The additional Show Report will be sent out shortly. They were Contributed by the National Pigeon Association of Bangladesh thanks to **Mr. Shoibal Kabbir**, and the Bangladesh Pigeon Society thanks to **Mr. Srk Showan**. Well over 1,450 photos total were submitted between the two organizations so I had a great deal of difficulty deciding which to use. I may have missed giving names of participants. Hopefully I will get a pattern worked out to avoid that in future. ~ Bob.

We are having a storm here with power loss, so the Report may be delayed a day or two.
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