



MATERIALS ON THE BIOLOGY OF LAUGHING DOVE (*STREPTOPELIA SENEGALENSIS* LINNAEUS, 1766) IN BUKHARA REGION

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ABOUT ARTICLE

Key words: Bukhara, historical monument, laughing dove, egg, generation, nest, chick, bird, biology, ecology, areal, agrobiogeocenosis, morphometric, method, food, importance, increase, size, development, care, heating, behavioral reaction, couple, pigeon, unsanitary, research, meet, spread, build a nest, interspecific relations, nesting site, component.

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Abstract: The article deals with the relevance of the topic, the distribution of laughing dove, the characteristics of the encounter and its study, the duration of research and methods used in the work, the number of nests found, nesting sites, different characteristics of other pigeons in Bukhara region, meeting places and number Behavioral reactions associated with reproduction, such as formation, have been studied. Number and location of nests, interspecific relationships in nesting, nesting time and use, nest shape, size, nest location, nest building, nest components and morphometric dimensions, egg laying and duration and generation during heating care, changes in the egg, hatching, size, growth and development of the chicks, images of reproduction, connection with the nest of the new generation, information about the night, information on biological properties and importance, such as relationship with historical monuments, nutrition and food diversity.

BUXORO VILOYATIDA KULIGAN KAPTAR (*STREPTOPELIA SENEGALENSIS* LINNAEUS, 1766) BIOLOGIYASI HAQIDA MATERIALLAR

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MAQOLA HAQIDA

Kalit soʻzlar: Buxoro, tarixiy obida, **Annotatsiya:** Maqolada mavzuning

kuluvchi kaptar, tuxum, avlod, uya, jo'ja, qush, biologiya, ekologiya, areal, agrobiogeotsenoz, morfometrik, usul, oziq-ovqat, ahamiyati, ortishi, hajmi, rivojlanishi, parvarishi, isishi, xulq-atvor reaksiyasi, er-xotin, kaptar, antisanitariya, tadqiqot, uchrashish, yoyish, uy qurish, turlararo munosabatlar, uyalash joyi, komponent.

dolzarbligi, kulayotgan kaptarning tarqalishi, uchrashish va uni o'rganish xususiyatlari, tadqiqotning davomiyligi va ishda qo'llaniladigan usullar, topilgan uyalar soni, uya joylari, boshqa kaptarlarning turli xil xususiyatlari ko'rib chiqiladi. Buxoro viloyatida uchrashish joylari va soni Ko'payish bilan bog'liq bo'lgan xulq-atvor reaksiyalari, ya'ni hosil bo'lishi o'rganilgan. Uyalarning soni va joylashuvi, uya qo'yishdagi turlararo munosabatlar, uya qo'yish vaqti va ishlatilishi, uya shakli, kattaligi, joylashuvi, uya qurish, uya tarkibiy qismlari va morfometrik o'lchamlari, tuxum qo'yish va qizdirishda parvarishlashda davom etishi va avlodi, tuxumning o'zgarishi, tuxumdan chiqishi, jo'jalarning kattaligi, o'sishi va rivojlanishi, ko'payish tasvirlari, yangi avlodning uyasi bilan bog'liqligi, tun haqida ma'lumotlar, biologik xususiyatlari va ahamiyati haqida ma'lumotlar, masalan, tarixiy obidalar bilan aloqasi, oziqlanishi va oziq-ovqat xilma-xilligi.

МАТЕРИАЛЫ ПО БИОЛОГИИ СМЕЮЩЕГОСЯ ГОЛУБЯ (STREPTOPELIA SENEGALENSIS LINNAEUS, 1766) В БУХАРСКОЙ ОБЛАСТИ

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О СТАТЬЕ

Ключевые слова: Бухара, исторический памятник, смеющийся голубь, яйцо, поколение, гнездо, птенец, птица, биология, экология, ареал, агrobiogeоценоз, морфометрический, метод, пища, значение, увеличение, размер, развитие, уход, обогрев, поведенческая реакция, пара, голубь, антисанитария, исследование, встреча, распространение, вить гнездо, межвидовые отношения, место гнездования, составляющая.

Аннотация: В статье рассматриваются актуальность темы, распространение смеющегося голубя, особенности встречи и его изучения, продолжительность исследования и используемые в работе методы, количество найденных гнезд, места гнездования, различные характеристики других голубей. в Бухарской области, места встреч и количество изучены поведенческие реакции, связанные с размножением, например формирование. Количество и расположение гнезд, межвидовые отношения при гнездовании, время и использование гнезда, форма гнезда, размер, расположение гнезда, строение гнезда, компоненты гнезда и морфометрические размеры, продолжительность и генерация яиц при тепловом уходе, изменения в яйце, вылупление, размер, рост и развитие птенцов,

изображения размножения, связь с гнездом нового поколения, сведения о ночи, сведения о биологических свойствах и значении, таких как связь с историческими памятниками, питание и разнообразие продуктов питания.

INTRODUCTION

It is important to study the distribution, biology and ecology of bird species, including *Streptopelia senegalensis*, which are an important component of biodiversity, its involvement in agrobiogeocenoses, rural and urban areas, and to identify conservation measures.

Laughing dove is a sedentary, synanthropic species of pigeon family, distributed almost all over the world, including in the Bukhara region. The reason it is called sedentary is that we have met it all year round in all the ecological environments of the region. This bird can be found in the agrobiogeocenoses of districts, cities, towns and villages of the region. However, the biology of this bird is still poorly studied or the materials collected by researchers are obsolete and insufficient to draw appropriate conclusions (Zarudniy, 1896; Dal, 1936; Abdusalomov, 1964; Ivanov, 1969; Kashkarov, 1974; Bakayev, 1994; Kholboyev, 2000). With this in mind, in this article, we present our observations based on the observations made in laughing dove bioecology in 2006-2018.

The methods of G. A. Novikov (1953), A. V. Mikheyev (1984), A. S. Malchevsky (1981) were used in the work. 48 nests of laughing dove were found, 32 eggs, 20 offspring were studied. A number of other observations were also made. Study of the biology and economic significance of laughing doves in the agrobiogeocenoses of Bukhara region. To make recommendations to determine the relationship between humans and laughing doves, their importance, ways of involvement, protection.

THE MAIN RESULTS AND FINDINGS

In Bukhara region, laughing doves live side by side with people and are not afraid of them due to the positive attitude of people. That's why it's hard to find a home where this bird hasn't built a nest. This bird is noticeable in rock dove and collared dove, and much smaller than turtle dove. The character is more complex and the boundaries of the area are changing, which can be seen when the nesting places are occupied by collared doves, when they choose closed places as nesting places, and when they change their sleeping places. Not only is the small size of the body different from other pigeons, especially the collared dove, but also the absence of a noticeable semicircular black band and bright patterns on the neck and outer surface of the wing. Accordingly, it can be recognized quickly even from a great distance.

During the year we saw this bird in the villages and towns of Bukhara region, in the trees along the roads, in the agrocenoses. The fertility rate (number) of laughing dove varies considerably in urban, rural, agrobiogeocenoses.

The song of this bird has 4-5 syllables - "kuk-ku-ku-kukuuu" and can be heard in almost all months of the year. Only laughing doves are more abundant from March to August, and from September to February their sound is less audible. And in the harsh winter of 2008, the laughter of the doves changed dramatically. During the winter months, they stopped singing. We recorded its first song in the first decade of March. Laughing doves before nesting also form pairs like other agrocenosis birds. During this time, they chase each other, sometimes touching their beaks to each other, making a croaking noise like "kuk-ku-kuuu", flapping their wings and clapping their hands. Demonstrates a skillful ability to dive quickly to the ground. We found and studied 48 nests in different conditions. Our observations show that in the Bukhara region, laughing doves nests are built mainly on trees, partly on various buildings and objects built by humans. Species such as *Streptopelia decaocto* and *Acridotheres tristis* compete with *Streptopelia senegalensis* in the selection of nesting sites. Due to natural conditions, *Streptopelia senegalensis* sometimes win and sometimes lose in such interspecific competition. Occasionally, *Streptopelia senegalensis* reuse their nests, which have been used for years or years. Both sexes *Streptopelia senegalensis* are involved in nest building. The construction period sometimes takes three to ten days, on average four to six days, depending on the time of spring, weather, including temperature. *Streptopelia senegalensis* nests mainly from various parts of the surrounding vegetation within a radius of 100 meters, and rarely from thin, colored wires (in 5 nests). The nest is characterized by its flatness, porosity, lack of nesting materials, and the use of thin colored wires, which are placed close to people. Plate-shaped. Sometimes you can see the eggs in the nest from below. When placing bird nests in trees, the always prefers the branched areas of the stems, or the side branches. *Streptopelia senegalensis* uses vegetative and generative parts of various plants as well as very small amounts of anthropogenic material to build the nest. The raw material and size of the *Streptopelia senegalensis* nest vary depending on environmental conditions and the season, the nesting period. It is known that there are both local and individual variables in nest sizes. When the nest is finished, it lays white eggs. Eggs are laid once in one case and once a day in the other. The total number of eggs in the nest is two. The morfometry of *Streptopelia senegalensis* eggs is as follows: egg (n=32) length 26,8 (25,3-29,4) mm., Width 19,6 (18,4-22,1) mm., Weight 7,82 (5,67-9,6) g. Although the *Streptopelia senegalensis* family is involved in egg laying and heating, the activity of the female individual in the family is noticeable. Observation of eggs, time of measurement Mother *Streptopelia senegalensis* swells, the feathers on the tail swell like a fan, showing the size of the trunk, flapping its wings, flapping its wings like butterfly wings on the back of the trunk, slowly changing position when very close, trying to dive, uncomfortable sound resistance. The male protects the mate within a radius of 50 meters from the hive and connects it to the surrounding situation. When the sun goes down, it comes close to the nest. During the pressing of eggs, the

female *Streptopelia senegalensis* allows a person to come close to her, even to touch her and take a picture of her. This indicates the strength of the care of the offspring of *Streptopelia senegalensis*. The process of pressing eggs takes 13-14 days. From 9 to 11 days of this period, cracks appear in the egg shells. This means that they are trying to get the chicks out of the eggs. The process of pressing eggs, the weight of the eggs decreases. From the egg on the day of hatching, the new generation weighs 5.9 g. The weight before leaving the hive will be 108.6 g. So it's growing fast. Their initial weight gain was 18.41 times. Body weight 18.41g per day. increases from. The appearance, appearance, and color of the chicks change. At first, the tip of the nose and nails are white. On the surface of the body there are yellow and bright yellow embryonic tufts, and in some places: around the eyes, ears, beak, paws, lower neck, along the abdomen. The chicks are blind and their ears are closed. By 4 to 7 days after hatching, dark patches appear around the eyes and ears. Later, in 4-6 days, the ear canals and eyes open. The chicks begin to respond to external influences, i.e., squealing, littering, trembling, throwing themselves backwards, squealing with their beaks, trying to fly and dive, squeezing their paws, fast trying to avoid walking, breathing frequently, grabbing the nests in the hive, moving the head, paws, beak. Now the tips of the feathers on the wings and the tail feathers crack and swell, forming tufts reminiscent of a brush. The nose and fingernails turn brown and thicken. The chicks spread their wings slowly, keep their heads upright, and breathe often. By 7 to 8 days of age, white feathers appear on both ends of the chick's tail feathers. The wings have been shown solely to give a sense of proportion. Because the contour feathers are well developed along the surface of the body, the body is well covered with feathers, and at 10-12 days they are still unable to fly. But it will be more active. Later, when the chicks are 14-15 days old, they become like their parents, trying to fly out of the hive. However, they will be in the shelter of their parents for another 3-4 days. Then they leave the hive. The following are illustrations of the reproductive cycle of *Streptopelia senegalensis*

MUSICHA / МАЛАЯ ГОРЛИЦА / STREPTOPELIA SENEGALENSIS LINNAEUS, 1766
BUXORO VILOYATI
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Streptopelia senegalensis family

MUSICHA / МАЛАЯ ГОРЛИЦА / STREPTOPELIA SENEGALENSIS LINNAEUS, 1766
BUXORO VILOYATI
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A nest ready to lay eggs

MUSICHA / МАЛАЯ ГОРЛИЦА / STREPTOPELIA SENEGALENSIS LINNAEUS, 1766
BUXORO VILOYATI
B. N. DONIYOROV © 14. 05. 2009



MUSICHA / МАЛАЯ ГОРЛИЦА / STREPTOPELIA SENEGALENSIS LINNAEUS, 1766
BUXORO VILOYATI
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The first and second eggs in the nest



Streptopelia senegalensis by pressing and heating the eggs



Changes in the egg



An overview of the new generation



7-day-old Streptopelia senegalensis chicks



10-day-old Streptopelia senegalensis chicks



12-day-old Streptopelia senegalensis chick



15-day-old Streptopelia senegalensis chick



A general view of adult Streptopelia senegalensis

Images of the reproductive cycle of Streptopelia senegalensis

Thus, in the Bukhara region, the egg nests of *Streptopelia senegalensis* can be found from the second decade of March to November. Depending on the weather, they are sometimes even in the fall or even in early spring exhibit reproductive movements.

CONCLUSION

Streptopelia senegalensis are mainly grain-eating birds. However, their food spectrum and location may change during the seasons. For example, spring, summer wheat, corn, seeds of foreign plants, partly insects, in autumn and winter they are food scraps, virgin spruce seeds, cotton, wheat, corn, beans, mung beans, peas, millet, rice, sunflower, rye, grapes, apples, apricots, quinces, peanuts planted fields, markets, cemeteries, barns, crows night on the spot vomit tickles, settlements, landfills, from nurseries food found and ate. It sometimes swallows pieces of stone, glass, and iron to improve the process of consuming solid foods. In nutrition *Columba livia*, *Streptopelia decaocto*, *Passer montanus*, *Acridotheres tristis*, *Sturnus vulgaris*, *Parus bokharensis*, *Corvus monedula*, *Corvus cornix*, *Pica pica*, domestic birds, livestock and, in rare cases, *Larus ridibundus*, *Burhinus opticonemus* was found to be around. *Streptopelia senegalensis* feeds on grains and grasses of cultivated plants, encounters around food stalls in markets, on benches in parks, in homes, and sometimes causes unsanitary problems. Carrying ectoparasites in the body causes them to spread. Shares poultry and livestock feed. The waste is fed with food waste and also serves a sanitary function. It is important as a trophic level in the food chain. During the feeding of the new generation, it feeds on “pests” and benefits agriculture. Manure is rich in phosphorus, which mixes with the soil and affects fertility. It uses the body parts of weeds to build nests to limit their spread. In recent times, unplanned shaping of trees, cutting them down, has been affected by the number of *Streptopelia senegalensis* by children, stray cats and *Pica pica*. The appearance and flowering of *Streptopelia senegalensis* is unique and plays a role in agrobiogeocenosis. Therefore, it is advisable to protect it, to create feeding grounds for them in adverse weather conditions, to feed them. With the above characteristics, it plays a positive role in human ecology at various stations.

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