

A DIAGNOSTIC, CLASSIFICATION STUDY OF EXTERNAL PARASITES THAT INFECT SOM TYPE OF PIGEONS IN BASRAH

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ABSTRACT

This study is conducted on two types of pigeons, wild pigeons (*Columbia livia*) and (*streptopliadecaocto*). A total of (201) birds were examined for ectoparasits, included (143) *Streptopliadecaocto* and (58) *Columba livia*. It was found that (37) birds were infected with more than one type of lice. The percentage of infection in *Columbia livia* (64%), the highest infection in February (92%) and March (62%); No infection detected in *streptopliadecaocto*. Four types of ectoparasites were isolated from *Columbia livia*:

Columbicola columbae, *Hohorstiella lata*, *Coloceras damicorne*,
campanulotes bidentatus scopoli

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INTRODUCTION

Pigeons and doves are in the order Columbiformes and family *Columbidae*. There are five subfamilies within *Columbidae*, 42 genera and 308 species. They are easily recognizable and have a world-wide distribution. They live in almost all types of terrestrial habitats from desert to dense forest and large marsh lakes areas. Pigeons and doves are stocky birds that

range from 15 to 75 cm long. Many of the seed-eating *columbids* are buff, grey and brown colors, while the fruit-eaters are often more brightly colored. Many have ornamentation and iridescent feathers on the neck, breast, back, wings and face (1).

The pigeon (*Columbia livia*) is one of the commonest birds kept and bred by amateurs as ornamental birds, messenger and for meat purpose and a member of the bird family *Columbidae* (dues and pigeons) (2). They are robust, resistant to disease and easy to keep requiring only simple cage and equipment and little space and can be kept on free range. Pigeons breed at any time of the year but peak times are spring and winter parasitic infections cause considerable losses to wildlife in our country, the birds are under constant stress and are prone to parasitic infections. (3).

External parasites reproduce dramatically making their eradication very difficult, influencing poultry rearing and adding a burden of it weakening their vitality and production capacity. (4). External parasites include many kinds of Mites, Ticks, Lice, Mosquitoes, Fleas, Bug and Flies.

There are 12 species of chewing lice recorded from *Columba livia* worldwide (5), namely three Amblycera: *Bonomiella columbae* Emerson 1957; *Colpocephalum turbinatum* Denny 1842; *Hohorstiella lalata* (Piaget 1880), and nine Ischnocera: *Campanulotes compar* (Burmeister 1838); *Colocerasaegypticum* (Kellogg & Paine 1911); *C. damicorne* (Nitzsch 1866); *C. israelensis* (Tendeiro 1974); *C. liviae* (Tendeiro 1974); *C. tovoornikae* Tendeiro 1973; *Columbicola columbae* (Linnaeus 1758); *C. tschulyschman* Eichler 1942 and *Physconelloides zenaidurae* (McGregor 1917).

A thorough knowledge of the pathogenic agents carried by wild type and feral populations of pigeons is needed to understand the epidemiology of some diseases affecting domestic stocks. Furthermore, free-living pigeon populations may be a threat to the poultry industry (6), especially when the most pathogenic species of poultry lice, i.e. *Menacanthus stramineus* (Nitzsch 1818) and *Menopon gallinae* (Linnaeus 1758), are known to occur on pigeons. In addition, pigeon farming is popular in Iraq, not only for the commercial sale of pigeon, homing pigeons. There is very little recent information on how chewing lice prevalence and infestation intensity may affect the economic importance of pigeon farming (7).

MATERIAIS AND METHODS

Total of 143 samples of *Streptopliadecaocto* and 58 sample of *Columba Livia* were collected during the period started in January 2016 to June 2016. *Streptopliadecaocto* was collected from Basrah Granary (silo), In Jubaila, which hunted by using network ranging opened from 1 to 1.5 cm placed on the ground and proven arm so as not to directly touch the ground, and *Columba livia* from Al- Basrah markets. Birds hunted weekly and bring to the laboratory of parasitology in College of Veterinary Medicine for appropriate examination and placed in special cages. The birds were identified according (8). then, the birds first identified on the sex and age. Each sample was examined all body part from vent. Head, neck, breast, back, and wing for the detection of external parasites. A procedure by (9). were used Eye lens 4X, comb, brush, fine forceps with light source. Any parasite kept in petri-dish with %70 alcohol and sent for fixation dipped in 80% the ethanol with KOH and glycerine solution. Lice were preserved in the same solution and mounted in Canada balsam following the technique in (10). Lice were identified based on literature reports (8).

RESULTS

In this study no infection with ectoparasites was in *streptopliadecato*. the highest infection recorded in *Columba livia* in February. Table (1).

Table (1): Total of examined and infected *Streptolidaecocto* & *Columba livia* with

Month	Total Exam.	Total infected	<i>NO. Streptolidaecocto infected</i>	<i>NO. Columbalivia infected</i>
January 2016	39	9	0	9
February	44	10	0	10
March	27	5	0	5
April	35	8	0	8
May	32	3	0	3
Jun	24	2	0	2
Total	201	37	0	37

ectoparasite.

Table (2): Total of examined and infected male and female *colmbialivia*

Monthly Study	<i>Colmbiali via</i>	Total infected	Total Prevalence %	♀	Prevalence %	♂	Prevalence %
January	11	9	81	6	67	3	33
Feb	11	10	90	6	60	4	40
March	8	5	62	4	80	1	20
April	10	8	60	4	50	4	50
May	11	3	27	3	100	0	0
Jun	7	2	28	1	50	1	50
Total	58	37	64	24	65	13	35



Columbicolacolumbae



Coloceras damicorne



Campanulotes bidentatus scopoli



DISCUSSION

The present investigation demonstrated that the total 4 species of ectoparasites isolated from *Columba livia* during monthly study no infection by any type of ectoparasites in *Streptopliadecaoto*. The reason for the the convergence infection rates between males and females to parasites need to heat the host body to complete their life cycle .therefore ; no significant difference between the females and males (11. 4)

The highest infection rate in the female of *Columba liviathan* male that is male as male fly outside the cages while the females remain in cages caring young and it become more susceptible to external parasites.

The ectoparasites need to heat the host body and the warming moreover these parasites is weak cannot resist external conditions such as temperature and rainfall and other so it is always present in the nests theses agree with(13) and(14).

The results agreed with the results of (12) where he found that the lice parasite on the *Columba livia* have very high proportions in Croatia reaching (57%) As well as (2) infection rate has reached (100%) in the city of Chillan during examination the *Columba livia*.

The ratio of parasites isolated from the *Columba livia* in Spain is very low compared to a study of current study Where the percentage of infection (0,05%) (15) .

This study is disagree with (16) where isolate other types of lice which differ from species isolated in this study it might be due to the differences in geographical distribution.

Recorded of highest infection rate in the cold month this is agree with what was confirmed by (17).and the results have agreed to (4) isolated *Columbicolacolumbae* species from pigeons in Baghdad.

Some of isolated lice match with the species isolated and disagreed with other species, and the reason for that is due to the difference in isolated areas, including samples size and different types of Birds examination and Climatic conditions and months of the study .

In winter the birds were gathered to overcome the cold and this overcrowding assist increase the possibility of the infestation with ectoparasite may be an acceptable theory.(18.16).

The fact that the birds in the cold months has less movement and remain in their nests, therefore, the chances of infection be more in the cold months than warm months (19). The low incidence infection moreover their nests be above the palm trees permanently as they migrate from one area to another.

دراسة تشخيصية تصنيفية للطفيليات الخارجية التي تصيب بعض

انواع الحمام في البصرة

زينب حسن جاسم ، غازي يعقوب الاماره ، ناديه كاظم ثامر

الخلاصة

أجريت هذه الدراسة على نوعين من الحمام وهو الحمام البري (*streptopliadeca octo*) والحمام الطوراني (*Columbia livia*) بمجموع (201) طير فحست للكشف عن الطفيليات الخارجية. متضمنا (143) من الحمام البري و(58) من الحمام الطوراني ، حيث وجد أن (37) طير اصاب باكثر من نوع من انواع القمل ، وبلغت نسبة الإصابة الكلية في *Columbia livia* (64%). ولم تسجل اي اصابه بالطفيليات الخارجية في *streptopliadeca octo* ، وسجلت اعلى نسبة اصابه في شهري شباط واذار بنسبه 92% و62% على التوالي وقد تم عزل أربعة أنواع من الطفيليات الخارجية:

Columbicolacolumbae، *Hohorstiellalata*، *Coloceras damicorn*

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