

## **Short Communication**

# **Biodiversity and Prevalence of Parasites of Rook (*Corvus frugilegus*) in Iran**

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### **Abstract**

**Background:** Rooks are distributed all over Iran and no information is available in the literature on their parasitic infections.

**Methods:** One hundred twenty five rooks were examined at post-mortem for parasitic infections.

**Results:** Two species of cestodes, 5 species of nematodes and 4 species of protozoa were found of which all were new host and distribution record.

**Conclusion:** Rooks have several parasites of which some are common with other domestic birds and some have zoonotic importance.

**Keywords:** *Rook, Parasite, Iran*

## **Introduction**

Rooks are distributed in all but the most mountainous area of Europe and Asia and can be found in farmlands with scattered trees and wooded steppe. It is also commonly wild spread all over Iran and it roaming frequently in private houses and courtyards and industrial poultry farms in big and small city to villages. Thus is close contact with man residential areas as well as native and industrial poultry farms. Therefore rooks can play a role as a source for transferring their parasites to other birds as well as human.

This study contains the results of examination of 125 rooks for internal parasites.

## **Materials and Methods**

One hundred and twenty five rooks were examined from two regions: Isfahan Province, central part and Golestan Province north of Iran by necropsy. They were wrapped individually in plastic bags. In the laboratory the contents of alimentary tracts were washed thoroughly under running water and sieved using a 100 mesh sieve. Air sac, liver, lungs, spleen, heart, abdominal cavity of each bird was examined microscopically and after slicing into pieces were inspected for the presence of parasite. The brain sections were stained with Hematoxylin Eosin. The parasites were identified using different references (1, 2). Statistics: Descriptive analysis.

## Results

Prevalence and frequency of parasites found in 125 examined rooks are summarized in Table 1

**Table 1:** Prevalence and frequency of parasites in 125 rooks

Parsrsite	Infection (%)	Mean No. Parasite
<i>Capillaria annulata</i>	8.6	2-5
<i>C. caudinflata</i>	13.3	2-5
<i>Heterakis</i> sp.	0.9	1-20
<i>Syngamus trachea</i>	0.9	1-3
<i>Cheilospirura</i> sp.	2.2	1-3
<i>Choanotaenia infundibulum</i>	0.9	2
<i>Rallietina tetragona</i>	18.1	3
<i>Toxoplasma gondii</i>	3.8	-
<i>Eimeria</i> sp.	18.1	-
<i>Histomonas</i> sp.	1.9	-
<i>Trichomonas gallinae</i>	3.8	-

## Discussion

All parasites reported from rooks in this study represent new host and distribution record among which *Eimeria* sp. and *R.tetragona* were the most prevalent species. Low number of parasite collected from examined birds indicates that they can't threaten the health of the infected birds. There was no relation between sex, zoogeography of the birds and parasitic infections. According to investigations carried out in Iran rooks share the parasite reported in this

study with native fowls (3) some cases, e.g. *C. caudinflata* and *Toxoplasma* sp. with turkey (4) and some, e.g. *R. tetragona* and *C. infundibulum* with woodpecker (*Dendrocopos syriacus*) (5), but non with the goose (6) and domestic ducks (7). Close contact between rooks and human residential areas may renders rooks as a potential source for transmission of *T. gondii* to man. Therefore it can be concluded that rooks may play a role in the transmission of parasitic infections to other birds as well as man in Iran.

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