DISEASES AND PARASITES ENCOUNTERED IN PEN-RAISED INDIAN RED JUNGLEFOWL 1

Authors: KELLOGG, FOREST E., and DOSTER, GARY L.

Source: Journal of Wildlife Diseases, 7(3) : 186-187

Published By: Wildlife Disease Association

URL: https://doi.org/10.7589/0090-3558-7.3.186

DISEASES AND PARASITES ENCOUNTERED IN PEN-RAISED INDIAN RED JUNGLEFOWL[1]

FOREST E. KELLOGG and GARY L. DOSTER, Southeastern Cooperative Wildlife Disease Study, Department of Parasitology, College of Veterinary Medicine, University of Georgia, Athens 30601

JOYCE K. JOHNSON, Department of Poultry Science, College of Agriculture, University of Georgia, Athens

Abstract: Forty-two visibly ill or dead pen-raised Indian red junglefowl were examined for parasites and diseases. The following disease conditions and parasites were identified; VIRUS(?)—visceral tumors; FUNGUS—*Candida albicans;* PROTOZOA — *Eimeria acervulina, E. maxima, E. mivati, E. tenella, Histomonas meleagridis;* CESTODA — *Raillientina tetragona;* NEMATODA — *Ascaridia galli, Capillaria obsignata, Heterakis gallinarum;* Filiariidea; ACARINA (mites) — *Megninia* sp. Coccidiosis was the most important problem. Junglefowl appear to be susceptible to most diseases and parasites of domestic chickens.

INTRODUCTION

Bump and Bohl[2] indicated that few disease and parasite studies have been made on the Indian red junglefowl. While in India they noted Newcastle disease, coccidiosis, simple coryza, and lice. They necropsied five wild junglefowl but found no helminth parasites.

The junglefowl examined by us were fourth and fifth generation offspring of wild birds captured in India by Bump and Bohl[2] for the Foreign Game Investigation Program (FGIP) of the Bureau of Sport Fisheries and Wildlife U.S. Department of the Interior. Between 1961 and 1968 seven southern states raised and released junglefowl as part of the FGIP[1]. These cooperating game and fish agencies submitted 42 visibly ill or dead junglefowl for necropsy. Most junglefowl examined were less than three months old.

METHODS

Ectoparasites were collected with the aid of a dissecting microscope. Birds were then examined for disease conditions and internal helminths were recovered by the methods of Kellogg and Prestwood.[4] Coccidia oocysts were collected from the intestinal content, allowed to sporulate, and identified by immune challenge techniques.[3]

RESULTS AND DISCUSSION

Diseases and parasites found in pen-raised Indian red junglefowl are listed in Table 1.

Extensive visceral tumors, similar to those seen in lymphoid leukosis and Marek's disease, were the apparent cause of death in two birds.

Crop mycosis was a regular cause of morbidity but mycosis alone did not appear to cause mortality. Often crop mycosis problems were related to poor sanitation.

Coccidiosis caused by *Eimeria tenella* and *E. maxima* was by far the greatest cause of mortality. Helminths *(Ascaridia galli* and *Raillietina tetragona)* occasion-

[1] Funds were administered and research coordinated under auspices of the Federal Aid in Wildlife Restoration Act (50 Stat. 917) and through Contract No. 14-16-0008-676, Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, and through Tall Timbers Research Station, Tallahassee, Florida.

Table 1. Diseases and parasites encountered in 42 pen-raised Indian red junglefowl.

Disease Entity or Parasite	Location in/on Host	Remarks
Virus (?)		
Visceral tumors	ovary, liver, kidneys, spleen	Apparently caused death of 2 adult birds, present in 3 birds.
Fungus		
Candida albicans	crop	A regular cause of morbidity, present in 18 birds.
Protozoa		
Eimeria acervulina	small intestine	Coccidia were responsible for 15 deaths and much morbidity.
Eimeria maxima	small intestine	
Eimeria mivati	small intestine	
Eimeria tenella	ceca	
Histomonas meleagridis	ceca, liver	Histomoniasis caused death of 1 bird.
Cestoda		
Raillietina tetragona	small intestine	Caused death of 1 chick, present in 22 birds.
Nematoda		
Ascaridia galli	small intestine	Caused death of 2 chicks, present in 16 birds.
Capillaria obsignata	small intestine	Low numbers present in 2 birds.
Heterakis gallinarum	ceca	Low numbers present in 20 birds.
Filariidea	body cavity	Three immature worms found in 1 bird.
Acarina (mites)		
Megninia sp.	feathers	Present in low numbers on 14 birds.

ally caused death due to intestinal obstruction.

With the exception of three immature filarial worms found in the body cavity of one bird, the diseases and parasites encountered in these junglefowl are common in domestic chickens of the southeastern United States.

LITERATURE CITED

1. BOHL, W. H., and G. BUMP. 1970. Summary of foreign game bird liberations 1960 to 1968 and propagation 1966 to 1968. Special Scientific Report — Wildlife No. 130. Bureau of Sport Fisheries and Wildlife, U.S. Dept. of Interior, Washington, 61 p.
2. BUMP, G., and W. H. BOHL. 1961. Red junglefowl and kalij pheasants. Special Scientific Report — Wildlife No. 62. Bureau of Sport Fisheries and Wildlife, U.S. Dept. of Interior, Washington. 41 p.
3. EDGAR, S. A. 1958. Coccidiosis of chickens and turkeys and control by immunization. World's Poultry Congress, Mexico City. 19 p.
4. KELLOGG, F. E., and ANNIE K. PRESTWOOD. 1968. Gastrointestinal helminths of wild and pen raised bobwhites. J. Wildl. Mgt. 32: 468-475.

Received for publication March 2, 1971