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A REPORT ON OCCURRENCE OF CHEWING LICE IN EGYPTIAN VULTURE (*Neophron percnopterus*), MAHARASHTRA

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Abstract: An Egyptian vulture (*Neophron percnopterus*) also known as a white scavenger is scheduled as an endangered species by the IUCN. Rescued wild animals serve as the best resources to obtain first-hand information related to diseases of free-ranging wild animals. A rescued Egyptian vulture (*Neophron percnopterus*) was examined for the presence of ectoparasites. The bird was injured because of a nylon kite string with multiple injuries on its legs and wings. During the physical examination, lice were collected from the neck and body of the vulture. Biting louse or chewing louse belongs to the order Mallophaga. They are very small, wingless, and host-specific insects living as ectoparasites mainly on birds and less frequently on mammals. Fourteen lice were collected during the physical examination of the neck and body of the bird. Collected mallophagan lice were identified using identification keys and confirmed as *Goniodes* spp.
Keywords: Egyptian vulture, Lice, Goniodes spp**.,** *Neophron percnopteurus*, Mallophaga.

INTRODUCTION

Rescued wild animals serve as the best resources to obtain first-hand information related to diseases of free-ranging wild animals. It is easy to investigate several parasitic infections including endoparasites and ectoparasites from the rescued animals. Ectoparasites, especially are more conspicuous and can be easily collected, and preserved, if searched properly. Systematic physical examination coupled with physical or chemical restraining helps to collect ectoparasites from the body of the rescued animal.

An Egyptian vulture (*Neophron percnopterus*) also known as a white scavenger is scheduled as an endangered species by IUCN (IUCN Red List 2014). They are widely distributed across the old world with their breeding range from southern Europe to Northern Africa to Western and Southern Asia. They feed on a range of food including mammal faces, including those of humans (Whistler, Hugh (1949), insects in dung, carrion, vegetable matter, and sometimes

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small mammals and reptiles (Prakash et.al. (1988). They also feed on the eggs of other birds, breaking larger ones by tossing pebbles onto them (Van Lawik-Goodall et.al.1966).

Biting louse or chewing louse belongs to the order Mallophaga. They are very small, wingless, and host-specific insects living as ectoparasites mainly on birds and less frequently on mammals (B.B. Bhatia, K.M.L. Pathak P.D. Juyal). There are more than 3000 species of biting lice. Their mouthparts are adapted for chewing, and they munch away on skin fragments, skin secretions, feathers, and hair. Lice may reduce host expectancy (Brown CR et al. 1995). Lice transmit microbial diseases and helminth parasites (Barlett CM 1993). Lice infestation is a disadvantage in sexual rivalry (Clayton DH 1990, Garamszegi LZ et al. 2005). A strong lice infestation results in bedraggled and thin plumage since many lice have fed on the feathers, causing birds to suffer from itching (in such circumstances they can cause a lot of skin irritation and disturbed sleep. As per the available literature, ectoparasites of the free-ranging birds are understudied and need a systematic approach for their documentation. This study is part of a parasitological investigation of the rescued animals in the Nagpur district of Maharashtra to document the ectoparasites of wildlife.

MATERIALS AND METHOD

A rescued Egyptian vulture (*Neophron percnopterus*) was brought to the Critical Care Unit of the Society for Wildlife Conservation, Education and Research (Wild-CER) by the forest department personnel. The bird was injured because of nylon kite string with multiple injuries on its legs and wings. It was severely dehydrated probably because of the inability to fly due to cut patagium. The bird was restrained and was examined thoroughly for major and minor injuries and also for the presence of ectoparasites. Fourteen lice were collected during the physical examination of the neck and body of the bird. Samples were preserved in 70% alcohol immediately. The lice were cleared in 10% KOH overnight and then washed with Glycyl Acetic acid with 3 consecutive washes, each washed for 30 minutes and mounted in Canada balsam.

RESULT AND DISCUSSIONS

They were identified by using a compound microscope and standard identification keys as *Goniodes* spp. Lice are optimal model organisms to study the ecology of contagious pathogens since their infestation, sex ratios, etc. are easier to quantify than those of other pathogens. Hence it is important to study lice and their host as it is host host-specific parasite. This study also concludes that there is very little study conducted on lice infestation of Egyptian vultures.

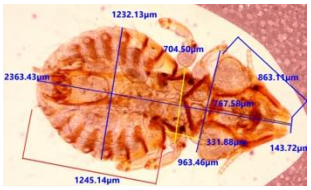

Fig 1. *Goniodes* spp.

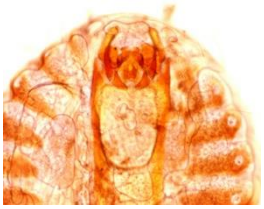

Fig 2. Posterior end *Goniodes* spp

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