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SOME HELMINTH PARASITES OF THE AMERICAN BALD EAGLE

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Abstract: Bald eagles (*Haliaeetus leucocephalus*) found dead or moribund in the United States and Canada and submitted to Patuxent Wildlife Research Center were examined for helminth parasites. Nine genera of helminths were reported which include new host records for *Clinostomum complanatum*, *Neogogatea pandionis*, *Centrorhynchus* sp., *Serratospiculum amaculata*, *Capillaria contorta*, and *Habronema americanum*.

INTRODUCTION

The American bald eagle (*Haliaeetus leucocephalus*) has shown a dramatic decline in numbers over the last two decades throughout the continental United States. A great deal of attention has been focussed on the importance of pesticide poisoning and other factors which have contributed to mortality and reduced fecundity.^{8,9,2,12} Few reports are available on the helminth parasites of this North American bird, perhaps because of its general decline in numbers and intensified protection in recent years.

MATERIALS AND METHODS

Fifty-nine eagles, found dead or moribund in the United States and Canada and submitted to Patuxent Wildlife Research Center were examined for helminth parasites. These eagles were collected between 1963 and 1971. Because of the condition of the birds upon receipt and the variable care afforded the birds prior to arrival, no attempts could be made to determine prevalence or degree of infection.

RESULTS

Nine genera of helminths (four trematodes, one cestode, one acantho-

phalan, and four nematodes) were recorded from the eagles examined (Table 1). *Clinostomum complanatum*, *Neogogatea pandionis*, *Centrorhynchus* sp., *Capillaria contorta*, *Habronema americanum*, and *Serratospiculum amaculata* are reported here for the first time from this host. Although this is the first report of these genera from bald eagles, many of them have been previously reported from European and Asian eagles and a number of other raptors.^{10,6,5,7}

DISCUSSION

The exact role of helminths in raptor populations is not clear. It appears that birds subjected to greater than normal stresses, hand reared birds, and captive birds are more susceptible to parasitic infections and other environmental and biological insults than are birds from wild populations.^{18,4,3} Although no evidence of pathogenicity or mortality could be directly attributed to the helminths recovered in this study, pathogenicity has been previously reported for *Serratospiculum amaculata* by Bigland et al.,¹ and esophageal capillarids by Cooper² and Trainer et al.,¹² in other raptors.

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TABLE 1. Helminths found in North American bald eagles.

| Parasite | Collection location | Age | Sex | Necropsy diagnosis | Date |
|----------------------------------|---------------------|-----------|-----|--------------------------------|------|
| Trematoda | | | | | |
| <i>Clinostomum complanatum</i> | Minnesota | fledgling | F | enteritis emaciation | 1972 |
| <i>Phagicola longus</i> | North Carolina | 2 years | F | gunshot | 1965 |
| <i>Neodiplostomum banghami</i> | Arkansas | adult | M | none | 1963 |
| | Iowa | immature | M | gunshot | 1966 |
| <i>Neogogatea pandionis</i> | Iowa | immature | M | gunshot | 1966 |
| | Massachusetts | immature | F | gunshot | 1966 |
| | Wisconsin | immature | M | none | 1966 |
| Acanthocephala | | | | | |
| <i>Centrorhynchus</i> sp. | Maine | adult | F | none | 1967 |
| | Florida | immature | F | gunshot | 1971 |
| | Iowa | immature | F | gunshot | 1966 |
| | New Jersey | adult | F | none | 1963 |
| Cestodes | | | | | |
| <i>Cladotaenia banghami</i> | Minnesota | immature | M | beating | 1968 |
| | Idaho | immature | M | impact injuries | 1968 |
| | Florida | immature | F | gunshot | 1971 |
| | Minnesota | immature | F | impact injuries | 1968 |
| | Wisconsin | immature | M | gunshot | 1968 |
| Nematodes | | | | | |
| <i>Contraecaecum</i> sp. | New Jersey | adult | F | none | 1963 |
| | Minnesota | immature | F | neck fracture | 1969 |
| | South Dakota | immature | M | gunshot | 1968 |
| | Illinois | immature | F | gunshot | 1971 |
| | Minnesota | adult | M | impact injuries | 1969 |
| | Wisconsin | adult | F | pesticide poisoning (Dieldrin) | 1968 |
| | South Dakota | adult | F | gunshot | 1968 |
| <i>Habronema americanum</i> | Minnesota | immature | F | impact injuries | 1967 |
| | Iowa | adult | F | none | 1971 |
| | Illinois | immature | F | gunshot | 1970 |
| | Wisconsin | immature | M | gunshot | 1969 |
| | Illinois | immature | F | none | 1967 |
| | Minnesota | immature | F | impact injuries | 1967 |
| <i>Serratospiculum amaculata</i> | Wisconsin | immature | M | gunshot | 1969 |
| | Illinois | immature | F | gunshot | 1971 |
| <i>Capillaria contorta</i> | Iowa | immature | F | strangled | 1967 |
| | Missouri | immature | F | gunshot | 1969 |
| | Minnesota | immature | F | gunshot | 1966 |
| | Wisconsin | adult | M | none | 1965 |

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