# FOODS OF THE COMMON MYNA (Acridotheres tristis) IN CENTRAL INDIA AND IN HAWKE'S BAY, NEW ZEALAND

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ABSTRACT

Foods of the adult Mynas from near Bhopal in central India are described from 43 birds collected during the breeding season. A comparison is made with adult and nestling Myna foods in Hawke's Bay, New Zealand. The results show that Mynas fed on both animal and vegetable foods.

## INTRODUCTION

Foods of the Myna *(Acridotheres tristis)* have been briefly mentioned by many workers including Kent (1927) from South Africa, Walker (1952) from Australia, Akhmedov (1957) and Sagitov *et al.* (1957) from the U.S.S.R. and Sengupta (1968) from India. The feeding habits have been studied in any detail only by Mason and Lefroy (1912) and Toor & Ramzan (1974) in India, and Wilson (1965) in Hawke's Bay, New Zealand.

This work reports a comparative study of the foods of Mynas from near Bhopal (23°20'N, 77°30'E) in central India, from an area used extensively for growing wheat. Mynas are abundant in this region, living around villages and nesting in buildings and in old trees. To examine the food eaten 43 adult Mynas (22 ♂♂, 21 ♀♀) were shot during the breeding season in May 1974. The results were compared with findings from New Zealand.

## RESULTS AND DISCUSSION

The food consisted of insects, seeds and fruits. Percentage occurrence of insects and the abundance of seeds and fruits for both sexes of the Myna are given in Table 1. The insects were counted by eye, and very small specimens could have been missed. Seeds and fruits were arbitrarily recorded as 1 (traces), 2 (few) and 3 (many), and identified by reference to specimens collected in the area.

Of the gizzards examined (Table 2), 16 contained insects, seeds and/or fruits (37.2%), 15 had only insects (34.9%), 10 had seeds and/or fruits (23.3%), and 2, both females, were empty (4.6%, excluded from the food analysis).

Adult beetles (Carabidae and Coccinellidae, 30.9%), crickets (Gryllidae, 29.9%) and grasshoppers (Acrididae, 27.2%) were eaten more than weevils (Curculionidae, 10.4%) which in turn were eaten more than beetle larvae (Carabidae, 1.6%). The insect composition in the diet was similar in both the male and female Mynas.

TABLE 1 – Food of the Myna in central India

| | Actual numbers recorded | | | | | Mean score of arbitrary scale | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *No. of* Mynas | Beetle Adults | Beetle Larvae | Weevil Adults | Crickets | Grass-hoppers | Wheat | Dates | Figs | Beans | Other stone fruits |
| | % | % | % | % | % | | | | | |
| 22♂♂ | 15.6 | 0.4 | 4.3 | 15.0 | 13.5 | 2.1 | 2.1 | 2.0 | 1.3 | 1.6 |
| 19♀♀ | 15.3 | 1.2 | 6.1 | 14.9 | 13.7 | 1.2 | 2.0 | 2.0 | 1.0 | 2.5 |
| Totals | 30.9 | 1.6 | 10.4 | 29.9 | 27.2 | 1.7 | 2.0 | 2.0 | 1.1 | 2.0 |

TABLE 2 – Food items in individual gizzard of Mynas (– = Absent, * = Traces, ** = Few, *** = Many; 1–22♂♂, 23–43♀♀)

| Myna No. | Food items | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Beetle Adults | Beetle Larvae | Weevil Adults | Crickets | Grass-hoppers | Wheat | Dates | Figs | Beans | Other stone fruits |
| 1 | 10 | – | – | 4 | 5 | – | – | ** | – | – |
| 2 | 6 | – | 2 | 3 | 4 | – | – | – | – | – |
| 3 | 4 | – | – | 2 | 3 | – | – | – | – | – |
| 4 | – | – | – | 3 | – | * | – | *** | – | – |
| 5 | – | – | – | 7 | 8 | – | *** | – | – | – |
| 6 | – | – | – | 2 | 3 | ** | – | – | ** | – |
| 7 | 3 | 1 | 1 | 1 | 4 | – | – | – | – | – |
| 8 | – | – | – | 11 | 6 | – | ** | – | – | – |
| 9 | 2 | – | 1 | 1 | 2 | – | ** | – | – | – |
| 10 | 8 | – | – | – | – | ** | *** | – | – | – |
| 11 | – | – | – | 4 | 3 | – | – | *** | – | – |
| 12 | – | – | – | – | – | – | *** | – | – | ** |
| 13 | – | – | – | – | – | *** | – | * | – | * |
| 14 | 3 | – | 2 | 7 | 4 | – | – | – | * | ** |
| 15 | 9 | – | 3 | 8 | 6 | – | – | – | – | – |
| 16 | – | – | – | – | – | *** | – | * | * | – |
| 17 | 2 | – | – | 11 | 7 | – | – | – | – | – |
| 18 | – | – | – | – | – | ** | * | – | – | ** |
| 19 | 16 | – | 4 | 3 | 1 | – | – | – | – | – |
| 20 | 10 | 1 | 9 | 2 | 4 | – | – | – | – | – |
| 21 | 4 | – | – | – | 2 | ** | ** | – | – | – |
| 22 | 3 | – | – | 8 | 7 | – | * | – | – | * |
| 23 | 12 | – | 9 | 6 | 4 | – | – | – | – | *** |
| 24 | – | – | – | 6 | 8 | – | – | – | – | – |
| 25 | 3 | 2 | – | 9 | 4 | – | – | – | – | – |
| 26 | – | – | – | – | – | – | – | – | – | – |
| 27 | – | – | 1 | 4 | 7 | * | – | – | – | – |
| 28 | 12 | 1 | 1 | 3 | 2 | – | – | – | – | – |
| 29 | 6 | – | – | 10 | 9 | – | – | – | – | ** |
| 30 | – | – | – | – | – | ** | – | – | * | ** |
| 31 | – | – | – | – | – | – | – | *** | * | – |
| 32 | – | – | – | – | – | * | ** | – | * | – |
| 33 | – | – | – | – | – | – | *** | – | * | ** |
| 34 | – | – | – | – | – | * | * | – | – | *** |
| 35 | – | – | – | 4 | 7 | – | *** | – | – | – |
| 36 | 6 | 1 | 1 | 6 | 8 | – | – | – | – | – |
| 37 | – | – | – | – | – | – | – | – | – | – |
| 38 | 13 | – | 2 | 4 | 6 | – | – | – | – | – |
| 39 | – | 2 | 6 | 8 | 4 | – | – | * | – | – |
| 40 | 4 | – | 6 | 12 | 4 | – | – | – | – | – |
| 41 | 14 | – | 5 | 1 | 3 | – | – | – | – | – |
| 42 | – | – | – | – | – | * | * | – | – | *** |
| 43 | 8 | – | – | 3 | 4 | – | – | – | – | – |

Twelve gizzards contained wheat (7 males, 5 females), 13 had dates (8 males, 5 females), 7 had figs (5 males, 2 females), 7 had beans (3 males, 4 females) and 11 had other stone fruits (5 males, 6 females). The mean score of occurrence of seeds and fruits on the 1-3 scale is shown for each food item in all gizzards in Table 1. The diet of male and female Mynas was similar although males ate more wheat and females more miscellaneous stone fruits.

This study confirms earlier reports (Mason & Lefroy 1912, Kent 1927, Walker 1952, Akhmedov 1957, Sagitov *et al.* 1957, Wilson 1965, Sengupta 1968, Toor & Ramzan 1974) that the Mynas' food consists of both animal and vegetable matter. Comparable data for the breeding season were reported by Wilson (1965) who studied the foods of 17 adults (shot January to March) and 4 nestlings. The adult Mynas in Hawke's Bay, New Zealand, ate a mixed diet, while the nestlings were fed exclusively on insects. Wilson's findings for nestling foods are supported by Sengupta (1968) who reported that nestlings up to 10 or 12 days old are fed exclusively on animal food, and vegetable food is added later to the diet. Subsequent observations on feeding behaviour by Wilson (pers. comm.) show that the young nestlings were fed on some vegetable matter, the proportion of which increased considerably in nestlings older than 10 days. Moeed (1975), studying the diets of nestling Starlings and Mynas in Hawke's Bay, also found that the Myna nestlings (3-18 days old) were fed on both animal and vegetable foods. A similar feeding pattern seems likely in central India.

The danger of small samples for food analysis of adults of this species was demonstrated when 15 gizzards showed only insects and 10 had only seeds and/or fruits. An assessment based on either of these would have been misleading.

Definite conclusions are difficult because the birds were collected over only a five day period. Nevertheless, it seems that the Mynas in that area may have some economic significance, at least during the breeding season because they fed on seeds and fruits that are a part of the human diet.

The economic importance of insects eaten by Mynas in central India is not known. If the insects are harmful, the damage to fruits and seeds by Mynas may be somewhat balanced. On the other hand, the grasshoppers eaten were not "locusts," and some beneficial Coccinellid beetles (ladybirds) were also eaten, so any economic assessment would be complex.

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# SHORT NOTE

## HARRIER RECOVERS DEAD DUCK FROM WATER

On 5 June 1976, while I was in a hide beside a large dam near Martinborough (Wairarapa), a harrier *(Circus approximans gouldi)* circled, then alighted on a dead duck floating 10 m from shore. Under the weight of the harrier, the duck tilted and slowly sank until the harrier's legs and lower breast were immersed. To balance, the harrier spread its wings on the surface. Some 3-4 minutes later, the harrier endeavoured to feed on the small portion of the duck's rump above water, but on each attempt lost balance as the corpse moved. After another minute or two (of apparent intense deliberation) the harrier tried twice, without success, to lift the duck clear of the water. Finally, grasping the duck's neck with one foot, the harrier slowly progressed toward the more distant shore about 20 m away, by vigorously flapping 4 or 5 times, then resting for up to a minute. At rest, the harrier floated with wings outstretched on the water. Approximately 15-20 minutes later, the thoroughly wet harrier reached shore and pulled the duck partially clear of the water. Despite the long time in the water, the harrier flew without any apparent difficulty when the ownership of the duck was disputed !

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