

Arthropods Consumed by an Immature Marbled Godwit

Robert M. Timm¹ and Robert M. Zink

Bell Museum of Natural History

University of Minnesota

Minneapolis, Minnesota 55455

Rapid digestive rates often hinder precise analysis of avian stomach contents, especially those containing insects. Thus, there is a paucity of information concerning the identity of prey items consumed by many birds. Marbled Godwits (*Limosa fedoa*) are locally common shorebirds in the western U.S. However, there are few data available concerning prey taken. Locusts and "other insects" were reported in the stomachs of six Marbled Godwits from Nebraska (Aughey 1878). Baird *et al.* (1884) reported that godwits in Saskatchewan preyed on leeches. Marbled Godwits along the California coast were found to have polychaetes, small snails, pelecypods, and shore fly larvae in their stomachs (Reeder 1951). Marbled Godwits also have been reported to feed on crustaceans, insects, and worms (Goss 1891), and on snails (Grinnell *et al.* 1918).

We examined the gizzard of an immature female Marbled Godwit that was of particular interest because it contained a large number of identifiable arthropods. The bird was found dead on Hwy. 113, ¼ mi. S, 1 mi. W of Waubun, Mahnomen Co., Minnesota on 11 July 1976. Voucher specimens of arthropods have been deposited in the entomology collection of the University of Minnesota, St. Paul, and the Marbled Godwit has been deposited in the collection of the University of Minnesota Forestry and Biological Station at Itasca State Park, Minnesota.

We found 191 arthropods, representing eight species of adult insects and one harvestman, in the gizzard of the godwit. Identifications and numbers of individuals found are listed in Table 1. Average length of the arthropods was roughly 7 mm (range 4-12 mm). Additionally, 79 stones (1-5 mm) were found in the gizzard.

The Marbled Godwit fed on a variety of insects; however, the large number of soldier flies (*Eulalia virgo*) is of interest. *Eulalia virgo* is a common, widespread species throughout North America; adults frequently are found on flowers. Since 90% of the prey items were soldier flies, either they were the most abundant prey item available or the godwit specifically selected them. These results do not provide a basis for general conclusions about Marbled Godwit feeding habits, but they do illustrate the type of data that can be obtained from careful analysis of avian digestive tracts.

¹Present address: Department of Entomology, Fisheries and Wildlife, University of Minnesota, St. Paul, MN 55108.

Table 1. Arthropods consumed by an immature Marbled Godwit (*Limosa fedoa fedoa*).

INSECTA	Number
Hemiptera: Nabidae <i>Nabis ferus</i> (Linnaeus, 1758)	2
Homoptera: Cicadellidae <i>Athysanus argentarius</i> (Fabricius, 1794)	6
Coleoptera: Curculionidae <i>Sitona cylindricollis</i> Fahraeus, 1840	7
Neuroptera: Chrysopidae <i>Chrysopa rufilabris</i> Burmeister, 1839	1
<i>Chrysopa</i> sp.	1
Lepidoptera: unidentified Microlepidoptera	1
Diptera: Stratiomyidae <i>Eulalia virgo</i> (Wiedemann, 1830)	171
Sarcophagidae: unidentified	1
ARACHNIDA	
Phalangida: Phalangiidae <i>Leiobunum</i> sp.	1
Total	191

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