

# ARTHROPODS IN THE DIET OF THE BIRD ASSEMBLAGE FROM A FORESTED RURAL LANDSCAPE IN NORTHERN CHILOE ISLAND, CHILE: A QUANTITATIVE STUDY

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## Abstract:

Knowledge of bird diets is important to understand population fluctuations and the persistence of bird communities in changing landscapes. However, there is a general lack of quantitative information about the composition of bird diets at the community level in the Neotropics. Although consumption of fruits and seeds by birds has been well documented for forest ecosystems in southern South America, consumption of arthropods has received less attention, despite their relevance in bird diets. Here we describe and evaluate the presence and diversity of arthropods consumed by members of different dietary guilds of the avian community from temperate forests and rural landscapes in northern Chiloé Island, Chile (42°S). We estimated the proportion of arthropods consumed by all bird species captured using mist nests in a mixed rural landscape, and identified arthropods at the order level, based on remains contained in bird droppings. In addition, we estimated trophic diversity for those bird species with the highest number of samples. Arthropod remains were prevalent in dropping contents for nearly all sampled species (17 out of 18 captured species), indicating that arthropod consumption is broadly distributed in the avian assemblage. The insectivorous Chilean swallow (*Tachycineta leucopyga*) had the highest average number of arthropods per sample but the lowest arthropod diversity. On the contrary, the highest arthropod diversity in droppings corresponded to the insectivorous House Wren (*Troglodytes aedon*). The omnivorous species, Austral Blackbird (*Curaeus curaeus*) and White-crested Elaenia (*Elaenia albiceps*) consumed mainly Coleoptera. Finally, arthropod orders found in droppings varied among bird species from the same and between dietary guilds.

**Keywords:** Dietary guild | Insectivorous birds | Omnivorous birds | Trophic diversity

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