

Short note
Nota breve

OCCASIONAL RECORD OF ORTHEMIS SP. (LIBELLULIDAE) IN THE DIET OF FALCO SPARVERIUS L. 1758 (FALCONIFORME) IN THE STATE OF PARANÁ, SOUTHERN BRAZIL
REGISTRO OCASIONAL DE ORTHEMIS SP. (LIBELLULIDAE) EN LA DIETA DE FALCO SPARVERIUS L., 1758 (FALCONIFORME) EN EL ESTADO DE PARANÁ, SUR DE BRASIL

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ABSTRACT

The American kestrel (*Falco sparverius*), one of the smallest birds of prey in the world, has a varied diet that mainly consists of insects, such as dragonflies. However, specific records of these insects in the diet of this species are still scarce. This paper reports an occasional record of a *F. sparverius* preying on a dragonfly, which was observed on March 22, 2025, on a rural road in the municipality of Umuarama, state of Paraná, southern Brazil. The bird was photographed holding a dragonfly (*Orthemis* sp., Libellulidae) while perched on a power line wire approximately 5 meters above ground. These data contribute to the knowledge of the diet of *F. sparverius* in Brazil and highlight the need for further studies on the ecological role of dragonflies as prey for birds in both natural and human-altered environments in the country.

Keywords: Falconidae; *Falco sparverius*; Libellulidae; *Orthemis*; Predation.

RESUMEN

El quiriquiri (*Falco sparverius*), una de las aves de rapiña más pequeñas del mundo, posee una dieta variada, con énfasis en insectos, como las libélulas, aunque los registros específicos de estos insectos en la alimentación de la especie aún son escasos. Este trabajo reporta un registro ocasional de depredación de una libélula por *F. sparverius*, observado el 22 de marzo de 2025, en una carretera rural del municipio de Umuarama, Paraná, sur de Brasil. El ave se fotografió sosteniendo la libélula, *Orthemis* sp. (Libellulidae), mientras estaba posada sobre un cable de energía eléctrica, a aproximadamente 5 metros del suelo. Este dato contribuye al conocimiento sobre la dieta de *F. sparverius* en Brasil, así como refuerza la necesidad de más estudios sobre el papel ecológico de las libélulas como presas de aves de rapiña en ambientes naturales y antropizados del país.

Palabras clave: Falconidae; *Falco sparverius*; Libellulidae; *Orthemis*; Depredación

INTRODUCCIÓN

The Quiriquiri, *Falco sparverius* Linnaeus, 1758, also known as the American kestrel, is a bird that belongs to the Order Falconiformes, Family Falconidae. It is one of the smallest species of birds of prey in the world and has a wide geographic distribution in the American continent, including Brazil^(8,11,21). The species inhabits different ecosystems, including areas disturbed by human activities such as livestock farming and agriculture⁽³⁾.

This species is known to have a diverse diet, encompassing amphibians, birds, small mammals, and reptiles^(1,19), but invertebrates, such as insects, are also the most common and abundant prey^(3,16), which includes dragonflies. However, the available literature on this order in the diet of *F. sparverius* is imprecise and scarce^(1,3).

Dragonflies, Odonata, occur in the most diverse Brazilian ecosystems⁽²⁾, acting as generalist predators^(14,18), as well as prey for other insects^(22,23), mammals⁽⁴⁾, spiders⁽¹⁰⁾, and birds^(9,17). Thus, they represent an important component of food chains.

In view of the above, the objective here is to provide information on the presence of Odonata in the diet of *F. sparverius*, which is justified by the relevance of these animals in food chains, both in natural and human-altered environments.

The occasional record of predation occurred on March 22, 2025, at 5:16 p.m., on a rural road in the municipality of Umuarama (23°50'22"S 53°13'53"W) in the state of Paraná, southern Brazil. The site of observation of the interaction is a rural area close to the municipality, less than 5 km from downtown, where most of the properties are used for cattle raising.

The event was documented through direct observation and photographic recording (Canon R6 Mark II, Sigma 150–600 mm lens). The dragonfly was identified from the image by PhD Diogo Silva Vilela, IFSULDEMINAS, Campus Inconfidentes, and the falcon was identified by the ornithologist Professor PhD Mario Eric Cohn Haft, from the National Institute of Amazonian Research (INPA).

At the time of photographing, the bird was perched on a power line wire, approximately 5 m above the ground, holding an individual of *Orthemis* sp. (Libellulidae), with its claws (Figure 01).



Figure 01. Photographic record of predation on *Orthemis* sp. (Libellulidae) by *Falco sparverius*. Photo: José Adolfo Mota de Almeida.

The frequency with which Odonata are preyed upon by *F. sparverius* in Brazil remains uncertain due to the lack of published information, including images, on the Wikiaves platform (www.wikiaves.com.br). However, it is possible to hypothesize that these insects are common part of this bird's diet, as dragonflies are considered an important source of energy for other falcon species, such as *Falco subbuteo* in England, especially for young birds⁽⁵⁾, as well as for other species of small European falcons (*F. vespertinus*, *F. eleonora*, and *F. concolor*)⁽⁶⁾.

Another argument supporting the hypothesis raised is the fact that Odonata are abundant in the most diverse Brazilian terrestrial ecosystems⁽²⁾. Therefore, the wide geographic distribution of *F. sparverius*⁽³⁾ causes niche overlap, which, when combined with this bird's generalist habits, increases the probability of predation.

In addition to the presence of Odonata in the diet of Falconiformes, these insects are also prey for other bird orders, such as herons, Pelecaniformes⁽²⁰⁾, Coraciiformes⁽¹³⁾, and Passeriformes^(12,15).

Further research is needed to understand the trophic implications of Odonata predation by falcons in both natural and human-altered environments, as these insects are important components of trophic chains as both prey and predators^(7,10).

We have added more information on the presence of dragonflies in the diet of *Falco sparverius* in Brazil. Further studies are recommended to broaden our understanding of the ecological implications of predation on Odonata and for the survival of this bird species. Reporting on specific and sporadic records, such as this one, is also important.

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