

The Feeding Biology of *Rana macrocnemis* Boulenger, 1885 (Anura: Ranidae), Collected in Uludağ, Bursa, Turkey

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Abstract. - In this study gut contents of 64 mature specimens (34 male, 30 female) from *Rana macrocnemis* population collected from Uludağ(Bursa) are analyzed. The results indicate that the majority (68.05%) of the food items is composed of insects.

Key words. - *Rana macrocnemis*, feeding, stomach content.

Introduction

Rana macrocnemis is a very common species in the northern and eastern Caucasus and has dispersed into Western and Northern Anatolia in Turkey. Also known as a “mountain frog”, its altitudinal distribution ranges from 1,000 to 2,300 m. It generally lives in open areas or in small brooks in or near the woods. It is also seen in areas with muddy bottoms or close to water. Many studies have been conducted to find out the feeding biology of amphibia (Böhme 1975; Boulenger, 1897; Schreiber, 1912; Beschkov, 1970; Lamb, 1984; Yılmaz, 1984; Sampetro, 1986; Gittins, 1987; Atatür, 1993; Uğurtas 1995), but no detailed study exists on the feeding biology of *Rana macrocnemis*. The aim of this study is to establish various animal groups that are taken as prey by this species.

Materials and Methods

The specimens of *Rana macrocnemis* used in this study were collected in three localities between June and July 1997 (Fig. 1). These localities are:

Kirazlyayla (16 males, 30 females)

Hotels Area (10 males)

Çobankaya (8 females)

The specimens were found between the hours 730 and 1930 hours in daylight, but were observed to appear more often between 1030 and 1500 hours. We used Parker (1982), Lodos (1983, 1986), and Çağlar and Demirsoy (1992, 1999) to identify prey items.

Results

We did not observe any significant discrepancies in the stomach contents of males and females. Thus, they were evaluated together. Of the 64 specimens collected dur-



Figure 1. Localities where *Rana macrocnemis* specimens were collected.

ing the feeding period, two had empty stomachs. Among stomach contents which were investigated, 626 prey items were counted. Of these prey items, 426 (68.05%) belonged to Insecta, 36 (5.75%) to Arachnida, 44 (7.02%) to Gastropoda, 4 (0.63%) to Myriapoda, 112 (17.89%) to Isopoda and 2 (0.31%) to Acarina groups. Two (0.31%) juveniles of *Rana macrocnemis* were also found as stomach content.

The number of prey items found in stomachs and their taxonomy are listed below. It was found that the majority of food taken by *Rana macrocnemis* was composed of insects (68.05%). 144 (36.15%) were Coleoptera, 82 (19.24%) Plecoptera, 94 (22.06%) Diptera, 40 (9.38%) Hymenoptera, 36 (8.45%) Odonata, 6 (1.40%) Orthoptera, 6 (1.40%) Lepidoptera, 4 (0.93%) Homoptera and four (0.93%) in Hemiptera (Fig. 2). As a result of this study on the stomach contents, we con-

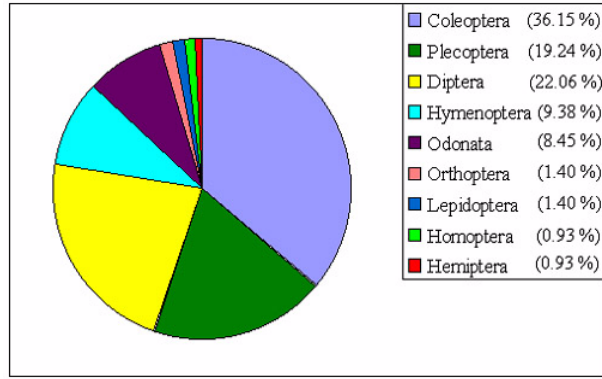


Figure 2. The percentages of insect groups taken as prey.

clude that *Rana macrocnemis* is an opportunistic feeder that utilizes any prey in its environment that it has the ability to consume.

Acknowledgments

This work was supported by grants from Uludağ University Scientific Research Fund (2001/60)

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