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Research Article

About Habitat Type Preferences of Some Coreoidea (Hemiptera: Heteroptera) Species of Yahyalı-Kayseri

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ABSTRACT: In this study, the data about habitat type preferences of the species belonging to Yahyalı (Kayseri) Coreoidea (Hemiptera: Heteroptera) fauna were evaluated.

KEYWORDS: Turkey, Heteroptera, Coreoidea, Yahyalı-Kayseri, habitat preferences.

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In the study conducted by Kıyak & Baş (2020) to identify the Yahyalı (Kayseri) Coreoidea (Heteroptera) fauna between 2011-2012, 16 genera and 25 species from 4 families were recorded (Kıyak & Baş, 2020).

In this study, an ecological evaluation of the samples collected within the scope of Kıyak and Baş (2019) was made. In the study area, Heteroptera records belonging to different species taxa collected from the same or different habitat types were reviewed. The Habitats are classified as "natural vegetation covered areas", "afforestation areas", "agricultural areas (a-Orchards, b-Fields)" according to the habitat preferences of the species identified during the study.

Habitat Preference Rating:

The preferred habitats and specimens numbers of the species identified as a result of the sample collections from different habitats in this study are given below.

A) Natural vegetation covered areas (Herbaceous steppe formation): The samples were collected from the dominant plant species. In this formation, 4 species from Alydidae, 9 species from Coreidae, 10 species from Rhopalidae, and *Dicranocephalus agilis*, which are the only species identified from Stenocephalidae, were found.

B) Afforestation area- (*Pinus nigra* afforestation area): The samples were collected from the herbaceous plant species between the

tree formation. These; 8 species belonging to Coreidae, 4 species belonging to Alydidae, 10 species belonging to Rhopalidae.

C) Agricultural Areas:

a) Orchards: The samples were collected from the herbaceous formation between the orchards. These; 2 species belonging to Aydidae, 5 species belonging to Coreidae, 3 species belonging to Rhopalidae.

b) Fields: The samples were collected from *Triticum aestivum, Hordeum vulgare* fields and plants around them. 4 species belonging to Coreidae, 3 species belonging to Alydidae, 5 species belonging to Rhopalidae were collected from both crop fields and other herbaceous plants species.

Table 1. Habitat distribution of the species in the study area (HS: Herbaceous steppe, PNAA: *Pinus nigra* afforestation area; OR: Orchards; CF: Crop fields)

FAMILIA	**Species**	**Habitat Type**			
		HS	**PNAA**	**OR**	**CF**
Alydidae	*Alydus calcaraus*	+	+		
	Camtopus tragacanthae	+	+	+	+
	Camtopus lateralis	+	+	+	+
	Camtopus illustris	+	+		+
Coreidae	*Coreus marginatus*			+	
	Phyllomorpha lacerata	+	+		
	Syromastus rhombeus	+	+	+	+
	Centrocoris spiniger	+	+		+
	Centrocoris degener	+	+		
	Coriomeris affinis	+	+	+	+
	Coriomeris subglaber	+	+		
	Coriomeris denticulatus	+	+	+	
	Ceraleptus gracilicornis	+	+	+	+
	Loxonemis dentator		+		
Rhopalidae	*Stictopleurus pictus*	+	+		
	Corizus hyosciami	+	+		+
	Rhopalus parumpunctatus	+	+		
	Rhopalus subrufus	+	+		+
	Rhopalus conspersus	+	+	+	
	Maccevethus caucasicus	+	+		+
	Maccevethus lutheri	+	+		
	Chrosoma schillingi	+	+	+	+
	Myrmus miriformis	+	+		+
	Brachycarenus tigrinus	+	+		
Stenocephalidae	*Dicranocephalus agilis*		+		

As shown in Table 1, the species of family Alydidae, Coreidae, Rhopalidae and Stenocephalidae have different habitat preferences. According to the habitat preferences of the species, the highest number of species are respectively *Pinus nigra* afforestation area (24 species), Herbaceous steppe formation (22 species), crop fields (12 species) and orchards (9 species). Also, while *Camtopus tragacanthae*, *Syromastus rhombeus*, *Ceraleptus gracilicornis*, *Chrosoma schillingi* species are found in all habitat types, *Coreus marginatus* and *Dicranocephalus agilis* were found in only one habitat type.

The distribution of 194 Coreoidea specimens caught in the field studies in Yahyalı in months is given in Table.2.

Table 2. Monthly distribution of sample number of Coreoidea superfamily in the study area

June	July	August	September
85	34	65	10

As indicated in Table 2, 85 samples were found in June, 34 samples in July, 65 samples in August and 10 samples in September. The percentage graph of this data distribution is shown in Figure 1.

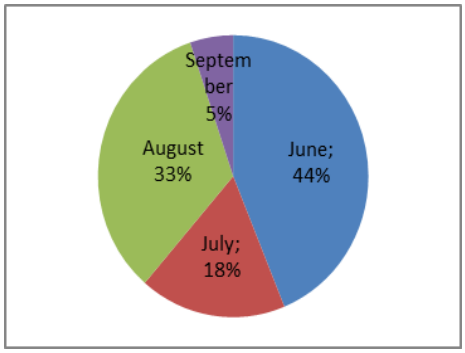

Figure.1 Percentage distribution of samples in the study area by months.

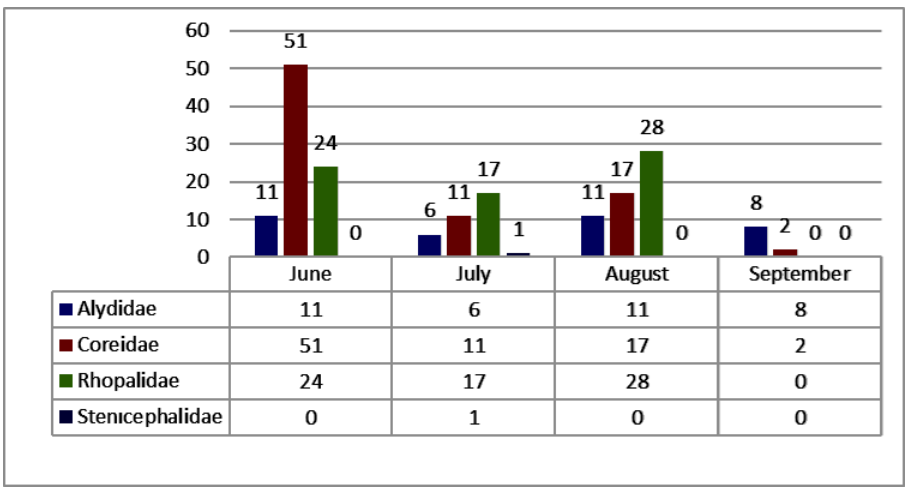

Figure 2. Distribution of collected samples by families and months

Table 3. Distribution of sample number of Coreoidea superfamily according to family and months in the study area

	June	**July**	**August**	**September**
Alydidae	11	6	11	8
Coreidae	51	11	17	2
Rhopalidae	24	17	28	-
Stenocephalidae	-	1	-	-

Of these species *Phyllomorpha lacerata* only in July, *Dicranocephalus agilis* only in July, *Brachycarenus languidus* and *Stictopleurus pictus* only in August, *Loxocnemis dentator* only in June, *Centrocoris degener* only in September, *Coriomeris subglaber* only in June were found.

All the species except the *Chorosoma schillingi* and *Mrymus miriformis* of the Rhopalidae family, which belong to the superfamily Coreoidea, spend the winter as adults.

Therefore, the number of these individuals increases rapidly with the arrival of spring months. In addition, the fact that there is a high amount of food during this

period explains the reason for the high number of samples collected in June.

According to Dolling (2006), all species belonging to the 4 families of this superfamily are phytophage-fed or seed-fed species from the plant's meristematic tissues and sometimes cause damage to plant tissues by causing a decrease in live seed production. Ecological studies of the Coreoidea species are of great importance in terms of habitat preferences and distribution of species and sample numbers by months.

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