

FOODS OF THE TEXAS SPOTTED WHIPTAIL LIZARD (*CNEMIDOPHORUS GULARIS*) IN NEW MEXICO.—The Texas spotted whiptail lizard (*Cnemidophorus gularis*) reaches the western extreme of its range in southeastern New Mexico (Stebbins, A field guide to western reptiles and amphibians, Houghton Mifflin Co., Boston, 1966). Aside from locality records presented by Wright (Southwestern Nat., 8:56, 1963) and Tanner (Stu. Nat. Sci., Portales, NM, 2:1-39+20 maps, 1975), nothing is known of the biology of *C. gularis* in New Mexico. The food habits of *C. gularis* have been reliably studied only by Scudday and Dixon (Southwestern Nat., 18:279-289, 1973) in Trans-Pecos Texas. Accounts presented by Milstead (Texas J. Sci., 9:410-447, 1957; Texas J. Sci., 10:443-446, 1958) under the name *C. sacki* presumably included *C. gularis* and *C. exanguis*, and thus are of limited value. The paucity of food habit data for *C. gularis*, its limited distribution in New Mexico, and its association with other teiid species make it especially worthy of study. Here we present data on the food habits of *C. gularis* and associated lizard species in New Mexico.

On 17 and 18 July 1979, we collected 89 Texas spotted whiptail lizard (58 ♂ and 31 ♀), five western whiptail lizards (*C. tigris*), one side-blotched lizard (*Uta stansburiana*), and one Texas horned lizard (*Phrynosoma cornutum*) from the southern half of Section 1, T23S, R30E, Eddy Co., New Mexico (ca. 35 km E Carlsbad). Specimens were sexed, preserved in formalin, and stomachs later removed for analyses. Specimens and stomach contents are deposited in the Natural History Museum, Eastern New Mexico University, Portales. Dominant plants on the study site and mean densities per hectare in July 1979 were: snakeweed (*Xanthocephalum texanum*), 135,500; Fendler bladderpod (*Lesquerella fendleri*), 12,250; black grama grass (*Bouteloua eriopoda*), 5,750; buckwheat (*Eriogonum* sp.), 5,250; creosote bush (*Larrea tridentata*), 838; mesquite (*Prosopis glandulosa*), 650; dropseed (*Sporobolus* sp.), 500; and spurge (*Euphorbia* sp.), 250.

The kinds and numbers of food items found in the stomachs are listed in Table 1, as well as the percentage of specimens containing each type of food. In addition, the specimen of *U. stansburiana* contained one Hemiptera (Lygaeidae), and the *P. cornutum* had eaten several Coleoptera (four Carabidae and three Tenebrionidae) and 64 Hymenoptera (Formicidae). Grasshoppers (Acrididae) were eaten by 81% of the *C. gularis* and by all of the *C. tigris*. Second in abundance for *C. gularis* were the termites (Isoptera) found in nearly half the specimens, and spiders (Araneae) were second for *C. tigris*. More than one-third of the *C. gularis* had eaten spiders (Araneae). Although there were several food categories that differed between species (probably related to sample size), the relatively large number of tenebrionid beetles in *C. gularis* compared to none found in *C. tigris* may be an important food difference.

Four categories, represented by the largest number of food items and greatest frequency of occurrence, show no apparent sexual differences in food habits for *C. gularis*, i.e., Acrididae, Isoptera, Tenebrionidae, and Araneae. Of the 32 food categories listed in Table 1, 20 are common to both sexes. The 12 differences are all categories with only one or two food items.

In summary, the differences between items eaten by *C. tigris* and *C. gularis* may indicate some differences in use of the available food resources, but the sample size for *C. tigris* is small. There is no apparent evidence of sexual differences in *C. gularis* feeding habits.

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TABLE 1.—Number of food items found in stomachs of 89 Texas spotted whiptail lizards (*Cnemidophorus gularis*) and five western whiptail lizards (*C. tigris*), and the percent frequency for each.

Food Category	<i>Cnemidophorus gularis</i>				<i>Cnemidophorus tigris</i>	
	Males (N = 58)	Females (N = 31)	Sexes Combined	Percent Freq.	Sexes Combined	Percent Freq.
APTERGOTA						
Leptismatidae	1	1	2	2.3		
ORTHOPTERA	1		1	1.1		
Acrididae (eggs, larvae, adults)	69	39	118	80.9	12	100.0
Mantidae (nymphs)	1	1	2	2.3	1	20.0
Tettigoniidae (nymphs, adults)	1	1	2	2.3		
ISOPTERA	594	705	1,299	48.3	37	40.0
HEMIPTERA		1	1	1.1		
Alydidae	2		2	2.3		
Coreidae (nymphs)					1	20.0
Miridae (nymphs)					1	20.0
Pentatomidae (nymphs, adults)	1	2	3	3.4		
Reduviidae (nymphs)					1	20.0
HOMOPTERA						
Cicadellidae	1	5	6	6.7		
Cicadidae	4	2	6	6.7	1	20.0
NEUROPTERA						
Chrysopidae	1		1	1.1		
Myrmeleontidae (larvae, adults)	1	1	2	2.3		
COLEOPTERA		2	2	2.3	2	40.0
Carabidae (larvae, adults)	3	11	14	9.0		
Curculionidae	2	1	3	3.4	1	20.0
Tenebrionidae	14	12	26	22.5		
LEPIDOPTERA	3		3	2.3		
Noctuidae (larvae, adults)	1	1	2	2.3		
DIPTERA	1		1	1.1		
Asilidae	3	1	4	4.5		
HYMENOPTERA		1	1	1.1		
Apoidea	1		1	1.1		
Braconidae		1	1	1.1		
Colletidae					1	20.0
Formicidae	3	11	14	10.1	1	20.0
OTHER						
ARTHROPODS	2	2	4	4.5		
Acarina	5	3	8	7.9		
Araneae	30	36	66	39.3	5	60.0
Scorpionidae	1		1	1.1		
Solpugidae		1	1	1.1		
PLANT TISSUE		1	1	1.1		
EMPTY	2	2	4	4.5		