

### **P13 - How sympatric Lacertid lizards divide prey among species and between sexes**

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The co-existence of related species sharing the same food resources is problematic. This competition is both reflected and mitigated by inter-specific differences in the size of the jaws, hence head length. Intra-specifically the same applies to the sexes. Among insectivorous lizards, the sexual head-size difference is often accompanied by a sexual diet difference. Another mechanism presumably mitigating the competition for food, is the foraging mode. Carnivorous animals either actively search for prey, or ambush for it. Lizard families have been characterized as either actively foraging or ambushing. But among Lacertidae in the Kalahari both "widely foraging" and "sit-and-wait" species were discovered, and this recurs elsewhere. Moreover, in lizards of several families the foraging mode differs sexually, either sex being more active and presumably differing in diet. In this paper we explored whether and how the two mechanisms mitigating food competition inter-relate. Hypothetically strong competition may maximize both mechanisms, or one efficient mechanism may obviate the other. Therefore we tested the correlation, among 15 lacertid species inhabiting Israel and vicinity, of the degree of sexual head-size difference with the degree of activity of foraging. Head size we measured in museum specimens in the National Collections of Natural History at the Hebrew University of Jerusalem. Foraging activity had been quantified in the field as Percent-Time-Moving and as number of Moves-Per-Minute for few species, but is known as tightly correlated with relative tail length, available from the museum specimens. The two variables were significantly correlated, indicating that the lizards exploit both avenues to divide the food resources according to the intensity of the competition. We worried lest this could be a "fake correlation" deriving from each variable allometrically depending on body size. But sexual head-size difference did not correlate with body size; while the specific relative tail length was negatively correlated with the specific body size.