

# Dunes in Israel

Policy and management



## ABSTRACTS

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# Foraging Mode and Time Allocation of the Lizard *Acanthodactylus Schreiberi* at Caesarea and Nizzanim Sand Dunes

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Lizards forage actively or from ambush and anywhere between these extremes. Little is known about the ultimate factors that determine the tendency of lizards towards one of these two modes. Israel's coastal sand dunes can be divided to three main types: stabilized, semi stabilized and shifting dunes. Lacertid lizards from the genus *Acanthodactylus* often specialize on sandy habitats. In Caesarea sand dunes, the Mediterranean *Acanthodactylus schreiberi* is the only diurnal lizard while in Nizzanim sand dunes, *Acanthodactylus scutellatus*, another diurnal lizard, typical to desert habitats, occurs in the semi stabilized and the shifting dunes. In Nizzanim, a long-term research on the communities of plants, mammals, reptiles and arthropods is taking place since 2004. In order to examine the influence of sand stabilization, a major manipulation was done in 2005: vegetation was partially removed from several stabilized and semi stabilized dunes. I examined whether the foraging mode and the time allocation of the Lacertid *A. schreiberi* differ among habitats and whether it differs with age and with the presence of a potential competitor. Additionally I examined *A. schreiberi* foraging behavior in the manipulated dunes for estimating the efficiency of the manipulation. The time allocation was record by behavioral observations of 10-30 min. I measured the moves per minute (MPM), the percent of time spent moving (PTM), the percent of food items eaten while moving (PEM) and the percent of time spent in the open (PTO).

In Caesarea the MPM was highest in shifting and lowest in stabilized dunes, and the PTO in the stabilized dunes was higher then in any other dune type. In Nizzanim the PTM was higher in the stabilized dunes comparing to the semi stabilized ones and showed intermediate values in the manipulated dunes. In the comparison between age classes, the PTM of the juveniles was higher than the adults.

*schreiberi* foraging behavior in the different dune types change between the two sites. The juveniles of this species are more active than the adults. More over, *A. schreiberi* foraging mode showed that the vegetation removal manipulation in Nizzanim is effective.