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# PROCEEDINGS OF THE THIRTY-SEVENTH MEETING OF THE ZOOLOGICAL SOCIETY OF ISRAEL

HELD AT BEN-GURION UNIVERSITY OF THE NEGEV 24 December 2000

#### PROGRAM

Greetings, Avishay Braverman, President of Ben-Gurion University of the Negev. Greetings, Miriam Cohen, Dean of the Faculty of Natural Sciences, Ben-Gurion University of the Negev.

Greetings, Zeev Arad, Treasurer of the Zoological Society of Israel.

## SCIENTIFIC SESSIONS

Presiding: Y. Ayal (Ben-Gurion University of the Negev), Y. Benayahu (Tel Aviv University), A. Bouskila (Ben-Gurion University of the Negev), T. Dayan (Tel Aviv University), A. A. Degen (Ben-Gurion University of the Negev), A. Haim (University of Haifa at Oranim), U. Motro (The Hebrew University of Jerusalem), U. Paz (Society for the Protection of Nature in Israel), A. Perevolotsky (Israel Nature and Natural Parks Protection Authority), and D. Salz (Ben-Gurion University of the Negev).

A plenary lecture on "Foraminifera of the Mediterranean continental shelf: The present is the key to the past" was given by C. Benjamini (Ben-Gurion University of the Negev).

#### GENERAL MEETING OF THE SOCIETY AND CLOSING CEREMONY

Board elected: Y. Ayal (Ben-Gurion University of the Negev), D. Golani (The Hebrew University of Jerusalem), O. Gur (University of Haifa at Oranim), A. Haim (University of Haifa at Oranim), M. Inbar (University of Haifa at Oranim), O. Manheim (Tel Aviv University), M. Motro (The Hebrew University of Jerusalem), Y. Shkedy (Nature and Natural Parks Protection Authority), and I. Tsurim (Ben-Gurion University of the Negev).

The Michael Costa Prize for the best Ph.D. student paper was awarded to G. Stav (Ben-Gurion University of the Negev) for his presentation "Predation-risk effects on two temporary-pool species (*Bufo viridis* and *Culiseta longiareolata*)." The Gidy Zakai Memorial Prize for the best M.Sc. student paper was awarded to S. Perkol (Tel Aviv University) for her presentation "Comparison of coral communities between artificial and natural reefs in Elat (Red Sea)." The prize for the best poster presentation was

#### ABSTRACTS

Ambush-site selection of a sit-and-wait snake: A field study and a manipulative experiment H. HAWLENA and A. BOUSKILA. *Department of Life Sciences, Ben-Gurion University of the Negev, Beer Sheva 84105, Israel* 

Selection of foraging sites may be important for ambush foragers, who remain sedentary for long periods of time. In this work we investigated the ambush-site selection of *Echis coloratus*. Our first goal was to determine whether *E. coloratus* sets its ambush randomly or exhibits some preference for certain microhabitats. The second goal was to find out if ambush-site selection is related to the odor of potential prey. We collected ambush-site data in a natural population of *E. coloratus* in the En Gedi Nature Reserve, and compared them to the types of sites available at this location. Snakes showed a preference for undercover sites raised above ground and located 0–5 m from water. Logistic regression revealed that the proximity to water is related to air temperature, and increases at high temperatures. Females showed a preference for undercover sites, whereas males located their ambushes according to the availability of sites. The determination in the field of cues that lead snakes to these preferences is difficult to assess. Thus, we conducted experiments in two enclosures near Sede Boqer. We added to different regions of the enclosure odors from different organisms (rodents, geckoes, frogs, birds, and control). No odor preference was seen. These findings suggest that the snakes do select ambush sites, presumably to improve the preycapture rate, but the cues for this preference remain unclear.

### Predation by larval Salamandra and invertebrate species richness in temporary pools

M. KIFLAWI,<sup>a</sup> L. BLAUSTEIN,<sup>a</sup> and J. E. COHEN.<sup>b</sup> aInstitute of Evolution, University of Haifa, Haifa 31905, Israel; <sup>b</sup>Laboratory of Populations, Rockefeller and Columbia Universities, 1230 York Avenue, New York, New York 10021, USA

We examined the effect of predation on the diversity of temporary-pool invertebrates at both the individual-community (pool) and the community-assemblage scales. The community assemblages varied in the degree of occupancy by predatory fire-salamander larvae. Using artificial pools we showed that, while predation can depress average local species richness by ~30%, the effect at the community-assemblage scale may be mitigated over a wide range of predator-occupancy levels. We further demonstrate the possibility of predator-induced decrease in among-community similarity, and in degree of species co-occurrence.

## Mole rats (Spalax ehrenbergi) avoid obstacles by building bypass tunnels

T. KIMCHI, R. RADO, Z. WOLLBERG, and J. TERKEL. Department of Zoology, George S. Wise Faculty of Life Sciences, Tel Aviv University, Ramat Aviv 69978, Israel

The mole rat (*Spalax ehrenbergi*) is a solitary subterranean rodent that excavates and inhabits an extensive branching tunnel system, which it never leaves unless forced to. In order to survive, the mole rat requires a highly developed directional orientation sense, which must be extremely efficient in order to contend with the harsh conditions of the subterranean environment. In this study we examined whether mole rats are able to avoid obstacles by digging bypass tunnels and, if so, whether they dig these tunnels efficiently (the shorter the tunnel, the less energy expended). We created three types of obstacle, each positioned to block or disrupt a part of the tunnel system: (1) different sized ditches, (2) stone block, and (3) wooden block. We found that when the obstacle constituted of a small quadrilateral ditch in sizes ranging from  $30 \times 60 \text{ cm}^2$  to  $60 \times 150 \text{ cm}^2$  (with the longitudinal axis perpendicular to the tunnel axis), 72.5% (29/40) of the mole rats reconnected