

Geographic sympatry of *Acanthodactylus opheodurus* with *A. boskianus* in the Levant

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ARNOLD (1980) described three new species of *Acanthodactylus* from the Arabian Peninsula, all similar to but smaller than *A. boskianus* (Daudin, 1802). Whereas two are restricted to southeast Saudi Arabia, the third, *A. opheodurus*, occurs throughout the Peninsula and has been recorded from Iraq, Jordan and Israel. At least geographically, it is sympatric everywhere

with *A. boskianus*. The range of the latter species is wider, also covering Africa north of latitude 15 degrees, and extending through Syria to southern Turkey (ARNOLD 1980: fig. 1; SALVADOR 1982: maps 2 and 8).

From ARNOLD 's (1980) habitat descriptions, *A. opheodurus* appears to be a moderate and euryoecious psammophile, avoiding soft sand; in Dhofar he found it living alongside *A. boskianus*. It seems of interest to map the precise distributions of these two near-sibling species in and around southern Israel, where sandy soils constitute disjunct "islands", raising zoogeographical and ecological questions (WERNER 1968, 1982, in press). The main sand areas in Israel (fig. 1) are the Northern Negev (NN), loosely continuous with northern Sinai and Sahara sands; Coastal Plain (CP), tenuously continuous with the former; 'Arava Valley (AV), vaguely continuous with the sands of south Jordan and northwest Arabia; and Mishor Rotem and Mishor Yamin (MR), disjunct neogenous sands. Until now *A. opheodurus* has been reported only from AV as well as northeastern Jordan (ARNOLD 1980, SALVADOR 1982).

Because all the earlier material of *A. opheodurus* was identified as *A. boskianus*, I had to re-identify all the *A. boskianus* material (in the Hebrew University of Jerusalem and Tel Aviv University) on which previous distribution maps had been based (WAHRMANN 1970, WERNER 1977). This paper is an interim report on the HUI material. I used the external diagnostic characters provided by ARNOLD (1980) and SALVADOR (1982), and, when necessary and possible, the hemipenial characters defined by ARNOLD (1980). The latter have been more fully explained elsewhere (ARNOLD 1973, in press). Maps of locality records of both species, for a survey area including Israel and Sinai, were prepared as outlined earlier (WERNER 1977).

The resulting map for *A. boskianus* was the same as that published earlier (WERNER 1977): the species abounds in sandy and gravel habitats throughout Sinai and southern Israel, including MR and AV, but excluding the sand dunes of northern Sinai, NN and CP. But *A. opheodurus* (fig. 1) occurs only in or near MR, AV and southern Sinai; it coexists everywhere with *A. boskianus*. In addition, material collected in the 1930's produced a new *A. opheodurus* record for central Jordan: 65 km SSE of Amman (HUI-R 5045).

Zoogeographically, the distribution of *A. opheodurus* in AV and MR seems to be a continuation, through southern Jordan, of its distribution in Arabia, following the pattern of several other reptiles (WERNER, in press). Possibly the *A. opheodurus* population in southern Sinai is disjunct from the above, having arrived from northwestern Arabia across the Tiran Straits area, as has been suggested for *Mesalina brevirostris* (Lacertidae) (WERNER, in MS). The fact that the HUI collection has only *A. boskianus* from Tiran Island may be due to the small sample size ($n=7$). Ecologically, competition between the

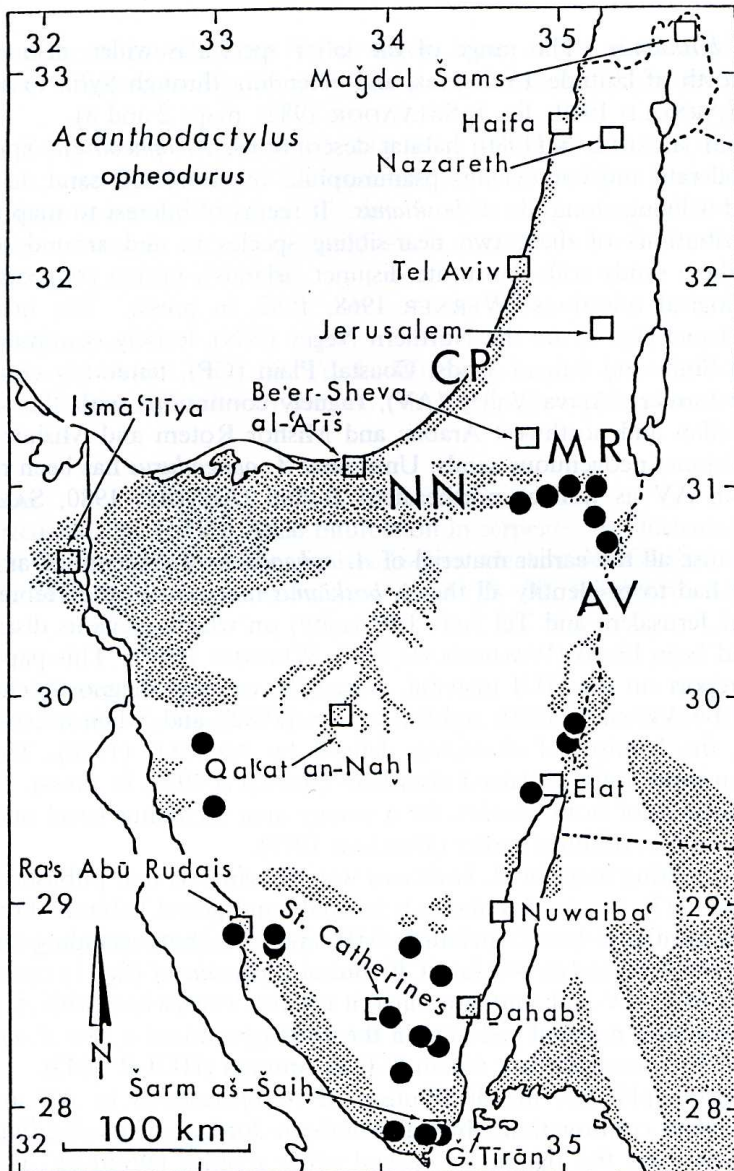


Fig. 1. Locality records of *Acanthodactylus opheodurus* in the survey area of Israel and Sinai. Stippling: major sand areas (see text); boxes: towns for orientation; dots: location from which one or more specimens are in the HUI collection.

similar and sympatric *A. boskianus* and *A. opheodurus* may be reduced by the size difference (ARNOLD 1980).

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