

The herpetofauna of the Sultanate of Oman

PART 3: THE TRUE LIZARDS, SKINKS AND MONITOR LIZARD

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INTRODUCTION

In this third publication in the series of the herpetofauna of Oman the true lizards, skinks and the monitor lizard are treated. Eleven species of lizards, six skinks and one monitor lizard are recorded for the Sultanate of Oman. The records on distribution and ecology, collected during two expeditions (the end of December 1998 until the end of March 1999 and from September 1999 until the end of December 1999) are summarized.

LACERTIDAE, LIZARDS

In Oman the family of Lacertidae consists currently of 11 species in three genera. They are found in a wide range of habitats.

GENUS ACANTHODACTYLUS

Seven species are found in this genus. *Acanthodactylus masirae* is endemic to Oman and is only known from Dhofar to Masirah Island. *Acanthodactylus haasi* is only known from four widely separated populations in Arabia, two of which are in Oman. *Acanthodactylus felicis* is endemic to south Yemen and Dhofar. The four other species are widespread in the Middle East.

The *Acanthodactylus* group is a very complicated genus (ARNOLD 1972, 1980, 1983, 1984, 1986, ARNOLD & GALLAGHER 1977, GALLAGHER & ARNOLD, 1988). E.N. Arnold has done some molecular research. However, these data have not yet been published.

Acanthodactylus blanfordii Boulenger, 1918



Acanthodactylus blanfordii, Seeb Beach between Muscat and Bahla.

(Daudin, 1802)

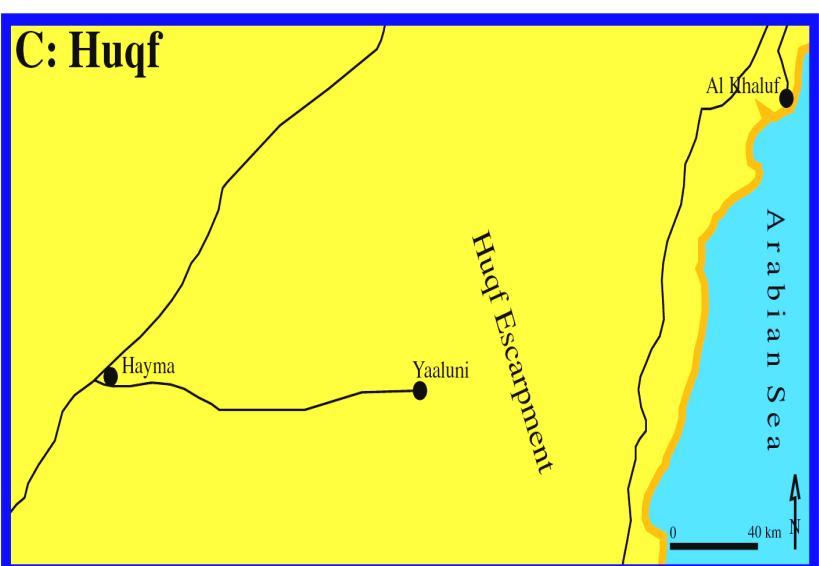
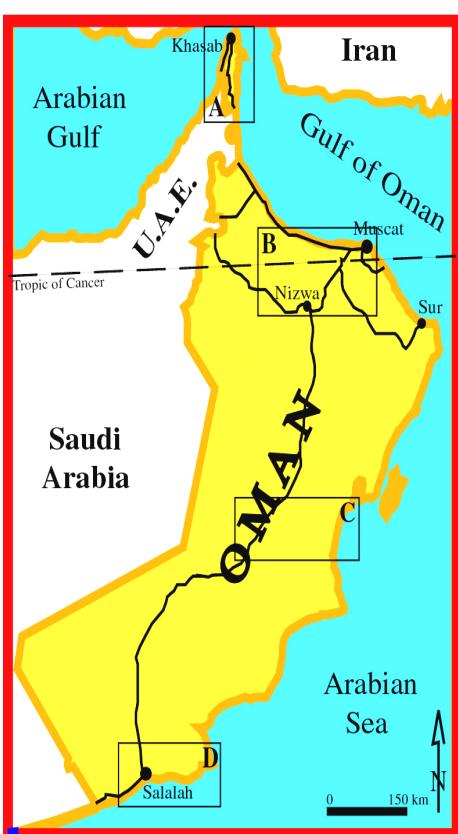
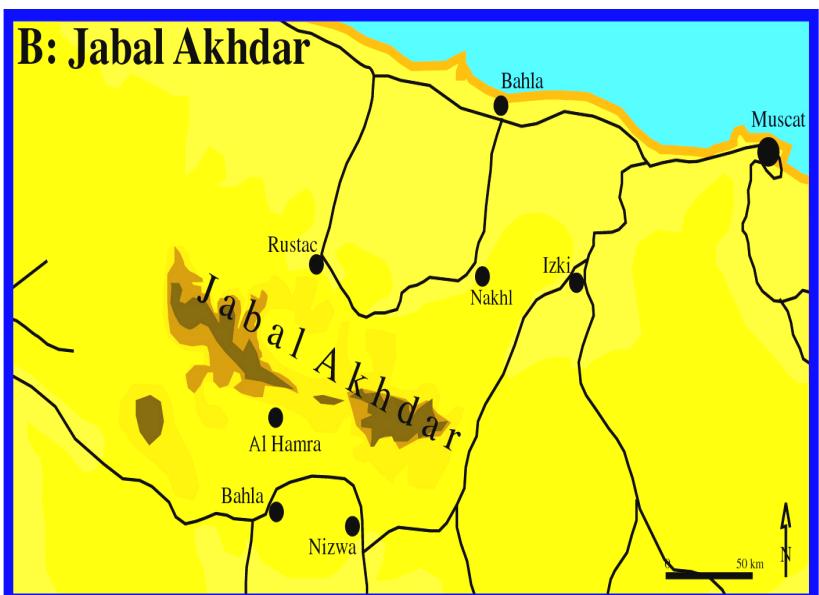
Distribution: Widespread in Arabia; also northern Africa, Israel, Jordan, Iraq, Syria and adjoining Turkey.

Ecology: We found a very large (90 mm from snout to vent) specimen in a sandy wadi-like habitat, with some quite high and dense bushes. ARNOLD (1984) mentioned records of specimens in the United Arab Emirates. They were found in a narrow band at the interface between the gravel plains, bordering the mountains and the areas of active sand dunes. This matches the habitat of this locality in the southern foothills of Jabal Akhdar. Until this record, there were no *A. boskianus* recorded from the northern part of Oman (above 19°02'N). Recent surveys, however, have contributed more records for this area (Gardner, pers. comm.).

Distribution: Coastal north Oman (Batinah region); south-eastern Iran, southern Afghanistan, south-western Pakistan.

Ecology: An *Acanthodactylus* of both soft sand areas and open gravel surfaces with dried salt crusts and low vegetation. This lizard is often found in high densities. It seems to be restricted to the Batinah region (between the Northern Mountains foothills and the coast).

Acanthodactylus boskianus





Acanthodactylus felicis, beach near Marbat (Dhofar).

***Acanthodactylus felicis* Arnold, 1980**

Distribution: Southern Yemen and southern Oman (Dhofar).

Ecology: This regional endemic species is found in Dhofar in areas of sand, sometimes bordered by gravelly wadis. It runs very agilely over the small stones. It has recently been recorded east of Marbat in sand dunes near the beach. Another new record is in Wadi Sunayke near Hasik in the easternmost Jabal Samhan region. Towards the north, *A. opheodurus*, *A. masirae* (MEINIG & KESSLER, 1998) and *A. boskianus* seem to occupy these habitats. *A. felicis* is absent here. There is some variation in coloration and dorsal patterning.

***Acanthodactylus haasi* Leviton & Anderson, 1967**



Acanthodactylus haasi, north of Hayma.

Distribution: North and east Saudi Arabia (Sakaka, Dhahran area); central Oman.

Ecology: For a long time, this species was only known from the type, collected in 1946 by J. Gasperetti. ARNOLD (1983) suggested the taxon was possibly based on a hybrid. However, it has been rediscovered in three widely separated localities (ARNOLD, 1986) by W. Ross (Dhahran area), K. Habini (Sakaka) and M.D. Gallagher (Oman). It is now considered a valid species (ARNOLD, 1986). The last records from GALLAGHER & ARNOLD (1988) were in

Mintirib in the north of the Wahiba Sands and at Ras Dhabdhub in the southern Wahiba sands. During the first expedition we found a new, fourth population on the road between Salalah and Muscat. It is roughly 500 km separated from the Wahiba Sands.

Acanthodactylus haasi has distinctive behaviour, different from other *Acanthodactylus*-species, as it climbs in low vegetation (*Zygophyllum*) (pers. obs.; ARNOLD 1986; GALLAGHER & ARNOLD 1988, LEVITON et al. 1992). This scansorial behaviour may give access to a new feeding niche, function as relief from the very hot sand, and as protection from predators. Specimens did not seem to run across the open sandy areas. This last behaviour was observed in *A. schmidti* found in the same locality.

Instead *A. haasi* remained in the vegetation where they moved confusingly fast and hid. No small burrow openings were found in these bushes. One specimen was observed covering itself with sand.

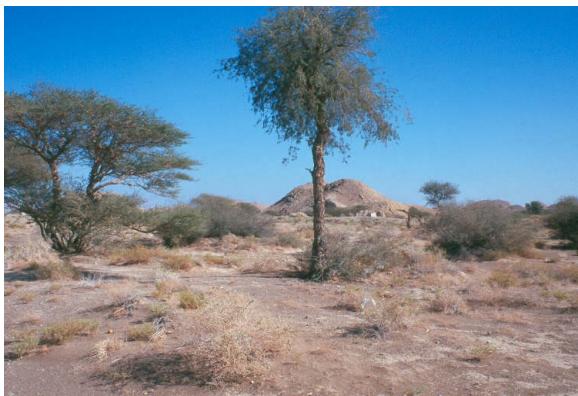
Unlike GALLAGHER & ARNOLD's (1988) description, this species looks very different from *Acanthodactylus schmidti*. It has obvious longitudinal stripes on the flanks and a yellowish tail and neck. Moreover, it is smaller and more slender than *A. schmidti*.

***Acanthodactylus masirae* Arnold, 1980**

Distribution: Oman (Dhofar to Masirah Island).

Ecology: A small species of *Acanthodactylus* with a distinctive narrow snout. No specimens were found during the expeditions.

***Acanthodactylus opheodurus* Arnold, 1980**



Habitat of *Acanthodactylus opheodurus*, west of Nizwa.



Acanthodactylus opheodurus, west of Nizwa.

Distribution: Widespread in Arabia; also Israel, Jordan and Iraq.

Ecology: A lizard found on gravelly plains and dry wadis with some vegetation. As in most other *Acanthodactylus* species it is active during the hottest parts of the day (10:00 AM-1:00 PM). Occasionally it was found at high densities. Localities previously recorded, together with the new record from Nizwa, suggest that the southern foothill gravel plains of the Northern Mountains contain *A. opheodurus*. However, the border area between these plains and more soft sandy surfaces is inhabited by *A. boskianus*. The latter species is much bigger and there seems to be a niche separation in habitat. The distribution of both species reaches towards the south. The southernmost recorded locality of *A. boskianus* is close to Ayun (Dhofar). The southernmost record of *A. opheodurus* is Thumrayt (slightly further north). In the south, the habitat of *A. opheodurus* is occupied by the closely related *A. felicis* that seems to occupy a similar niche. Juvenile specimens have longitudinal stripes and a red tail. There is some variance in colour pattern between individuals of different populations. Yaaluni specimens have much more distinct longitudinal striping than the more dotted specimens from the western Northern Mountains.

***Acanthodactylus schmidti* Haas, 1957**

Distribution: Widespread in Arabia (except for the Batinah region in northern Oman), Jordan and south-western Iran.

Ecology: A lizard found in open soft sand areas with little vegetation. There is geographical variation in colour, with some populations being considerably paler. Specimens of *Psammophis schokari* were found in the same habitat and probably predate on this *Acanthodactylus* species. One population of *A. schmidti* was found sharing the habitat with *A. haasi*. The latter species is much more restricted to bushes whereas *A. schmidti* prefers the open sandy areas. In Oman the distribution is probably limited to the vast desert between the Northern Mountains and the Dhofar Mountains (including the Wahiba Sands).



Acanthodactylus schmidti, north of Al Khaluf.

GENUS MESALINA



Mesalina adramitana, pale specimen from Yaaluni.

For Oman two species have been described in this genus. *Mesalina adramitana* is an abundant species found almost everywhere in Oman. *Mesalina ayunensis* is only known from very few localities. A third *Mesalina* species recorded in Oman has not been formally described as only a single poorly preserved specimen from Dauqa (along the road from Salalah to Muscat) is known. It differs from *M. adramitana*, amongst which it was collected, in several scaling patterns. In some of these features it resembles *M. ayunensis*. However, it does not agree in a number of other characteristics (ARNOLD, 1980).

Despite the fact that *M. adramitana* was found abundantly in Dauqa no specimens of *M. ayunensis* were ever found anywhere near this place (more than 150 km apart). Also the flat desert from Dauqa doesn't fit the habitat descriptions of *M. ayunensis*. It is therefore unlikely that the curious undescribed *Mesalina* species is a hybrid of the two species.

During two extensive surveys in this area on the first expedition no individuals of this species were found. However, several specimens of *M. adramitana* were recorded.

In the Musandam peninsula no *Mesalina* species have been found. However, from the bordering United Arab Emirates *Mesalina brevirostris* is known.

***Mesalina adramitana* (Boulenger, 1887)**

Distribution: Southern Yemen, Oman, United Arab Emirates, Qatar, adjoining Saudi Arabia.

Ecology: This small species of lizard is found on gravelly or sandy plains with the presence of some vegetation. It is known from many stony localities in and around the Northern Mountains but also in the flat, desert plains towards the south (Dhofar). There is considerable variation between individuals of different populations and/or habitats. The desert specimens seem to be much paler in colour than the ones in and close to the Northern Mountains, and the Jabal Samhan animals from Dhofar are more spotted. These animals are much darker and have very distinct longitudinal stripes on both dorsolateral sides.



Mesalina adramitana, Northern Mountains west from Nizwa.

These animals are much darker and have very distinct longitudinal stripes on both dorsolateral sides.



Mesalina adramitana, spotted specimen from western part Jabal Samhan.

***Mesalina ayunensis* Arnold, 1980**



Mesalina ayunensis, west of Hasik, Jabal Samhan.

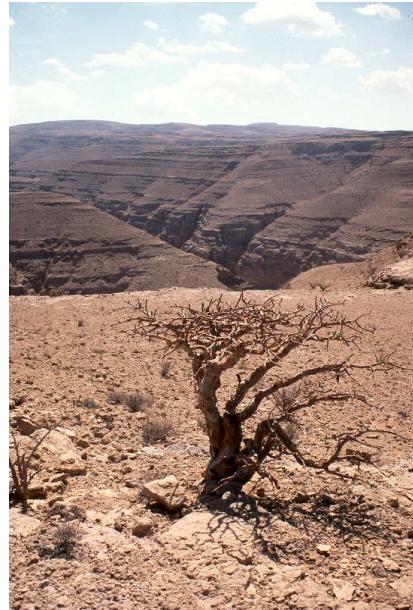
Distribution: Ayun and Jabal Samhan.

Ecology: An extensive survey has been done in the Ayun area during the first expedition. There *Mesalina ayunensis* had been recorded by ARNOLD (1980). The only known specimens thus far were two collected and three observed individuals. During the second expedition in Jabal Samhan, three more localities were found. In Hasik one specimen was recorded between boulders on a soft sandy beach at sea level. Two other specimens were recorded on Jabal Samhan: one at the escarpment at 1650 m altitude and the other near Hasik at 300 m.

Only eight specimens from four localities are known to science and the species should probably be evaluated as Vulnerable under the Red List criteria (GARDNER, 1999).

This species shares the habitat with *Mesalina adramitana* but seems to prefer slopes of gravel with little vegetation. In the described habitat the only lacertid found was *Acanthodactylus felicis*. However, they were never recorded together. Besides *A. felicis* only inhabits areas of lower altitudes.

In the Jabal Samhan area another juvenile *Mesalina* specimen was found. It did have a blue tail like described by ARNOLD (1986) for *M. ayunensis*. However, it had a different scale count than both *M. ayunensis* and *M. adramitana*. It doesn't however fit the scale counts of the Dauqa specimen as described by ARNOLD (1986). Possibly the two species hybridise.



Mesalina spec., juvenile specimen from western part Jabal Samhan.

GENUS OMANOSAURA

Two species of *Omanosaura* have been described and are both found in Oman. They are endemic to the Northern Mountains in Oman and the eastern United Arab Emirates.

Omanosaura jayakari (Boulenger, 1887)

Distribution: North Oman, eastern United Arab Emirates (Jabal Akhdar).

Ecology: This large lizard is endemic to the Northern Mountains and is mostly found in or close to wadis. Some variation exists between the eastern and the western populations (ARNOLD, 1972; ARNOLD & GALLAGHER, 1977). The northern populations seem to be slightly paler with more blue dots and dark spots. The southern populations consist of darker animals with smaller blue markings. Most specimens recorded during the surveys were found actively walking in their habitat. One specimen was found a few meters in a cave sitting on a ridge, two meters above the ground. *O. jayakari* is known to have a variable diverse diet (ARNOLD, 1972; ARNOLD & GALLAGHER, 1977) which includes insects, small reptiles and even plants. Unlike *Omanosaura cyanura*, this species is not found in the Musandam peninsula. However, some records are known from bordering eastern United Arab Emirates.



Omanosaura jayakari, Misfah near Al Hamra (Jabal Akhdar).

***Omanosaura cyanura* (Boulenger, 1887)**

Distribution: North Oman (Musandam, Jabal Akhdar), eastern United Arab Emirates.

Ecology: This is the other regional endemic species in the *Omanosaura* genus. It is much smaller than *Omanosaura jayakari*, and has a distinctive blue tail. It has seldom been found twice in the same locality. Its apparent wandering behaviour and the low densities hinder proper field research on the lizard. Currently only about ten localities are known (ARNOLD 1972, 1986; ARNOLD & GALLAGHER, 1977; LEPTIEN, 1995; LEPTIEN & BÖHME, 1994; Gardner, pers. comm.). This suggests that it is a very rare animal.

It seems to be more dependent on warm weather and will only be found during the hottest parts of warm days (10:00 AM-1:00 PM). No specimens were seen during the surveys.



Young, captive bred *Omanosaura cyanura*.

Photo: H.A.J. in den Bosch

SCINCIDAE: SKINKS

In Oman six species are found in four genera. Different species occupy a wide range of habitats, from mountains, gardens to sand plains. Some species coexist: *Ablepharus pannonicus* is found sharing the same date gardens as *Chalcides ocellatus*. In Salalah gardens (Dhofar) the latter species has also been recorded with *Mabuya brevicollis*. Both *Mabuya brevicollis* and *Mabuya tessellata* are found in the same habitat in the Tawi Atair region.

***Ablepharus pannonicus* (Lichtenstein, 1823)**

Distribution: Lower Tigris-Euphrates area, Kuwait; northern Oman (Jabal Akhdar), eastern United Arab Emirates, south-western Saudi Arabia (Asir), North Yemen.

Ecology: A small skink species that was only known (in Oman) from dry, stony habitats with low vegetation on the higher elevations of the Jabal Akhdar (Birkat Sharaf at 2000 m altitude) (ARNOLD, 1972; ARNOLD & GALLAGHER, 1977). Recent research reveals inhabitation of a similar habitat to that of the U.A.E population: wadi oases at low altitudes (500-700 m) with damp places, grass and other plant refuse (ARNOLD & GALLAGHER, 1977). In the eastern part of the Northern Mountains two specimens were found (between 5:00-5:30 PM) in a deserted date garden. In the Manah (east of Nizwa) oasis, specimens were also found amongst vegetation in the afternoon (4:00-5:00 PM). At that time two specimens of *Chalcides ocellatus* were found under rocks in the same area. This might hint to a niche separation in diurnal activity.

These recent records of *A. pannonicus* suggest a distribution that includes the oases surrounding the Northern Mountains.



Chalcides ocellatus, Khasab (Musandam).

***Chalcides ocellatus* (Forskål, 1775)**

Distribution: Periphery of Arabia (western Saudi Arabia, North Yemen, South Yemen, Oman, eastern United Arab Emirates; also from the Algerian Sahara through Egypt and from Greece through southern Turkey and lowland Southwest Asia eastward to Pakistan).

Ecology: Most previous records of this skink in Oman are from oases or gardens close to the sea. The Manah specimens, however, were found far from the sea (at the other side of the mountains). This species is probably quite abundant in the oases surrounding the Northern Mountains and in gardens along the Batinah coast. In the southern region (Dhofar) it was also found in gardens under piles of stones and dead leaves. Here *C. ocellatus* shared the habitat with *Mabuya brevicollis*. This species was found out in the open on the base of hedges.

***Mabuya aurata septemtaeniata* (Reuss, 1834)**

Distribution: North-east Saudi Arabia, Bahrain, northern Oman (Muscat); also Iraq and Iran.

Ecology: The subspecies described for this area, *Mabuya aurata septemtaeniata*, is only found on a few small isolated islands outside Muscat. It is likely this population is the result of an accidental human introduction. During recent surveys on the islands no specimens were recorded. However, these visits were during the hot summer when most reptiles are inactive (Gardner, pers. comm.).

***Mabuya brevicollis* (Wiegmann, 1837)**

Distribution: Saudi Arabia (Taif to Asir in Southwest; Bureidah and Riyadh area), Yemen, Dhofar; also northeastern Africa.

Ecology: A quite large, heavily built skink. It is found in the mountains of Dhofar in humid areas like oases and gardens. Several specimens were recorded in the Salalah Holiday Inn gardens. They were basking in the sun or actively walking around at the base of hedges (between 11:00 AM and 1:00 PM). When approached, they ran into the thick hedges. In and around the Tawi Atair sinkhole many specimens were seen.

***Mabuya tessellata* Anderson, 1895**



Mabuya tessellata, juvenile from Al Khodh, west of Muscat.

Distribution: Yemen, Dhofar, northern Oman (Musandam to Jabal Akhdar).

Ecology: *M. tessellata* is generally found in or close to wadis, gardens or oases. One specimen was found high up a wadi on a steep surface. A juvenile specimen was found crossing a road through the Sultan Qaboos University garden, Muscat. A specimen in Ayun was recorded in a wadi basking on a steep surface. In Wadi Darbat one specimen was found under a pile of stones in hilly woodland. In the eastern Jabal Samhan specimens were regularly spotted on the beach.



Mabuya tessellata, Hasik (Jabal Samhan).

Scincus mitranus Anderson, 1871

Distribution: South and east Saudi Arabia with isolated populations in the north, southern Yemen, southern Oman and coastal regions, United Arab Emirates and Kuwait (subsp. *S. m. mitranus*). In the Muscat area along the coast to Dhofar (subsp. *S. m. muscatensis* Murray, 1886).

Ecology: Usually this species is found in soft sand dunes. It buries itself and moves fast under the surface. The Dauqa specimen, subspecies *muscatensis* was found under a small *Zygophyllum* bush. It could not immediately dive into the rough sandy soil with salt crusts. Instead it ran to softer substrate where it did go underground.



Scincus mitranus muscatensis, Dauqa, north of Salalah.

VARANIDAE: MONITOR LIZARDS

Three species of varanids are found in Arabia. *Varanus griseus* is widespread in Arabia, including Oman. The second species, *Varanus exanthematicus*, is known from Africa but in Arabia only identified in two localities in El Khor, Yemen (ARNOLD, 1980). The third species, *Varanus yemenensis*, was only discovered in 1987 and described in 1989 (BÖHME et al., 1989). It is found on the western side of the Tihama mountains in Yemen and in the south-western Asir region of Saudi Arabia (BÖHME, 1999).

***Varanus griseus* (Daudin, 1802)**

Distribution: Widespread in Arabia; also North Africa and south-western Asia.

Ecology: It is found between the northern mountains and the Dhofar mountains. This area consists of (soft) sand and gravelly plains. No live specimens were recorded. Two dead specimens, one on the road to Lizq, 60 km east of Nizwa, and one on a track near Al Khaluf, were found.

Like most monitor lizards it is omnivorous. The locals consider this largest lizard in the area a delicacy.

SUMMARY

In this third paper on the herpetofauna of Oman, three families are treated: eleven Lacertidae, six Scincidae and one varanid. New records, notes on ecology and localities are combined with data from literature.

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