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Reptiles & Amphibians of the Hajar Mountains



Published by Consejo Superior de Investigaciones Científicas

First published Madrid 2022

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B = Bottom **T** = Top **R** = Right **L** = Left **M** = Middle
b = Body **h** = Head **X.1** = 1st spp **X.2** = 2nd spp

Graphic design by Bernat Burriel-Carranza & Salvador Carranza

Illustrated by Jhulyana López-Caro

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ISBN: 978-84-00-10988-2

NIPO: 833-22-074-9

Legal Deposit: M-12651-2022

e-ISBN: 978-84-00-10989-9

e-NIPO: 833-22-075-4

Impreso en España / Printed in Spain

National Media Council Approval Number: MC-01-01-4624350



Printed by Barcino Solucions Gràfiques, SL. in Barcelona, Spain

Legend for the species accounts starting on page 2:




CONSERVATION STATUS

-  Not Evaluated
-  Least Concern
-  Near Threatened
-  Vulnerable
-  Endangered
-  Critically Endangered

SEX

-  Male
-  Female

OTHERS

-  Diurnal
-  Nocturnal
-  Venomous




SIZE

SVL: Snout to vent length (without tail).

ENDEMIC

Species occurrence restricted to the Hajar Mountains.

ELEVATION

-  0 to 1,000 m
-  1,000 m to 2,000 m
-  > 2,000 m

The Hajar Mountains

The Hajar Mountain range is the highest in eastern Arabia, forming a spectacular isolated wall of rock that rises dramatically from the sea below. It runs northwest to southeast in a 650 km continuous arc parallel to the Oman and UAE coastline along the Gulf of Oman, from the Musandam Peninsula to Ras Al Hadd. This impressive massif is flanked by the sea to the East and by very large gravel and sand deserts to the West and South. Cut by deep wadis, these arid mountains have a complex topography and can be divided into three distinct blocks; **Western Hajars**, **Jebel Akhdar** and **Eastern Hajars**; separated by some topographical discontinuities. With a maximum elevation of 3,009 m, Jebel Shams in the Jebel Akhdar massif is the highest peak, although several peaks above 2,000 m also occur in the Eastern and Western Hajars.



The Hajar Mountains originated about 30 Mya due to the tectonic motions that resulted in the opening of the Red Sea and the Gulf of Aden but final uplift occurred approximately 4–6 Mya. The Hajar Mountains are usually referred to as a mountain desert for its arid conditions but it is actually **one of the most climatically variable areas in southeastern Arabia**. Owing to its geological origin, high elevations, very deep canyons and geographic isolation from other mountains, high levels of species richness and endemism are recorded in several animal and plant groups, making the Hajar Mountains a focal point of conservation in Arabia.

To date, 28 species of reptiles and two amphibians inhabit the Hajar Mountains and this number is likely to increase in the next few years as a result of ongoing research. Of these species, **19 are endemic** to the massif, which means that they do not live anywhere else in the world, highlighting the importance of the Hajar Mountains as a hotspot of reptile diversity and endemism.



Hemidactylus hajarensis
Hajar Mountain Gecko

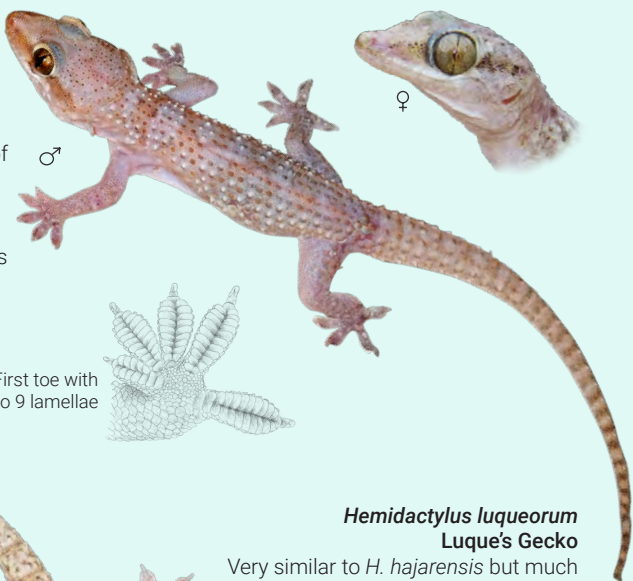
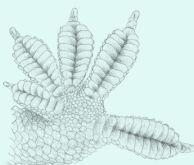
Large, robust gecko of pale grey coloration and faint yellowish dorsal bars, divided adhesive toe pads and rows of enlarged, keeled tubercles on the back. Restricted to Jebel Akhdar and the Eastern Hajars, it moves swiftly across rocks and boulders.

SVL: 67 mm

ENDEMIC



First toe with
7 to 9 lamellae



Hemidactylus luqueorum
Luque's Gecko

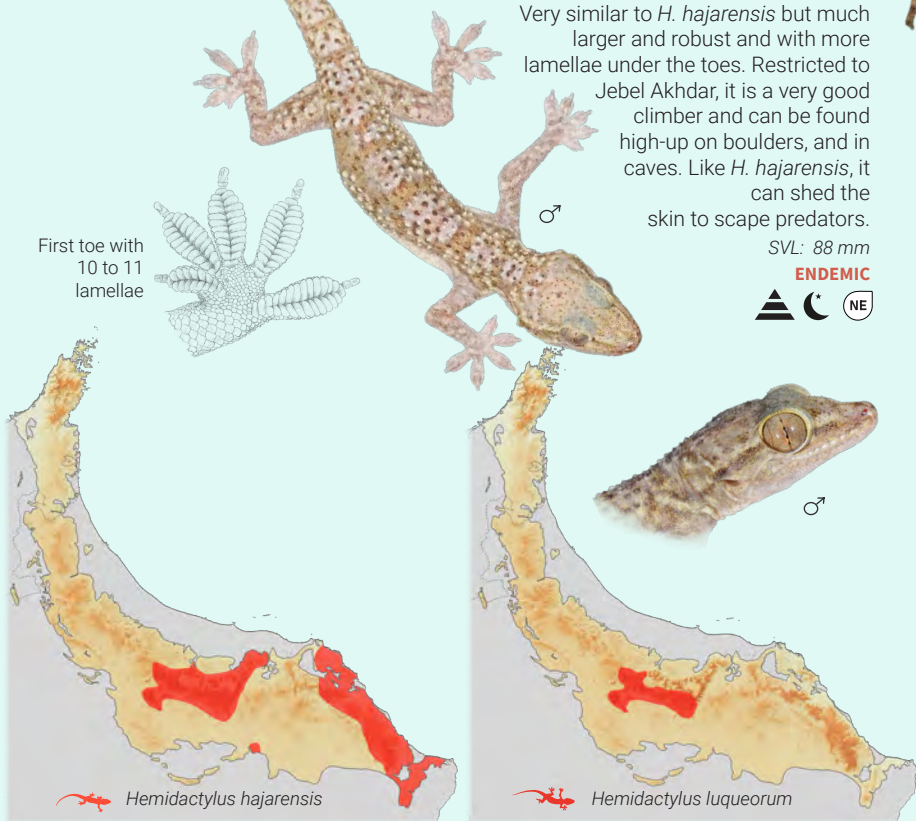
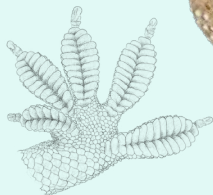
Very similar to *H. hajarensis* but much larger and robust and with more lamellae under the toes. Restricted to Jebel Akhdar, it is a very good climber and can be found high-up on boulders, and in caves. Like *H. hajarensis*, it can shed the skin to scape predators.

SVL: 88 mm

ENDEMIC



First toe with
10 to 11
lamellae



Hemidactylus robustus

Red Sea House Gecko

Small, morphologically very variable gecko with narrow toe pads and small tubercles on the back. It is widely distributed outside the Hajar Mountains. Mainly ground-dwelling and very abundant in or around human habitations.

SVL: 57 mm



Narrow toe pads



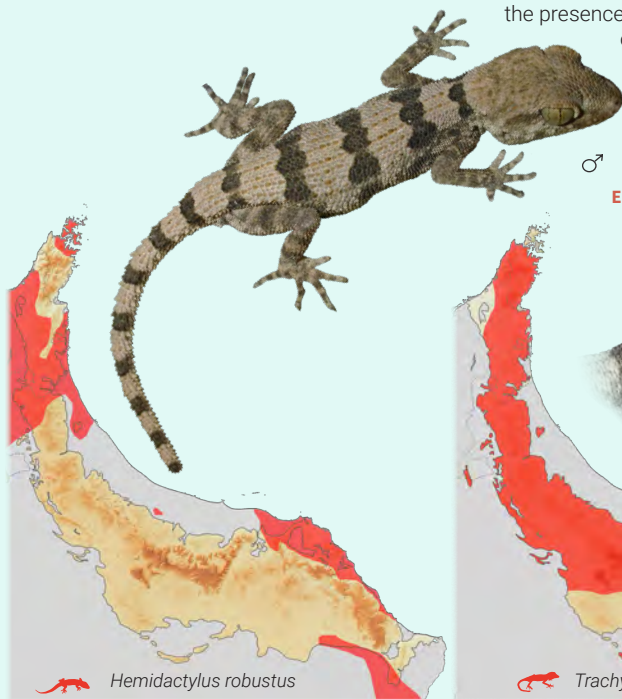
Trachydactylus hajarensis

Hajar Banded Ground Gecko

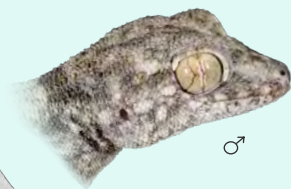
A medium-sized robust gecko, easily identified by the dorsum and tail crossed by conspicuous dark bands and the presence of several longitudinal rows of enlarged keeled scales on the back. Ground-dwelling and abundant across the Hajars, it is also present on Masirah Island.

SVL: 50 mm

ENDEMIC including Masirah island



Hemidactylus robustus



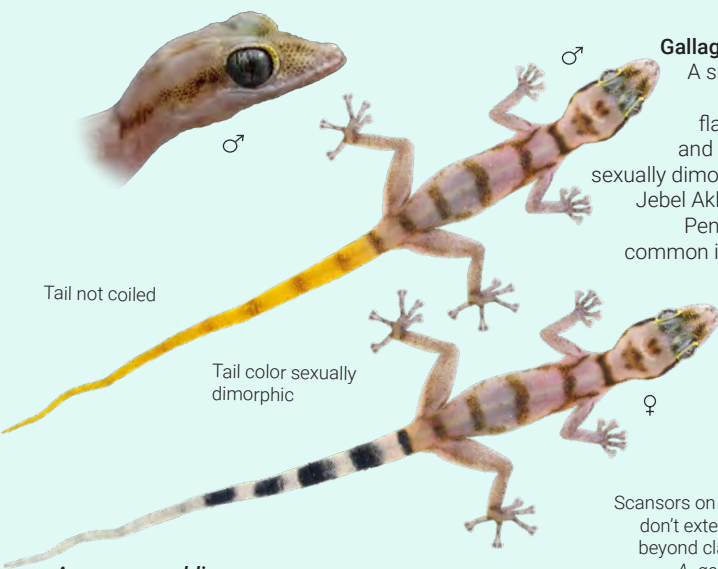
Trachydactylus hajarensis

Asaccus gallagheri
Gallagher's Leaf-toed Gecko

A small, lightly built gecko lacking tubercles, with flattened body and head, and narrow neck. Tail color sexually dimorphic. Distributed from Jebel Akhdar to the Musandam Peninsula, it can be locally common in some wadis where it inhabits rocky areas.

SVL: 40 mm

ENDEMIC



Tail not coiled

Tail color sexually dimorphic

Scansors on toe tips don't extend well beyond claws in:

- A. gallagheri*
- A. arnoldi*



Asaccus arnoldi
Arnold's Leaf-toed Gecko

Morphologically very similar to *A. gallagheri* from which it can be differentiated genetically and by its smaller size. Restricted to the Eastern Hajars, it is rather secretive and not very abundant. Like all other Arabian *Asaccus* species, it is very agile and inhabits rocky areas.

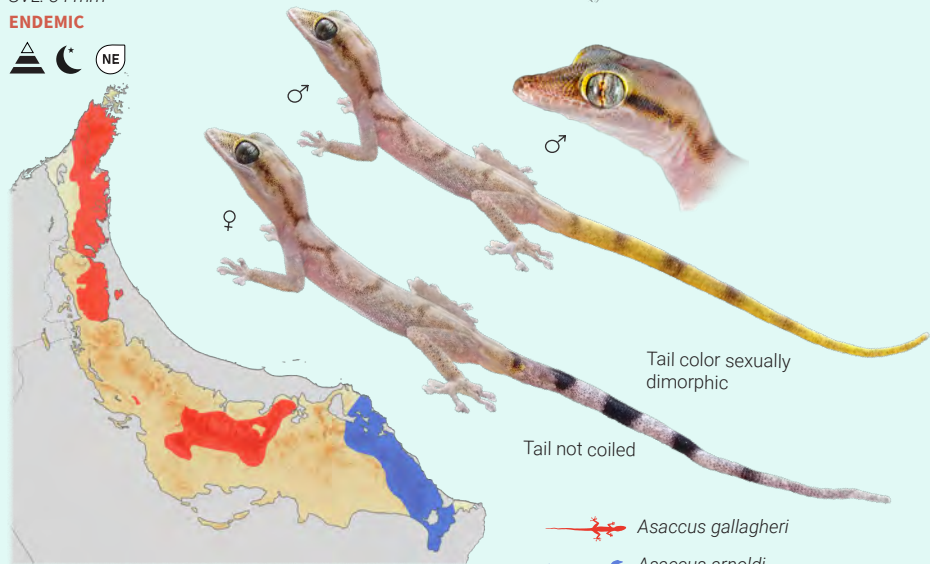
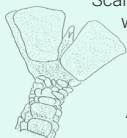
SVL: 34 mm

ENDEMIC



Scansors on toe tips extend well beyond claws in:

- A. platyrhynchus*
- A. gardneri*
- A. caudivolvulus*
- A. margaritae*

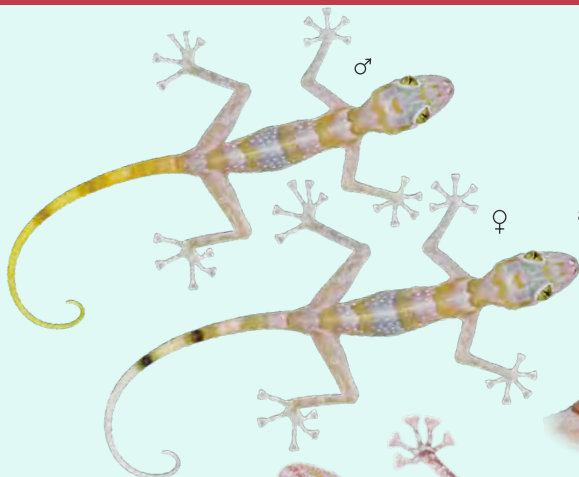


Tail color sexually dimorphic

Tail not coiled

Asaccus gallagheri

Asaccus arnoldi



Asaccus platyrhynchus

Flat-headed Leaf-toed Gecko

A medium-sized gecko with thin and flattened body, small dorsal tubercles and very long, slender limbs. Head with prominent eyes and wide snout. Tail color sexually dimorphic. Restricted to Jebel Akhdar, where it can be locally abundant. A very agile climber, it moves swiftly across rocks and boulders.

SVL: 63 mm

ENDEMIC

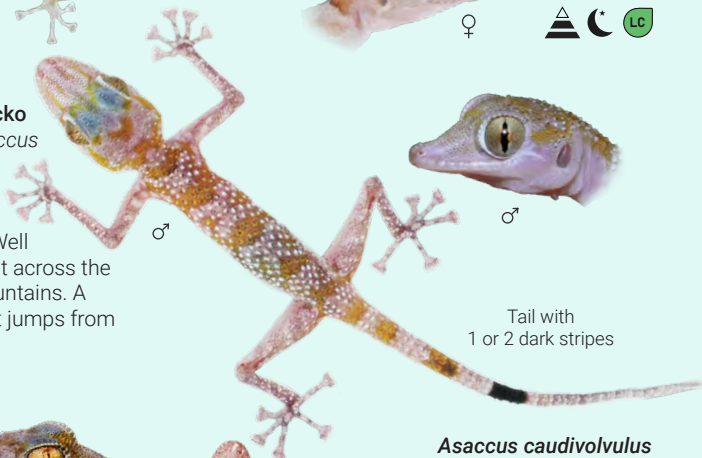


Asaccus gardneri
Gardner's Leaf-toed Gecko

The largest Arabian *Asaccus* species. Thin-flattened body with distinctively long limbs. Juveniles with white barred tails. Well distributed and abundant across the northernmost Hajar Mountains. A very agile rock climber, it jumps from rock to rock with ease.

SVL: 71 mm

ENDEMIC



Tail with 1 or 2 dark stripes

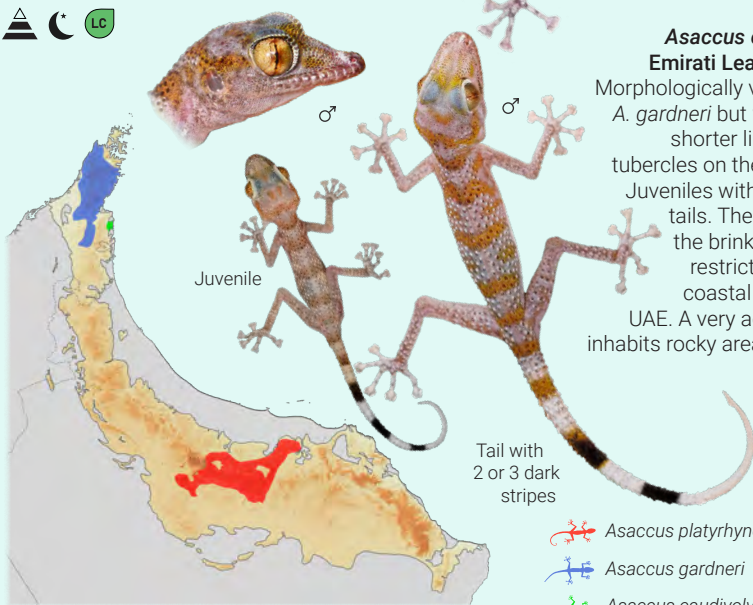
Asaccus caudivolvulus

Emirati Leaf-toed Gecko

Morphologically very similar to *A. gardneri* but with relatively shorter limbs and with tubercles on the upper arms. Juveniles with white barred tails. The species is on the brink of extinction, restricted to a single coastal locality in the UAE. A very agile climber, it inhabits rocky areas by the sea.

SVL: 63 mm

ENDEMIC



Tail with 2 or 3 dark stripes

Asaccus platyrhynchus

Asaccus gardneri

Asaccus caudivolvulus

Asaccus margaritae
Margarita's Leaf-toed Gecko

A medium-sized gecko with flattened body and relatively short limbs. Juveniles have orange-coppery tails. Only known from a few localities in the Western Hajar and the Musandam Peninsula. An agile climber, it inhabits rocky areas with boulders.

SVL: 59 mm

ENDEMIC



Asaccus montanus
Mountain Leaf-toed Gecko

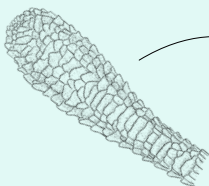
Small gecko, very well differentiated by its flattened body and heavy tuberculation. Restricted to Jebel Akhdar, where it lives on limestone rocky areas above 1,700 m. Genetic analyses suggest that there are two different species.

SVL: 40 mm

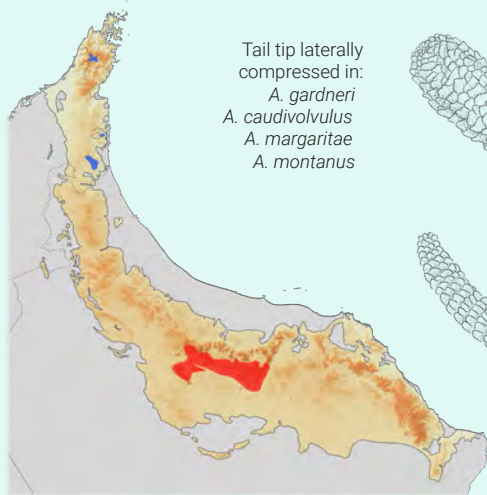
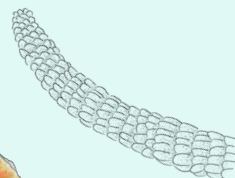
ENDEMIC



Tail tip laterally compressed in:
A. gardneri
A. caudivolvulus
A. margaritae
A. montanus



Tail tip uncompressed in:
A. gallagheri
A. arnoldi
A. platyrhynchus



Asaccus margaritae

Asaccus montanus

Ptyodactylus orlovi
Orlov's Fan-footed Gecko

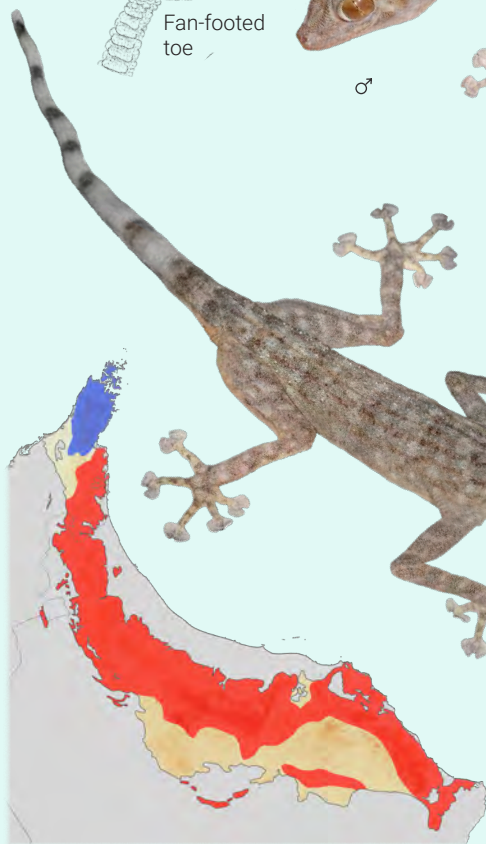
A very large gecko with slender body, very long legs and robust head with large eyes. Brownish-grey body with undefined dark markings, dark-barred tail and several rows of small tubercles on the back. Very abundant and widely distributed across the Hajars up to the Dibba region. Extremely agile, it climbs with ease on large cliffs and boulders, where it preys mainly on moths and other nocturnal flying insects.

SVL: 89 mm

ENDEMIC



Fan-footed toe

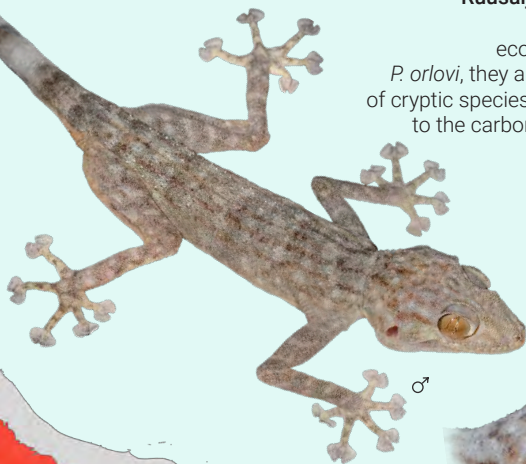




Ptyodactylus ruusaljibalicus
Ruusaljibal Fan-footed Gecko

Morphologically and ecologically very similar to *P. orlovi*, they are a very good example of cryptic species. Distribution restricted to the carbonated mountains of the Musandam Peninsula.

SVL: 90 mm

ENDEMIC



-  *Ptyodactylus ruusaljibalicus*
-  *Ptyodactylus orlovi*

Pristurus rupestris
Rock Semaphore Gecko

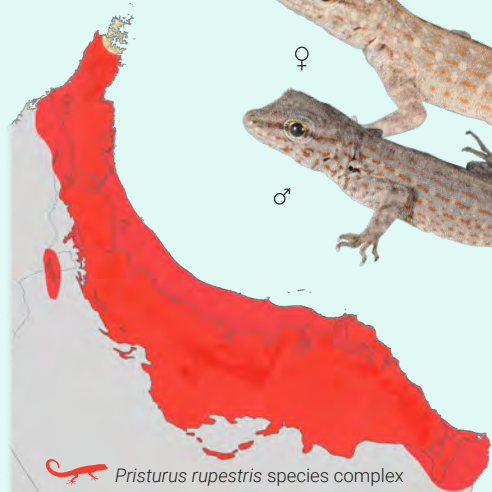
It is the smallest and most abundant gecko in the Hajar Mountains. Easily identifiable by its relatively robust head and body, brownish coloration and reddish markings on the back and flanks. Like all the other *Pristurus*, it feeds mainly on ants and other small invertebrates. Widely distributed across the Hajar Mountains and surrounding lowland areas, it moves with agility between rocks, exposing itself and signalling very actively by curling and moving the tail. Very common and often encountered on man-made structures.

SVL: 30 mm

ENDEMIC



Pronounced dorsal tail crest in males



Pristurus rupestris
robust morphotype



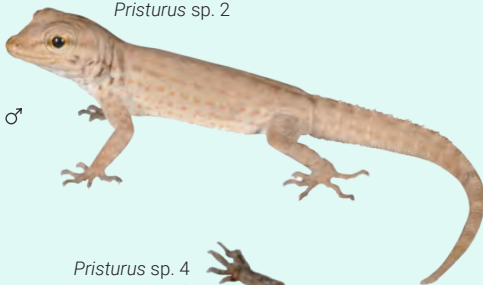
Pristurus rupestris
slender morphotype



Pristurus sp. 3



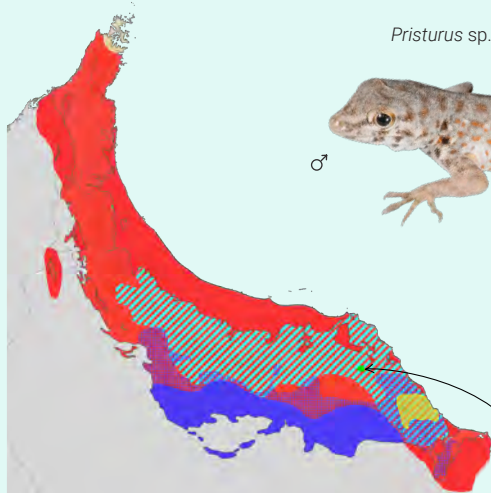
Pristurus sp. 2



Pristurus sp. 4



Pristurus sp. 5



-  *Pristurus rupestris*
-  *Pristurus* sp. 2
-  *Pristurus* sp. 3
-  *Pristurus* sp. 4
-  *Pristurus* sp. 5

Undescribed diversity in *Pristurus rupestris*
Recent genetic analyses indicate that *P. rupestris* is a species complex that started diversifying 15 million years ago, producing at least four new undescribed species that are morphologically very similar. Although two different morphotypes (robust and slender) have been identified, these are not related to the speciation process and reflect environmental adaptation, with the populations living at high altitude being robust and the lowland populations being slender. One of the putative new species (*Pristurus* sp. 4) is the reptile with the smallest distribution range in Arabia and, as a result of that, it is of high conservation concern.

Pristurus celerrimus

Bar-tailed Semaphore Gecko

Small gecko with distinctly depressed head and body, slender limbs and very long, laterally compressed dark barred tail. Individuals signal by raising the body with the hind parts higher, and raising and lowering the tail held straight several times. A rock-dwelling species abundant throughout most of its range.

SVL: 40 mm

ENDEMIC



Dark mark underneath in males



♂

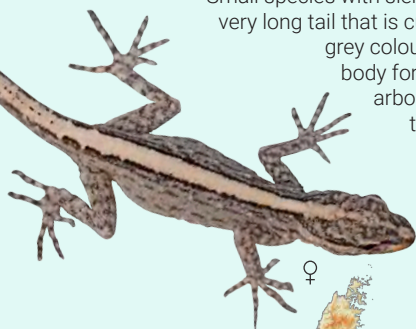
Pristurus gallagheri

Gallagher's Semaphore Gecko

Small species with slender limbs, long fingers and a very long tail that is curled up for signalling. Dorsal grey colour with markings on head and body for camouflage on tree bark. An arboreal species, it is restricted to the wooded wadis and hills of Jebel Akhdar.

SVL: 40 mm

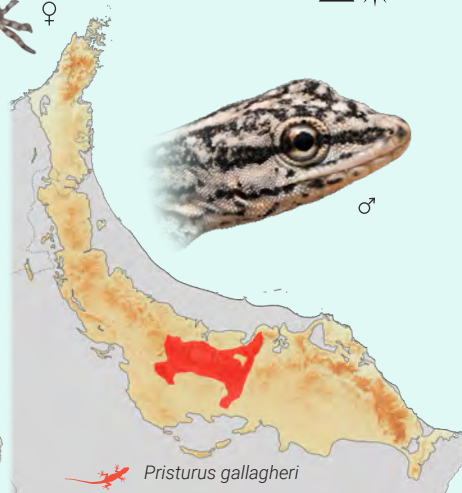
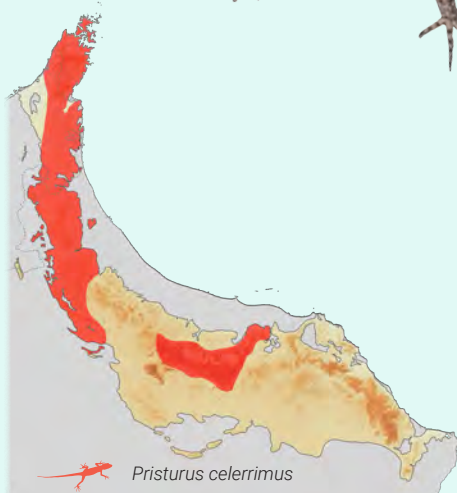
ENDEMIC



♀



♂

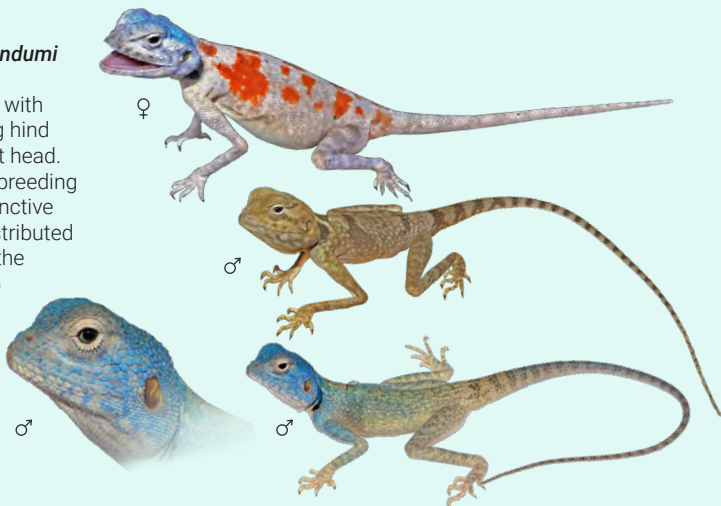


Pseudotrapelus jensvindumi
Hajar Rock Agama

A medium-sized lizard with slender body, very long hind limbs and large, robust head. Males and females in breeding season have very distinctive colorations. Widely distributed and abundant across the Hajars. They sit on top of rocks and escape at high speed if disturbed.

SVL: 92 mm

ENDEMIC



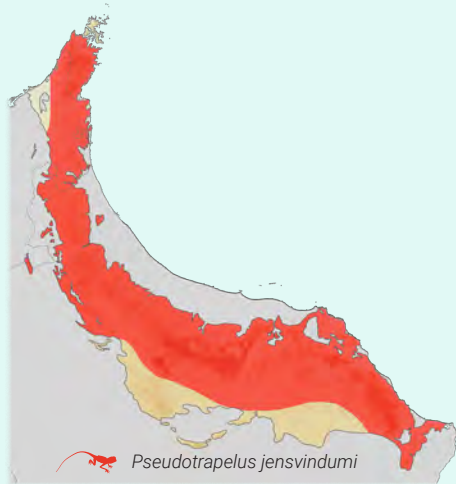
Uromastix aegyptia leptieni
Leptien's Spiny-tailed Lizard

Inoffensive and vegetarian, it is the largest lizard of the Hajar Mountains. Very heavy and robust, with large head, strong limbs and long nails. Absent from Musandam and most of the Eastern Hajars, it sits high on rocks and retreats quickly to its burrow if disturbed, blocking the entrance with its spiny tail.

SVL: 375 mm



Spiny tail

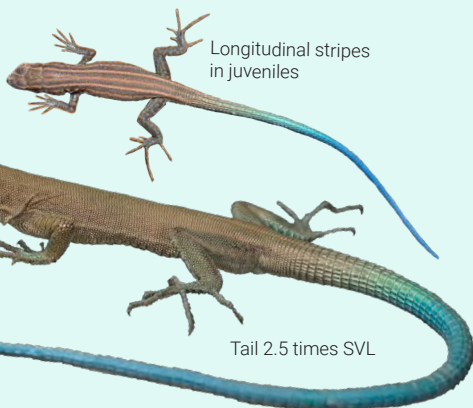


Omanosaura cyanura
Hajar Blue-tailed Lizard

A medium-sized slender lizard with flattened head and body and distinctively long, electric-blue tail. Distributed across the Hajars, preferably in rocky wadis with water, where it climbs with ease on large rocks. Not very abundant.

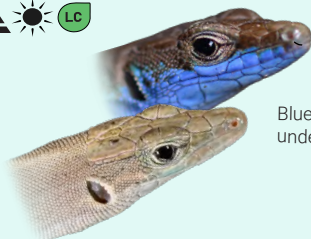
SVL: 60 mm

ENDEMIC



Longitudinal stripes in juveniles

Tail 2.5 times SVL



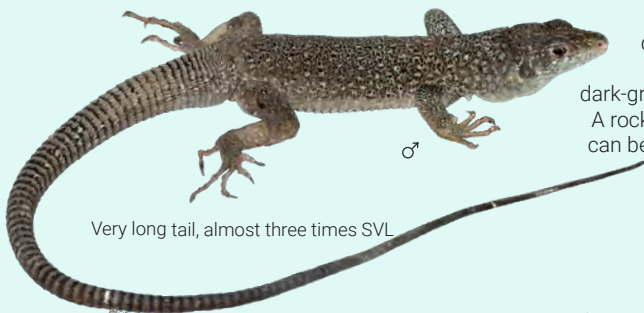
Blue coloration sometimes present underside adult's head and body

Omanosaura jayakari
Jayakar's Lizard

A large, robust lizard, with a long uniformly colored tail, which darkens towards the tip. Body coloration usually uniform dark-grey, covered with bluish spots. A rock-dweller, it is widespread and can be fairly common in wadis with vegetation and water.

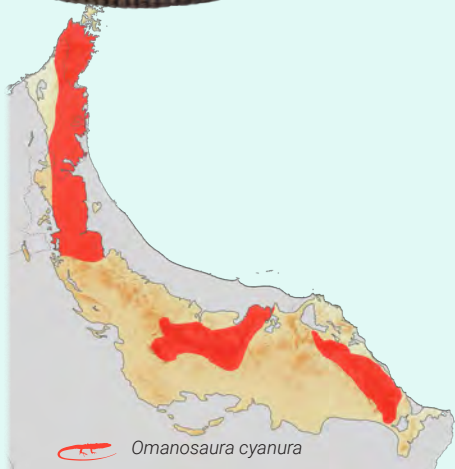
SVL: 200 mm

ENDEMIC

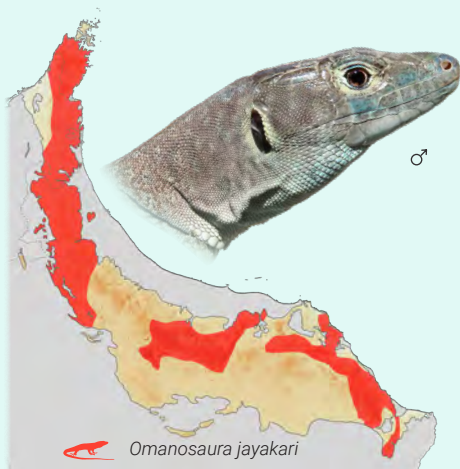


♂

Very long tail, almost three times SVL



Omanosaura cyanura



Omanosaura jayakari



♂

Acanthodactylus boskianus
Bosc's Fringe-toed Lizard

A medium-sized, robust lizard. Body with strongly keeled dorsal scales and usually several dark longitudinal stripes. Widely distributed across North Africa and Arabia, in the Hajars this ground-dwelling lizard is mainly found in wadis and on gravel plains.

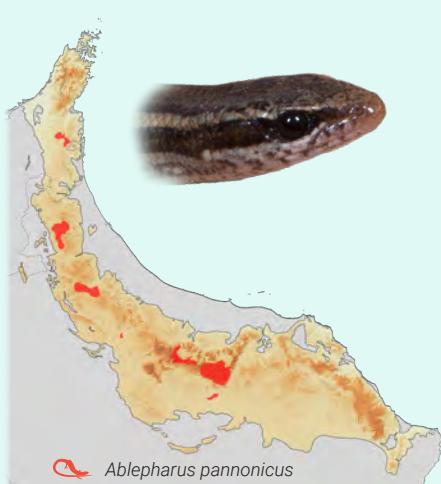
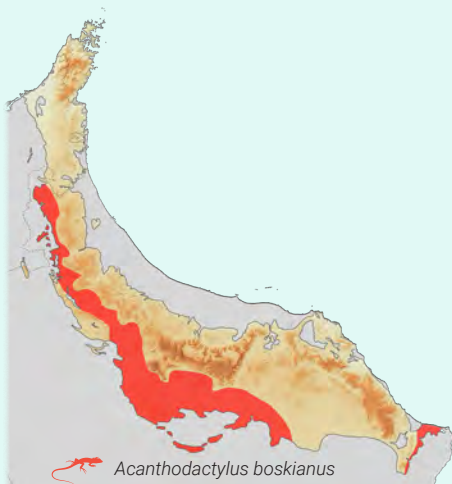
SVL: 95 mm



Ablepharus pannonicus
Asian Snake-eyed Skink

Small, elongated skink with long, thick tail, reduced limbs, and fused transparent eyelids. Widespread outside the Hajars, in the mountains it lives in leaf litter and is very secretive. When disturbed it presses the limbs against the body and uses serpentine locomotion.

SVL: 55 mm

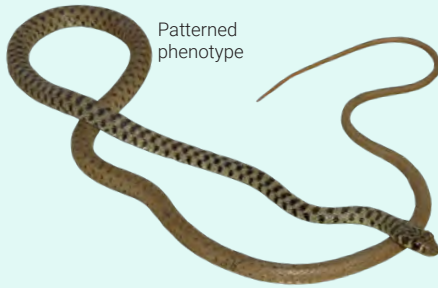
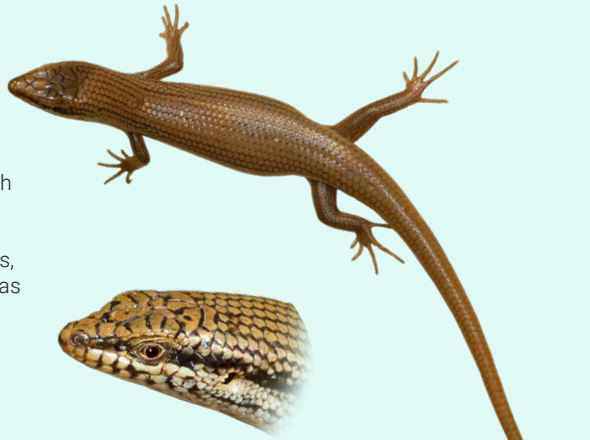


Trachylepis tessellata

Tessellated Skink

A medium-sized robust skink with uniform greyish-bronze coloration, dark edged dorsal scales, and a dark streak from the nostril, through the eye up to above the front legs. Endemic to southern Arabia, it is widely distributed across the Hajars, preferring well-vegetated rocky areas in wadis with water.

SVL: 100 mm



Patterned phenotype

Platyceps rhodorachis

Wadi Racer

A harmless, slender and very fast snake with long tail. Uniformly colored or with transverse dark bands that disappear towards the tail. Widely distributed in and outside Arabia, In the Hajars it is abundant across the whole massif, especially in wadis with water and cultivated areas.

It preys mainly on fish and amphibians but may predate on other animals.

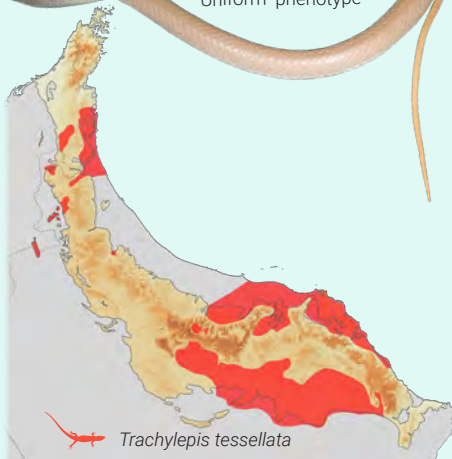
SVL: 130 cm



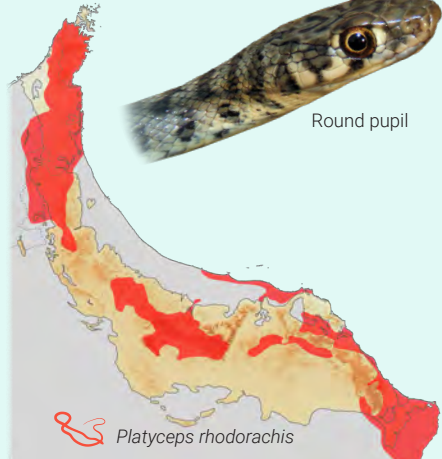
Uniform phenotype



Round pupil



Trachylepis tessellata



Platyceps rhodorachis

Telescopus dhara
Arabian Cat Snake

A large, robust snake when adult, identified by having large scales on the head and eyes with vertical pupils. Individuals uniformly orange-yellow or with a series of clear cream-yellow blotches and bars over a darker body. Despite having rear venom fangs (opisthoglyphous) it is harmless to humans. Distributed across Arabia, in the Hajars it is not common and inhabits rocky wadis where it preys mainly on geckos.

SVL: 120 cm



Vertical pupils

Psammophis schokari
Schokari Sand Racer

A long, agile, tree climbing snake with well-defined head and large eyes. Easily identifiable by being the only snake in the Hajars with longitudinal stripes. Despite having rear venom fangs (opisthoglyphous) it is harmless to humans. Widely distributed outside Arabia, in the Hajars it is common in well-vegetated areas with trees. It preys mainly on lizards but feeds also on mammals and birds

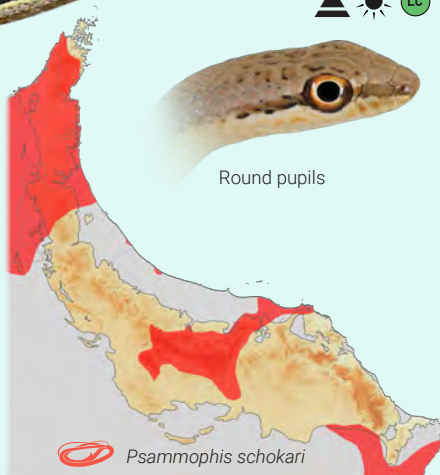
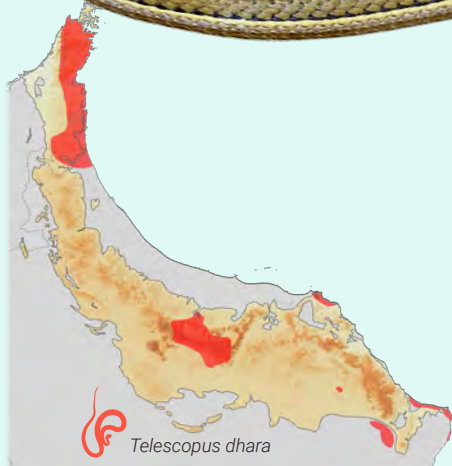
SVL: 140 cm



Longitudinal stripes



Round pupils



Echis omanensis

Hajar Saw-scaled Viper

A large viper with a narrow neck and wide, robust head. Usually dark brown or grey body with whitish dorsal spots connected by a zig-zag of darker scales. It is common in rocky areas of mountain wadis with permanent water, where it preys on toads, geckos, rodents and invertebrates. Despite being nocturnal, it can be found basking in the early morning. It has two large, movable fangs (solenoglyphous) that are used to inoculate a mainly hemotoxic venom.

SVL: 75 cm

ENDEMIC



Head with small scales.
Vertical pupils



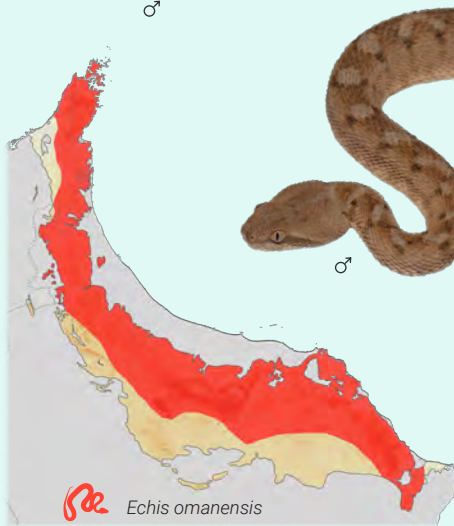
♂



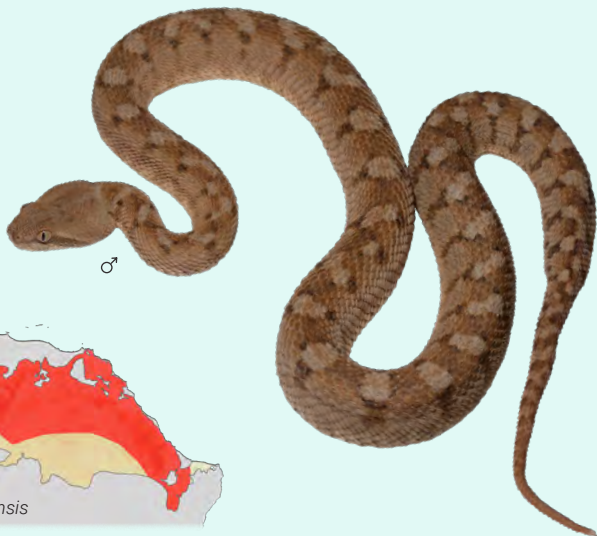
Red tongue

♂

3 or 4 scales
between the subocular
and the supralabial scales



Echis omanensis

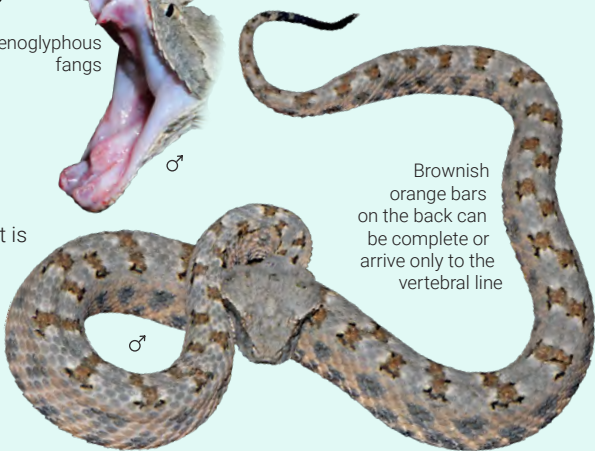
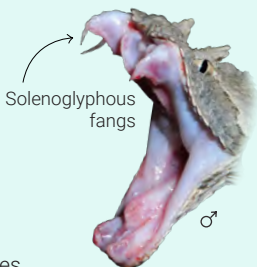


♂

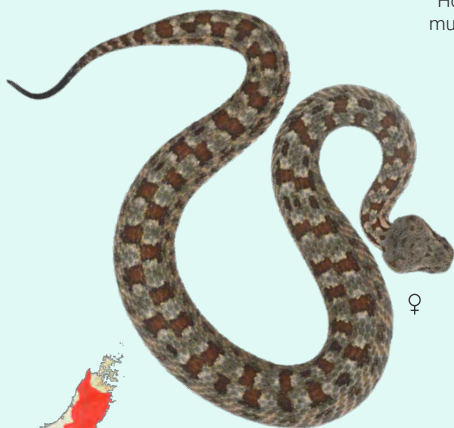
Pseudocerastes persicus
Persian Horned Viper

A medium-sized viper, identified by having two prominent horns formed by multiple scales, narrow neck and wide head, black tongue, and small eyes with vertical pupils. Variable coloration, with a series of bars on the back. In Arabia, this species is only present in the Hajars, where it is very secretive and prefers dry rocky areas with sparse vegetation. It can be found basking in the early morning or active at night. It has a myotoxic and hemotoxic venom and preys on small mammals, reptiles and birds.

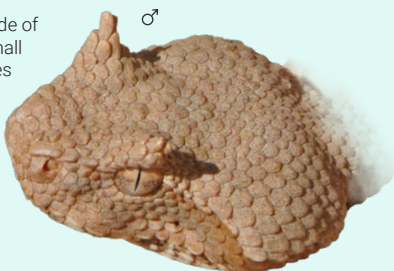
SVL: 66 cm



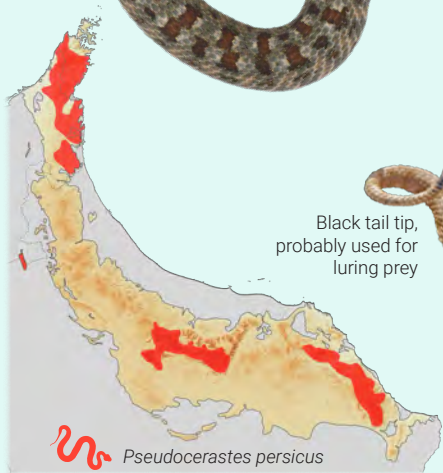
Brownish orange bars on the back can be complete or arrive only to the vertebral line



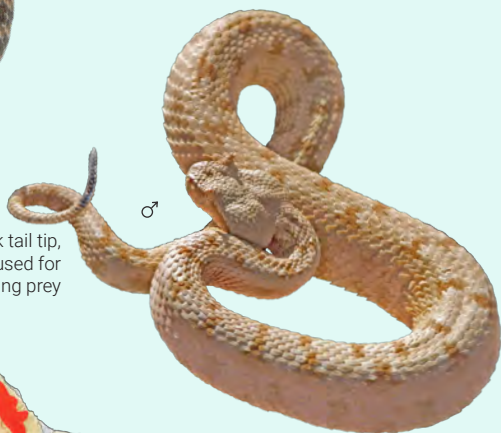
Horns made of multiple small scales



Vertical pupils



Black tail tip, probably used for luring prey



Duttaphrynus dhufarensis
Dhofar Toad

A medium-sized toad, characterized by having a large tympanum situated very near the eye, skin with small warts with a single keratinized spine, and protruding snout. Variable uniform coloration, sometimes with dark brown or green spots. Endemic to southern Arabia, it is very well adapted to arid conditions. In the Hajars, it is typically found in dry wadis and gravelly plains. It feeds mainly on insects and other invertebrates. Breeding males produce a steady, rapid call "kra-kra-kra-kra....".

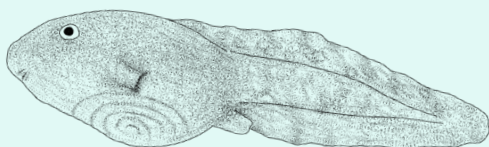
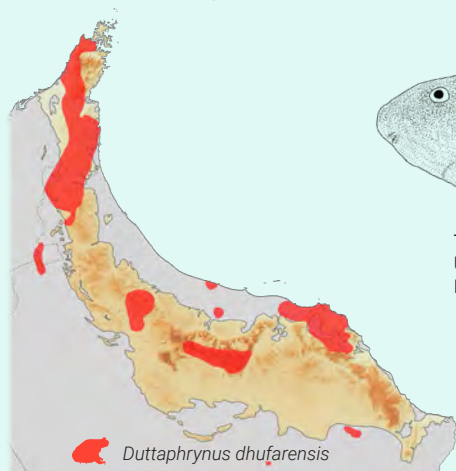
SVL: 65 mm



♀



♂



Tadpole:
Upper caudal membrane continues into the body.
Body length up to 45 mm

Sclerophrys arabica

Arabian Toad

A medium-sized toad, characterized by having a rather small tympanum situated away from the eye, with distinct parotid glands, and many large warts with several keratinized spines. Variable coloration, usually with contrasting green or dark brown spots and a yellow vertebral stripe. An Arabian endemic, in the Hajars it occurs day and night in wadis with water and in cultivated areas, where it can be very abundant. It feeds mainly on insects and other invertebrates. Breeding males produce a prolonged call "kraaaaaa...".

SVL: 78 mm



♀



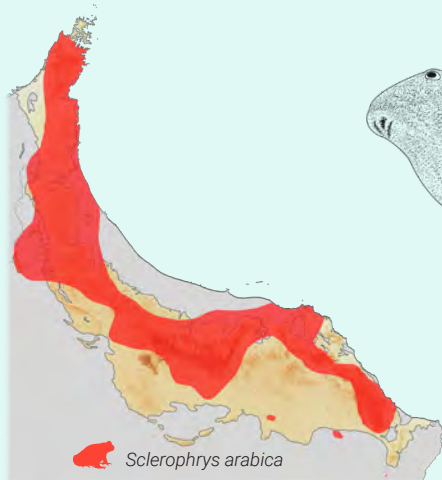
Yellow vertebral stripe



♀



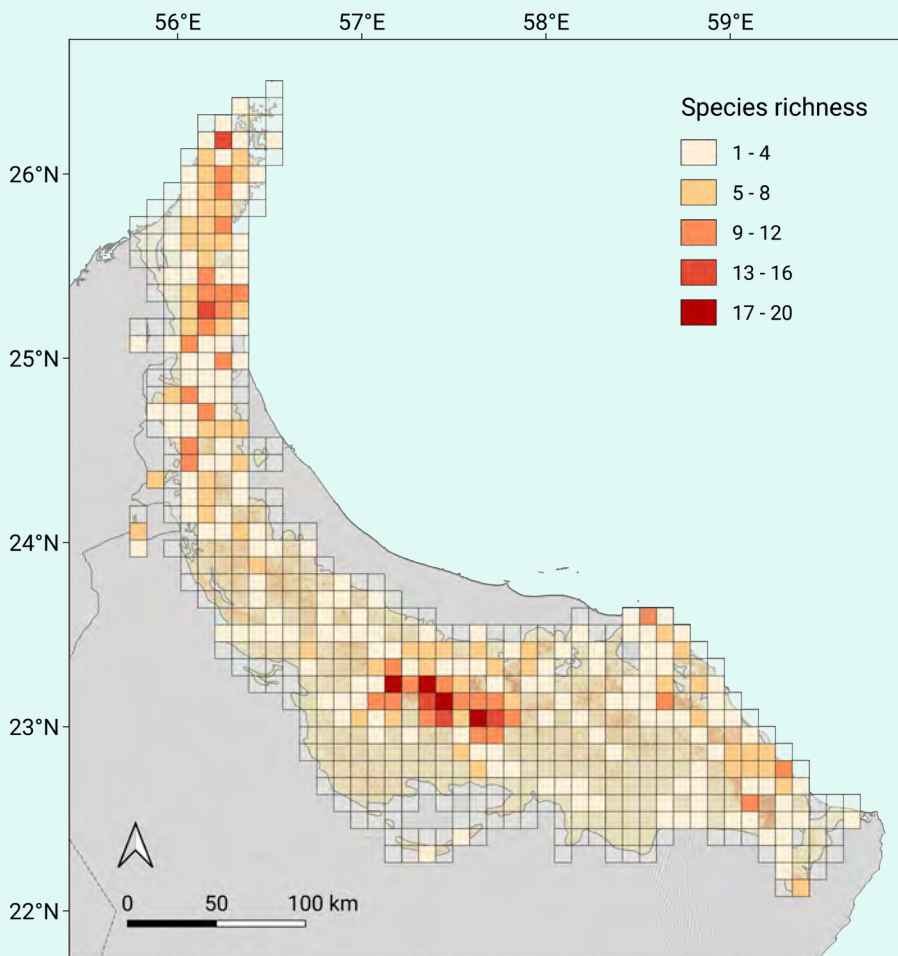
♀



Tadpole:

Upper caudal membrane ends at the base of the tail.
Body length up to 50 mm

Species richness map of the Hajar Mountain's reptiles and amphibians



Map inferred using 2,786 point records of all 30 species intersected with a 10 km² square-celled grid. The highest species richness is in the Jebel Akhdar massif, with up to 20 species in a single grid cell. The Western Hajars also contain some grids with high levels of species richness, while the gaps between mountain blocks are the regions with the lowest levels of reptile and amphibian diversity.



Hemidactylus hajarensis
page 2



Hemidactylus luqueorum
page 2



Hemidactylus robustus
page 3



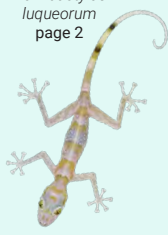
Trachydactylus hajarensis
page 3



Asaccus gallagheri
page 4



Asaccus arnoldi
page 4



Asaccus platyrhynchus
page 5



Asaccus gardneri
page 5



Asaccus caudivolvulus
page 5



Asaccus margaritae
page 6



Asaccus montanus
page 6



Ptyodactylus orlovi
page 7



Ptyodactylus ruusaljibalicus
page 7



Pristurus rupestris
page 8-9



Pristurus celerrimus
page 10



Pristurus gallagheri
page 10



Pseudotrapelus jensvindumi
page 11



Uromastyx aegyptia lepteni
page 11



Omanosaura cyanura
page 12



Omanosaura jayakari
page 12



Acanthodactylus boskianus
page 13



Ablepharus pannonicus
page 13



Trachylepis tessellata
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Platyceps rhodorachis
page 14



Teleoscopus dhara
page 15



Psammophis schokari
page 15



Echis omanensis
page 16



Pseudocerastes persicus
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Duttaphrynus dhufarensis
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Sclerophrys arabica
page 19

Reptiles & Amphibians of the Hajar Mountains

This pocket guide covers all 30 species of reptiles and amphibians occurring in the Hajar Mountains of Oman and the UAE. The guide includes **102 detailed illustrations, distribution maps** generated from 2,786 records, and a short **description** of each species to facilitate the identification of these unique and sometimes secretive animals. Despite being one of the mountains in Arabia with the highest level of reptile diversity and especially endemism, several species have extremely restricted distribution ranges and are therefore particularly vulnerable to environmental and climatic change. The aim of this guide is to reveal the unique reptile fauna of the Hajar Mountains and to help people learn about these incredible, yet poorly known animals. We cannot forget that some of these species have been living in this massif for millions of years and that it is within our means to ensure that they continue to be part of this unique mountain ecosystem.



30 Species of reptiles & amphibians

Scientific research has been funded by grants CGL2015-70390-P and PGC2018-098290-B-I00 funded by MCIN/AEI /10.13039/501100011033/ and by FEDER, a way to make Europe, and by project 22412027 from the Ministry of Environment and Climate Affairs, Oman to S. Carranza. B. Burriel-Carranza is supported by an FPU grant (FPU18/04742) (MCIU, Spain).

