

Über die Rassen des Wüstenwaranens, *Varanus griseus*. Senck. Biol. 36 5/6:353-357, 1954

The races of *Varanus griseus*.

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Translated by Naomi Cowgill and Daniel Bennett.

Although *Varanus griseus* is widely dispersed through north Africa, and South west Asia, no geographical races have been described, due to insufficient material (see MEERTENS 1942:338-347. Nevertheless, possible differences in colouring, tail form and relative tail length had been noted. Several specimens from different localities were recently examined, making it possible to differentiate three varieties; a north African-Arabian, a trans-Caspian, Iranian and a west Pakistan-Indian.

Of the characteristics mentioned above, the length of the tail is of the greatest importance, because this depends not only on age, but also apparently on sex. It is noticeable that the west Pakistan-Indian variety have a shorter tail than those from north Africa; four of the former have tails 1.18 - 1.27 the length of head and body, whilst those from Africa are 1.31 - 1.46. Possibly those from trans-Caspia and Iran have even longer tails, 3 have values of 1.23, 1.58 and 1.67.

Particularly noteworthy is the tail formation. *V. griseus* generally has a tail that is rounded in cross section. In fact this is mostly the case with north African specimens. Eichwald (1841:49) pointed out that caspius has a laterally compressed tail. I found this characteristic mentioned even earlier with an animal from Jasgly-Olun (southeastern coastal area of the Caspian Sea and now find it anew in the case of 2 specimens from Ispakeh and Iranshar (Iran) from W Richter's expedition and presented to me by the state Museum for Natural history in Stuttgart. It is noteworthy that VOHGEL (1954:35) draws attention to the longitudinally compressed tail, as being characteristic of the Russian-Asian form. He maintains that they have the tail squashed together sideways, from approx the first sixth to to the last third, with the end of the tail rounded. Even if the shape of the tails of monitors depends on nourishment, and therefore also on the season, I have always found the tails of animals possess tails which are rounded in cross section, even in the distal half, compared to those from trans-Caspia and Iran. Whereas those from north Africa have tail scales which show no peculiarities, those from Russia and Iran have two at least minimally-enlarged rows of scales in the distal part. Animals from Pakistan do not show this characteristic, their tail formation is somewhere between the other two, with a compressed tail not as extreme as those from Iran/Caspia. In the case of the north India variety, CARLLEYLE (1869: 194) even goes as far as to indicate a completely rounded tail.

Most striking, however, are the differences in colour on the tail and back, as I have already emphasised in my work. The north African variety are distinguished by the greater number of crossbands, the Pakistan Indian by the least. The species distributed from north Africa to Mesopotamia and Arabia have 5-8, usually 6 fairly narrow grey crossbands (not including the prominent neck band, in front of which there is a smaller, weaker band). These bands lose their clarity with the age of the animal and

bright spots appear. The tail of younger animals is distinctly cross banded with numerous markings (19-28) and mostly stretch to the tip of the tail. The Caspian/Iranian variety has about the same number of dorsal bands: 5-8, mainly 6. They are narrow, but a strikingly dark sepia colour, as a consequence contrast sharply with the bright green colouring. Only the proximal two thirds of the tail are banded, and the tail end, according to my conclusions, is often bright yellow. Animals from west Pakistan and India are distinguished by less numerous but broader bands, my 4 animals from Pakistan (Hab River, Korangee and Phar, all around Karachi) have only 4 dorsal bands of a grey colour, whereas in one animal the 4th band is irregular, so that on the left a 5th band appears. In some areas animals with only 3 bands appear. The number of tail bands is also minimal. in general there are 7-12 (in my Karachi animals only 7-11) but can be more. The tail tip is unmarked.

As a result, 3 forms of *Varanus griseus* deserve scientific names. they are as follows;

VARANUS (PSAMMOSAURUS) GRISEUS GRISEUS (DAUDIN).

Table 33, Fig 1.

1803 *Tupinambis griseus* Daudin Hist.. nat. Rept. 8:352. (Terra typica: Egypt).
Synonyms; *Varanus scinus* MERREM 1820. *Tupinambis arenarius* J. Geoffroy 1827;
Varanus terrestris SCHINZ 1834; *Varanus arenarius* GERVAIS 1848; *Psamosaurus arabicus* HEMPRICH & EHRENBURG 1899.

Tail round in cross section. also in distal half. Back with 5-8, usually 6 narrow grey crossbands which fade in older animals and is replaced with bright spotted markings, and 1 or 2 neck bands. Tail with 19-28 dark crossbands which reach almost to the tail tip.

DISTRIBUTION.

North Africa, west Asia from Syria and Israel as far as and including Arabia.

VARANUS (PSAMMOSAURUS) GRISEUS CASPIUS EICHWALD.

1831 *Psamosaurus caspius* Eichwald Zool. spec. 3:190 (Teraa typica Dardsha Peninsula, east coast of Caspian Sea. Synonym *Varanus caspicus* Grey 1845.

Diagnosis.

Distal half of the tail narrow in cross section, tightly compressed forming a distinct keel at the top; the back, except for the diagonal neck bands, is covered with 5-8 (mostly 6) narrow sepia coloured bands, tail with 13-19 dark diagonal bands, tail tip is unmarked.

Distribution.

From the east coast of the Caspian sea across the southern regions of Khazakstan to the central Asian republics as far as Iran, or possibly west Baluchistan and Afghanistan.

VARANUS (PSAMMOSAURUS) GRISEUS KONIECZNYI. N.Subsp. Table 33, fig 2.

Diagnosis.

Distal half of tail weakly compressed, forming a distinctive keel at the top. On its back (not including neck bands) 3-5 (mostly 4) broad grey bands, tail with 8-15 dark crossbands, tail tip unmarked.

Description of Type.

Body form very similar to nominate race, head is distinctly broad and flat however, its width is contained only 1.57 times and its height 2.25 times in the length. Temporal region is scarcely distended; nostrils - a large slanting fissure. lying directly in front of the eyes, ear holes fairly small, forming a vertically upright opening. The middle of the tail is only weakly compressed, showing a weak stubby keel at the top. Scales as in *griseus*, 58 across the back of the head from one corner of the mouth to the other, interparietals not noticeable, 136 scales around the body, 118 scales from the gular fold to the insertion of the hind legs. Preanal pores not noticeable, only at the end of the tail are the bands irregular, otherwise they form a regular pattern. Basic colour is sand yellow. Parietal region with a large grey spot, likewise also the lip region with some grey transverse bars, temporal region with two stripes (supraorbital and supraocular stripes), which blend into a broad lateral neckband behind the ear opening, which in the rear nuchal area meets its partner from the other side. On the back between the fore and hind legs are 4 transverse bands which fork and divide on the flanks, every diagonal band is bordered both front and back by a transverse row of bright, round, darkly lined scales, upperside of the proximal two thirds of the tail is marked with 7 bands, which however are narrower than the brighter ones between them. The distal third is completely yellow white, the stomach is yellow without markings, only the underside of the head is marked laterally with some long grey stripes.

Measurements.

Head and body 315mm, tail 400mm, ratio of head and body vs tail 1.27. Body length 59.1mm, width of head 37.7mm, height of head 26.2mm, front leg 72mm, rear leg 93mm.

Variations.

This variety seems to be constant at least in the Karachi region. Remarks on the remaining varieties will appear in my work on the amphibians and reptiles of west Pakistan, which is in preparation.

Taxonomy and Nomenclature.

It is possible that the animal described here as new is identical with *Varanus ornatus* CARLLEYLE 1869;192). The terra typica of *V.ornatus* is Sikandra, near Agra, India. This spot is however situated so far away from Karachi (about 1200km), that a further race of *V.griseus* can be expected from there. Instead of the absent dorsal transverse bands there is a narrower, blacker middle stripe, and a brightly orange coloured base tone on the back. CARLLEYLE mentions *V.ornatus* twice (as *Tupinambis ornatus*, Daudin 1803 and *Uranus ornatus* GRAY 1845), nevertheless, I have decided to introduce no new name for these animals, but rather to set up a new race which I name after my host in Pakistan; Mr M. G. Koniecznyi. Further material may

determine whether or not ornatus CARLLEYLE is a synonym of koniecznyi or whether it deserves a new name.

Distribution.

Apart from west Pakistan it is possible that V.g.koniecznyi may also appear in northwestern India. Whether or not the desert monitor in Afghanistan belongs to this race or to caspius remains to be seen.

Relationships.

The koniecznyi race may well be bound into the border areas with both the nominate race and caspius. Judging by the tail form, it is a less advanced animal than the nominate race,. The most ancient of the griseus group is caspius without doubt, not only due to its tail which is laterally compressed, but also due to its marked transverse bands (symbolic of youth) which are more primitive than the less distinctive and lighter transverse bands found in the nominate race and koniecznyi which both have a much more exaggerated adaptive colouring than caspius. It appears, therefore, that the actual home of the desert monitor is western Asia, from where it has extended its range to the south (India) and the west (north Africa).