A NEW BUSH VIPER

By

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A new viper of the genus *Atheris* has recently been discovered near Mount Kenya. This form comes from East of the Rift Valley in Kenya where no representatives of this genus have been previously recorded, and differs sufficiently from other forms to merit recognition as a separate species.

The first snake of this kind, a female, was brought to Nairobi Snake Park by a Peace Corps Volunteer, Mr. F. De Saix. Two further females of this species were collected by the author while a number of subsequent specimens have been received from Mr. De Saix. The species is therefore named for him in recognition of this, and for his past co-operation in collecting reptiles for this museum.

HOLOTYPE ♀: National Museum, Nairobi, No. 1626. Collected near Chuka, Lat. 0°20'S. Long 37°.35'E. on the third of July 1967 in rain forest at an altitude of c. 1,600 metres by F. De Saix.

DIAGNOSIS

Atheris desaixi sp. nov.

Nearest to *Atheris chloroechis* (Schlegel) from Western Africa with which it *agrees* in having short heavily keeled scales. The upper margin of the rostral scale is highest at the centre and supports an even number of supra-rostral scales, and the superciliary scales are not enlarged. In both, the nasal scale is circular and entire or semi-divided. It *differs* in its mid-body scale rows being 24–26: in *A. chloroechis* 25–36. Ventral scales are 165–168: *A. chloroechis* 154–165. In *A. desaixi* the sub-caudals are 44–46 (44–53 when the male specimen is included) against 48–57 (48–63 when male included) in *A. chloroechis*. The keels on the upper part of the dorsum end before the end of the scales, while in *A. chloroechis* the keels terminate in the form of swellings at the posterior end of the scales. It is larger in size: of the six specimens of the new viper, three are over 640 mm. in length, whereas the maximum length in the case of *A. chloroechis* is quoted as 615 mm.

DESCRIPTION OF HOLOTYPE ♀: Rostral between twice and three times as broad as deep, the highest point at the centre, and surmounted by four scales, the outer ones being the largest. Eye separated from upper labials by two scales. Eleven scales across

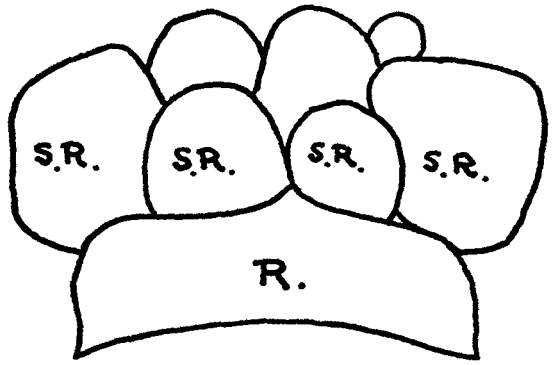


Fig. 1

Rostral arrangement of *Atheris desaixi*, Holotype
R = Rostral
SR = Supra-rostral

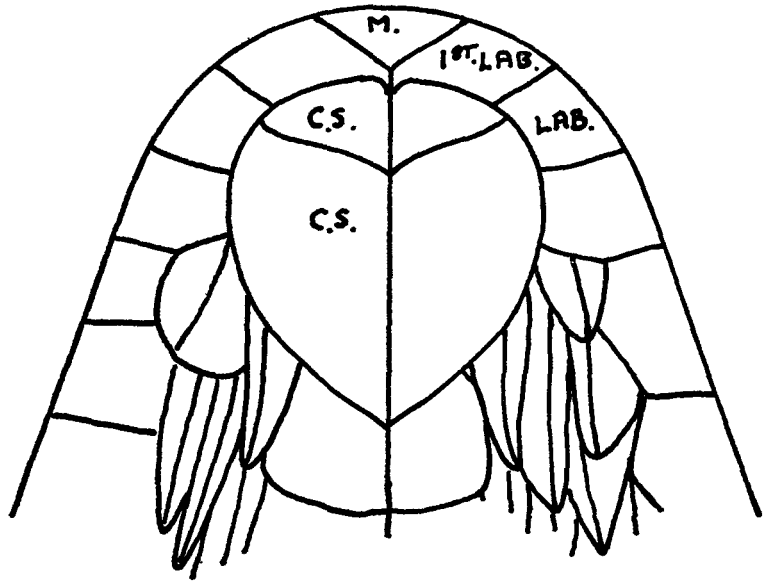


Fig. 2

Underside of Lower jaw of *Atheris desaixi*, Holotype.
Lab = Labial
M = Mental
C.S. = Chin Shield

occiput between eyes and 15 scales around orbit. Nasal circular, large and semi-divided, and pierced by a nostril in the centre. Nasal separated from eye by three scales, resting on first labial and separated from second by one scale. 11 left and 12 right upper labials, the anterior ones smooth and the posterior lightly keeled. All other head scales short and strongly keeled with the exception of those in front of the nasals, around eyes and chin shields which are smooth. Gulars strongly keeled, and in a series of nine from corner of last lower labials to chin shields. One small chin shield followed by a large one which in turn is followed by four small ones. First lower labial in contact with its fellow behind the mental. Dorsal scales strongly keeled, those on dorsum having foreshortened keels not reaching the end of the scale. The keels on the lower dorsal scales are serrated. Mid-body scale rows 24, ventrals 166, sub-caudals single and number 44.

COLOUR IN LIFE: Charcoal black with mustard yellow tip to each scale and festoon-like markings in the same yellow on either side of the dorsum bracketing the dorsal line. This patterning commences in an indistinct manner at the neck, but progresses to a clear pattern posteriorly until the tail, where it is indistinct again. The anterior half of the ventral surface is yellow. Beyond this faint purplish blotches begin to appear, which become progressively pronounced particularly on the rear edges of the ventral scales, until the vent. Tail beneath is a purplish black with the last few scales a blotchy yellow (the general shade of the series varies, but colours and markings are constant, the difference appears to be only in the amount of yellow in each scale).

ALLOTYPE: Male, National Museum, Nairobi, No. 1630, from same locality as holotype. Collected by Mr. F. De Saix on 1st October, 1967. The difference between this and the female holotype is as follows: anterior ventrals have a black posterior edge, the amount of black on these scales progressively increases until about three-quarters along the body where the whole ventral surface is black. This persists to the end of the tail which is a blotchy yellow. Ventrals 165, sub-caudals 53, tail into body length, a fraction over 6 times. In the female series the sub-caudal count is between 44–46, and the ventrals 166–168.

Holotype and Allotype to be deposited at the British Museum. One Paratype to the Museum of Comparative Zoology, Harvard, one Paratype to the Institut Royal des Sciences Naturelles de Belgique, Brussels, while the two remaining Paratypes will be retained at the National Museum, Nairobi.

DISCUSSION

In work on this snake at least one specimen of each of the series currently ascribed to *Atheris* was examined with the exception of *Atheris hispida* Laurent as in the description of this snake few of the characteristics coincide with those of *desaixi;* also no attempt was made to consider the two species recently removed from *Vipera,*

namely *A. hindii* (Boulenger) and *A. superciliaris* (Peters), due to the fact that they are atypical. Also *A. barbouri* (Loveridge) now occupies a new genus, *Adenorhinus* having been removed from *Atheris.*

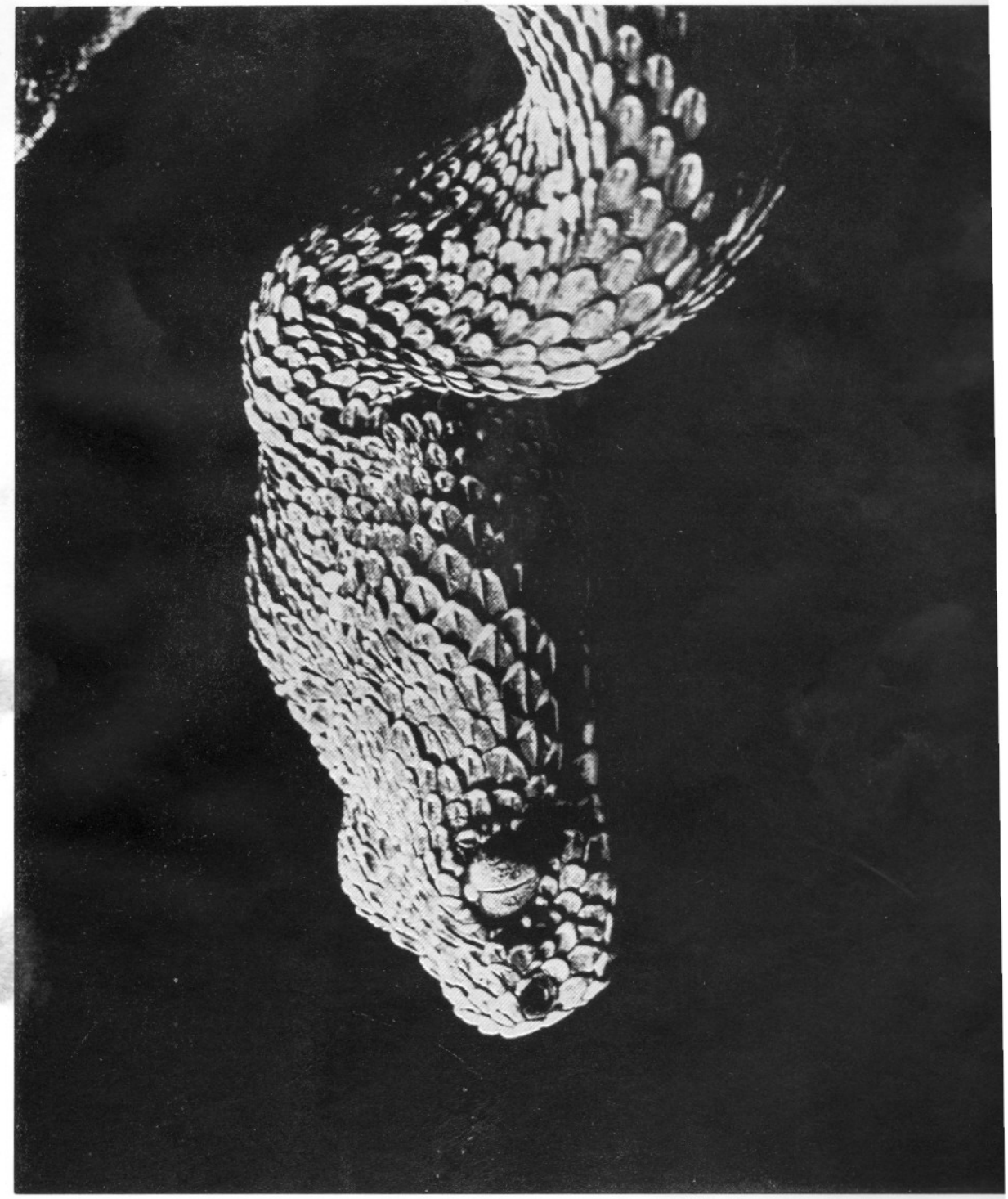
The rostral arrangement appears to divide the genus into two groups; in one a rostral scale with the highest point in the centre and an even number of supra-rostral scales, which is typical of *A. desaixi, A. chloroechis* and *A. ceratophorus* Werner; the other with a depressed centre to the rostral and an odd number of supra-rostrals as in *A. katangensis* Witte, *A. nitschei* Tournier, *A. squamiger* (Hallowell) and *A. hispida.** Further investigation may show justification in creating two-sub-genera based on this as a characteristic. Using this, and general morphology, the author believes that *A. chloroechis* is the closest ally of *A. desaixi.*

HABITAT: The first three specimens collected all came from an area of less than a mile across and at an approximate altitude of 1,600 metres. The first one came from a clearing with liberal undergrowth in rain-forest, and was discovered about 6 feet up a tree which was bare of leaves except at the top. The height of this tree was less than 15 feet. The second one was collected from a bush beside a pathway, and was noticed when creepers were being removed to keep the pathway clear. This one was about 5 feet from the ground. The camouflage of this reptile was perfect in these conditions, as the light green from the bush reflected from the yellow patterning, making the snake almost invisible even when it was entirely unconcealed. The third specimen was taken in less tall forest than the usual rain forest on a slope down to a small river. It was about 7 feet up in the canopy of an umbrella-shaped tree. There was almost no undergrowth, only very damp forest debris. No notes have been received yet of the other specimens collected. Both specimens collected by the author were taken at between 11.30 a.m. and noon.

OBSERVATIONS IN CAPTIVITY: These snakes fed in captivity, taking white laboratory mice. When alarmed they went into a display which resembled that of *Echis carinatus* (Schneider) in that they formed their bodies into loops and countermarched upon themselves, which causes a hissing sound. This was accompanied by rapid strikes towards the aggressor. This routine was indulged in with less enthusiasm than that of *Echis carinatus.* After a short time in captivity *A. desaixi* became quite mild, and would permit themselves to be handled with a hook without becoming unduly upset.

Whether this animal is nocturnal or diurnal is not settled. In captivity they show signs of both, feeding just as readily either by day or night.

* Although no specimens of *A. hispida* were examined, Laurent describes the supra-rostral arrangement as follows ". . . *surmontée de trois écailles dont la médiane est plus petite que les deux autres.*". This implies that this snake belongs to the second group.



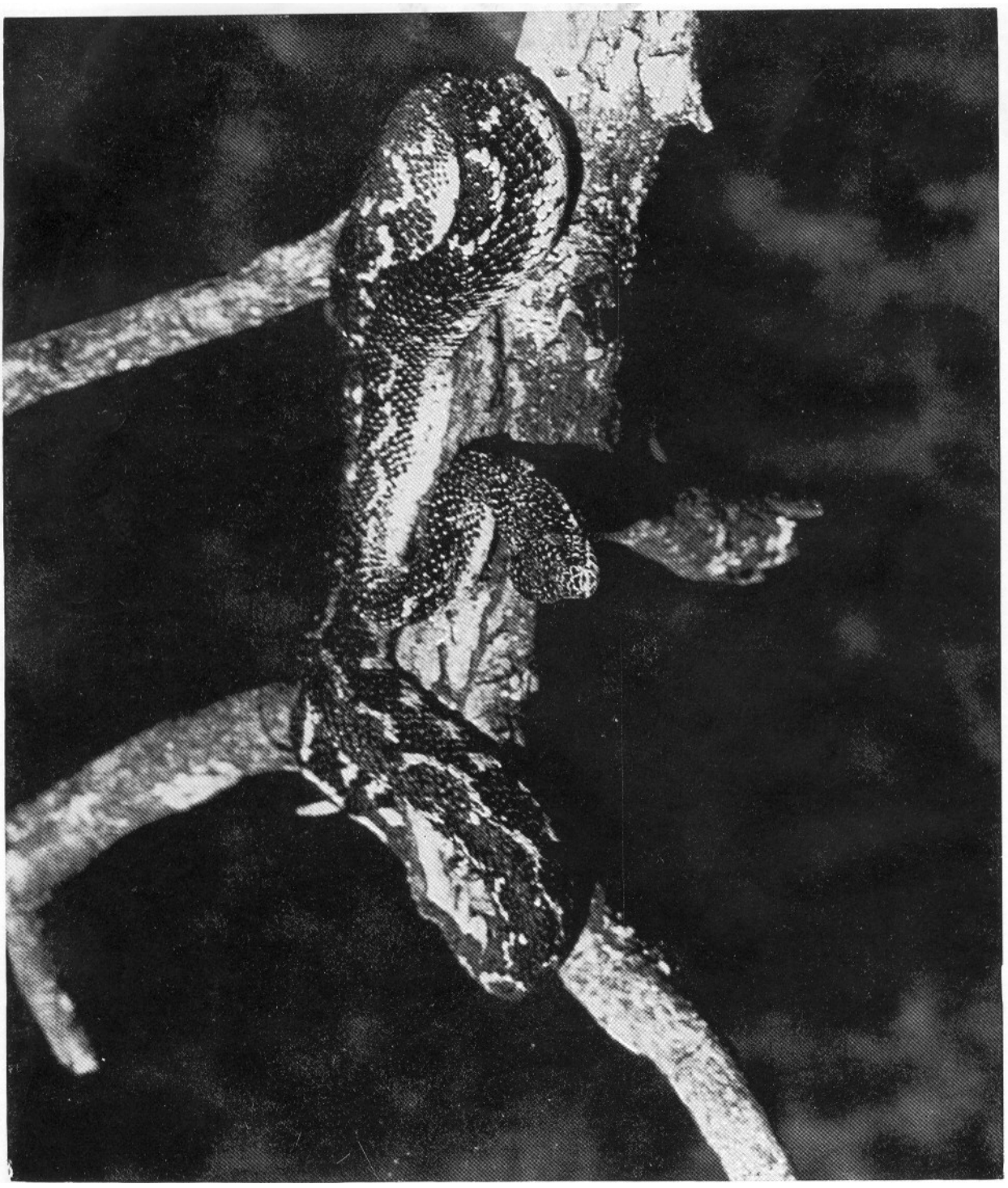


TABLE 1

	Holotype No. 1626 ♀	*Paratype No.* 1627 ♀	*Paratype No.* 1628 ♀	*Paratype No.* 1629 ♀	*Allotype No.* 1630 ♂	*Paratype No.* 1631 ♀	*Range*
Scales	L. R.	L. R.	L. R.	L. R.	L. R.	L. R.	
Upper labials	12–11	12–12	12–11	12–11	10–10	11–11	10–12
Lower labials	11–13	13–14	12–12	13–12	12–13	12–13	11–14
Round eye	15–15	16–17	15–15	14–14	15–15	16–16	14–17
Between eyes	11	8	11	11	11	9	8–11
Mid-body rows	24	26	25	26	24	26	24–26
Ventrals	166	168	168	168	165	168	165–168
Sub-caudals	44	46	46	45	53	46	44–46 (53♂)
Eye to Nasal	3	2	3	2	2	2	2–3
Eye to Labial	2	2	2	2	2	2	2
Measurements							
Total Length	645 mm	645 mm	682 mm	495 mm	555 mm	596 mm	495–682 mm
Length Head and Body	559 mm	556 mm	597 mm	431 mm	465 mm	512 mm	431–597 mm
Tail	86 mm	89 mm	85 mm	64 mm	90 mm	84 mm	64–90 mm
Collected by	F. De Saix	F. De Saix	J. Ashe	F. De Saix	F. De Saix	J. Ashe	
Date	July 3, 1967	Oct., 1967	Sept. 17, 1967	Oct., 1967	Oct., 1967	Sept. 19, 1967	

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