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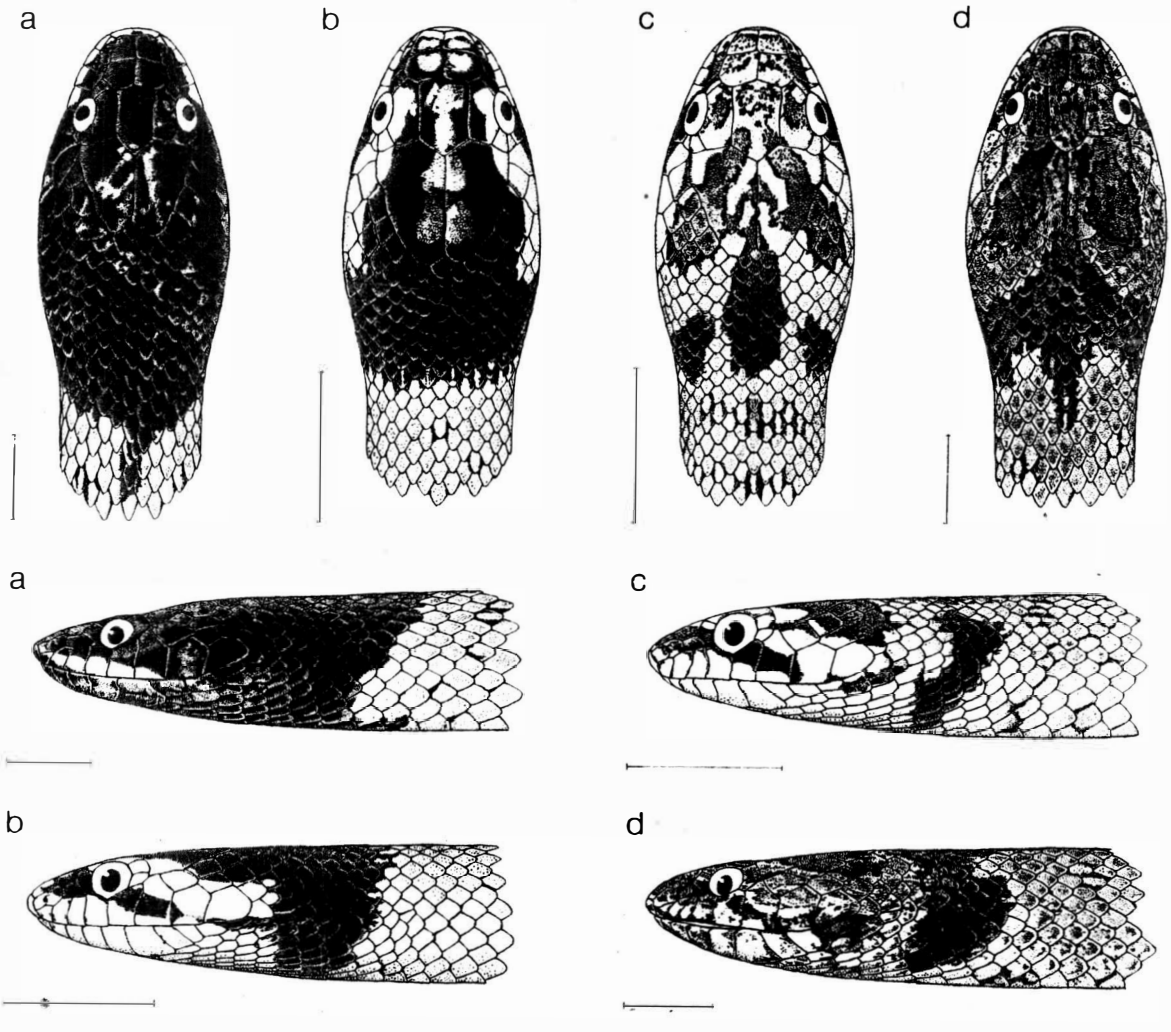

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Coordinator, Chilka Lagoon Expedition for facilities and encouragement. It is a pleasure to acknowledge the services of several fishermen of the Chilka Lake who have accompanied me in the field and also assisted me in collection of the material.

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INTRASPECIFIC VARIATION IN THE COLUBRID SNAKE GENUS *MACROPROTODON*

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ABSTRACT

The current status of the forms of *Macroprotodon* is summarised. Among the characters that were investigated the head patterns showed differences that were surprisingly consistent. The two recognised taxa, *Macroprotodon cucullatus cucullatus* and *Macroprotodon cucullatus brevis,* are reappraised and the existence of a third, *Macroprotodon cucullatus mauritanicus* is confirmed. An attempt has been made to determine the affinities of the isolated populations and a brief resume of the habits together with some personal observations is presented.

INTRODUCTION

The genus *Macroprotodon* consists of a single species with two currently recognised races. The high degree of intraspecific variability has long been recognised. The two races have been distinguished from each other on what would appear to be little more than differences in number of midbody scale rows.

The situation may be summarised as follows: *M. c. cucullatus* Geoffroy possesses normally 19 scale rows at midbody, 20 and 21 rows being occasionally met with in individuals from Algeria and Tunisia. The range extends from S. Palestine to Eastern Morocco including Lampedusa and the Balearics with relict populations in Rio de Oro and the Hoggar (Bons, 1967). Kramer and Schnurrenberger (1963) noted 'within the nominate race' and increase from East to West in the number of ventrals.

The other race *M. c. brevis* Günther is characterised by higher midbody scale counts of from 21-25 in Morocco and 21 and 23 in Iberia (Bons *op. cit.*). Recently however Almeida and Almeida (1986) remarked on two individuals from North Portugal (well to the north of the known range) as both possessing only 19 midbody scale rows.

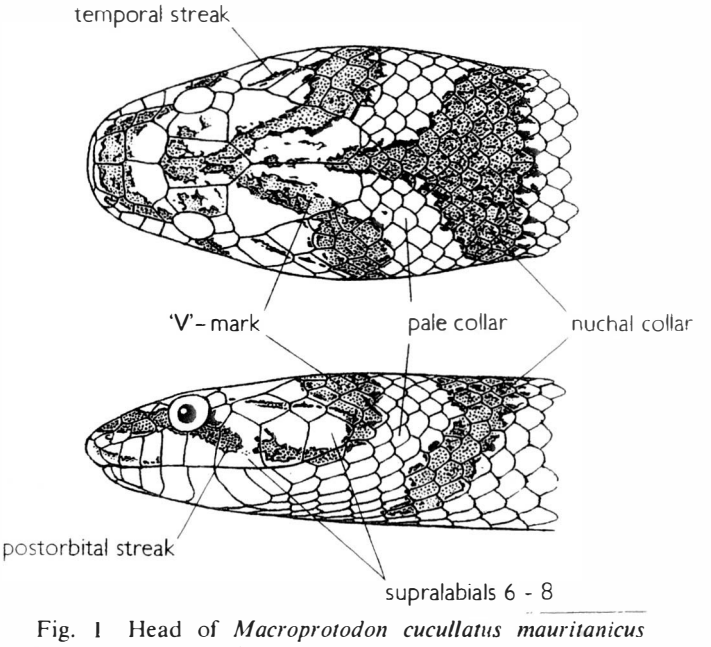

Fig. 1 Head of *Macroprotodon cucullatus mauritanicus* (BM 53.2.4.23, Algiers) showing typical scutellation and characters used in the study of the genus.

Bons (1973); Pasteur and Bons (1960) suggested the existence of a third race comprising the Iberian population which could be differentiated from the

Moroccan by the scales in the lowest dorsal row on each side being enlarged.

With regard to the head pattern Boulenger (1913) recognised one combination of elements for Iberia and a multiplicity of them throughout the rest of the range. He also noted that black-headed individuals occurred in Morocco and Algeria. Subsequent authors notably Lanza and Bruzzone (1960); Kramer and Schnurrenberger (*op. cit.*) demonstrated in Lampedusa and Lybia respectively that dark headed individuals may be found alongside those in which a contrasting head pattern is manifest.

Material acquired by the author from Spain and the Balearics revealed in the latter population a curious deviation from the normal condition of 8 supralabials in that an additional scale was wedged between the 6th and 7th (Fig. 5) in most individuals. Examination of this material together with that in the British Museum (Natural History) while confirming much of the foregoing gave indications that the populations from Northern Algeria, Northern Tunisia and the Balearics manifested a distinctness comparable with those of *M. c. cucullatus* in the South and East and *M. c. brevis* in the West. The main object of this account is the recognition of the N. Algerian/N. Tunisian population as a third taxon *Macroprotodon mauritanicus* Guichenot 1846 and also the determination of the relationships of the isolated populations.

Material Examined. This consisted of a total of 90 specimens, 62 of which comprise the collection of *Macroprotodon* in the British Museum (Natural History) (BM), 5 from the Museum National d'Histoire Naturelle, Paris (MHNP), 21 from the author's collection (EW), one from the Norwich Museum (NM) and another in the possession of Mr. N. Smith of Southampton University.

CHARACTERS EXAMINED

General Remarks

Head Scalation. The head shields apart from the supralabials were not formally investigated. The frontal however, whilst variable in shape, was noted amongst some of the specimens from the West as being rather narrow with the posterior apex more attenuated

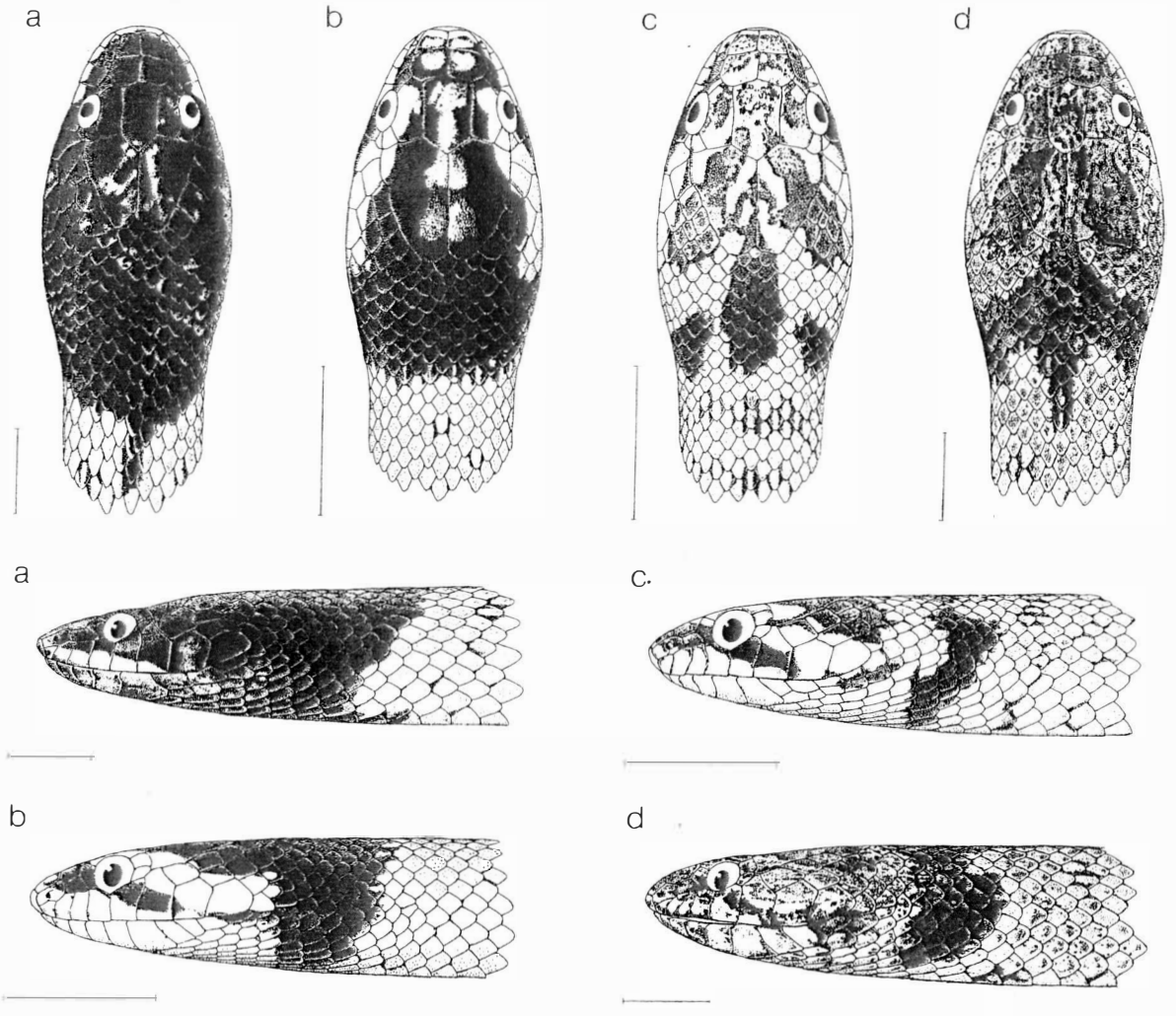

Fig. 2 Dorsal and lateral views of the heads of *Macroprotodon cucullatus brevis* showing the variations in head patterns. (a) BM 92.4.18.3 'Morocco'. (b) BM 89.12.16.11.116.7 and (c) BM 89.12.16.110.116.4 'City of Morocco' = Marrakesh. (d) EW 20.3.67 El Bosque, Cadiz, Spain.

Scale line = 5mm

(in those from the Balearics, North Algeria and North Tunisia).

Body Scalation. The dorsal, ventral and subcaudal scales were counted using the method of Dowling (1951a).

Head Pattern. Here was found a baffling assortment of seemingly unstable pattern elements, further complicated by the presence of examples in which the head is black in varying degrees (= melanocephaly) particularly in North Africa. The individuals in which the pattern elements were sufficiently discrete as to permit evaluation were isolated and the elements are itemised in Table 2. These include the nuchal collar, the 'V' mark (= 'Y' mark of Lanza and Bruzzone 1960), a postorbital streak and sometimes an interspace between the nuchal collar and the anterior pattern elements (the 'pale collar', Fig. 1).

Body Pattern. This consists essentially of a series of more or less prominent vertebral spots or flecks with lesser ones — usually on the posterior margins of the scales — alternating on the sides (Fig. 4, a). These in varying degrees (sometimes manifest only when the skin is distended) are connected diagonally. This condition may merge into one in which the spots expand to form a reticulated — tessellated pattern consistent with a darkening of the ground colour leaving the spaces so formed as pale patches (the 'textilis' pattern) (Fig. 4b). A third condition may occur in which the ground colour differentiates into pale and dark longitudinal stripes (the 'taeniatus' pattern), (Fig. 4, c). Intermediates exist between all three conditions.

The first condition seems to occur mostly in the West while the 'taeniatus' pattern is manifest in most of the Balearic and some North Algerian and North Tunisian examples. The 'textilis' pattern (and modifications thereof) is conspicuous in material from South Tunisia eastwards whilst also occurring in specimens from the West, Morocco in particular.

Belly Pattern. This character is seen here as falling into two categories namely checkered pattern, or variations of such, and one in which the ventrals, save for some darkening near their lateral margins, are either immaculate or show a few spots scattered at random. There is evidence here also of intergrading.

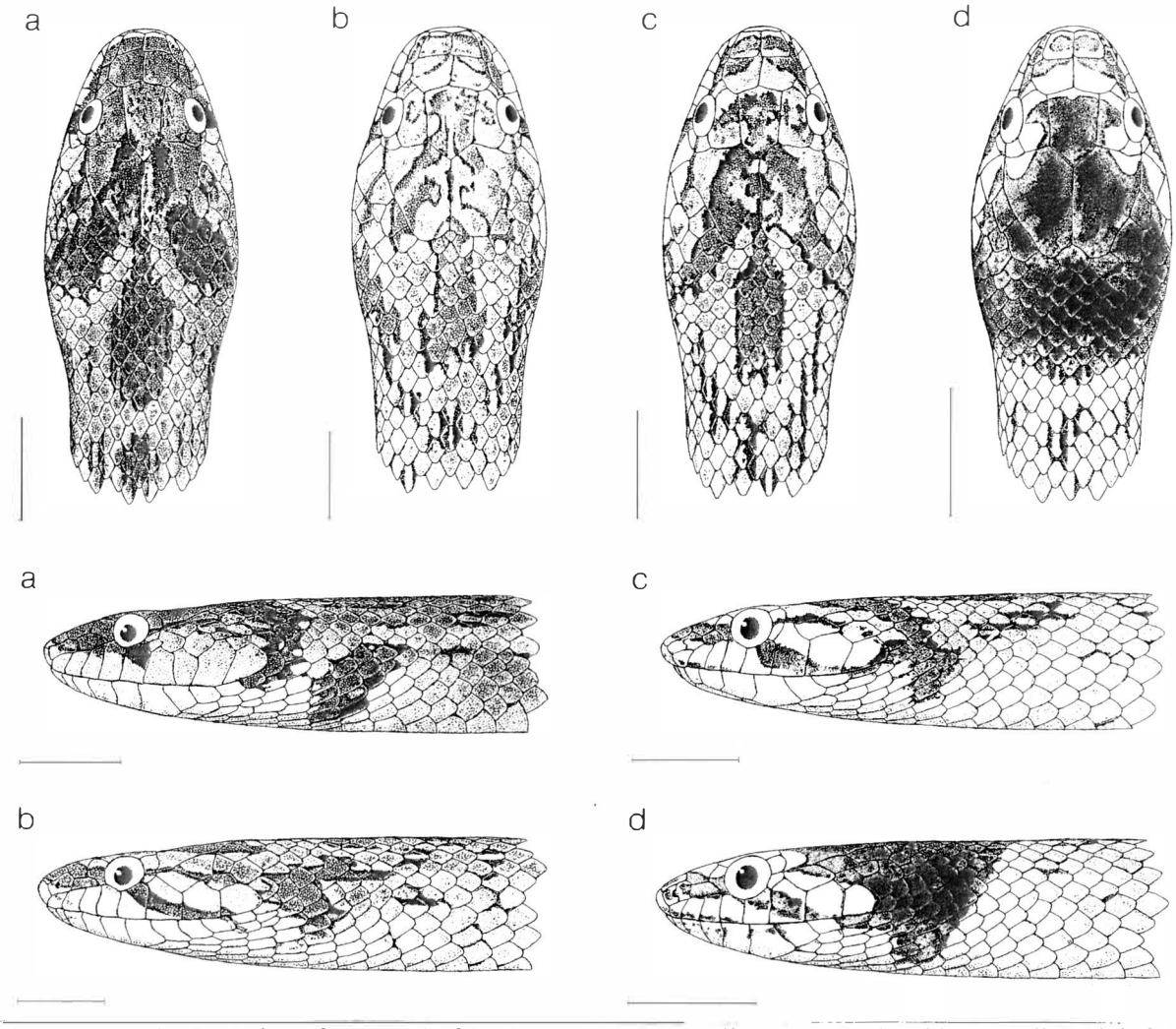

Fig. 3 Dorsal and lateral view of the head of (a) *Macroprotodon cucullatus mauritanicus* Menorca, EW 19.6.78.4 and *Macroprotodon cucullatus cucullatus*. (b) BM 1920.1.20.3859 Bir Oum Ali, Algeria. (c) BM 58.4.20.53 Tripoli. (d) BM 58.4.20.55 Tripoli.

Scale line = 5mm

		Dorsals						Ventrals					Subcaudals					
Taxon	Population	n	19	20	21	23	25	n ♂♂	range	mean	n ♀♀	range	mean	n ♂♂	range	mean	n ♀♀	range	mean
M. c. brevis	Iberia	11	1	—	9	1	—	5	160-168	163.8	6	173.5-185	177.1	5	46-51	48	6	41-48	43.7
	Morocco	23	—	—	7	15	1	9	154-171	163.9	7	172 -185	178.1	9	44-50	47.2	7	41-49	44.6
M c. mauritanicus	N. Algeria & N. Tunisia	18	14	1	3	—	—	9	164-174	169.6	9	177 -188	183.8	9	51-55	52.6	8	45-53	49.4
	Balearics	14	14	—	—	—	—	9	163-173	165.4	5	176.5-182	178.5	8	54-60	56.9	5	51-54	52.4
M. c. cucullatus	Rio de Oro	2	2	—	—	—	—	2	157-159	158	—	—	—	2	48	48	—	—	—
	S. Algeria & S. Tunisia	3	3	—	—	—	—	1	154-	—	2	164 -168	166	1	48	—	2	45-46	45.5
	Lybia	12	12	—	—	—	—	7	151-162	156.7	5	164 -174	169	4	44-52	48	5	43-47	45.6
	Egypt & Palestine	6	6	—	—	—	—	4	151-154	152.3	2	165 -166	165.5	4	47-49	48	2	43-44	43.5

TABLE 1: Body scalation of *Macroprotodon*

The checkered condition with its attendant variations were found in all regional samples although only one Balearic individual out of fourteen exhibited this condition. In the other Balearic specimens and some from Northern Algeria and Northern Tunisia the belly was either unmarked or sparsely spotted.

Pupil Shape. Contrary to the current concept of genus *Macroprotodon* as possessing a vertically elliptical pupil, the condition in nearly all examples was found to be circular or at best subcircular. In only two exceptions, both from Spain, could the condition be described as anything approaching elliptical. In one an individual (EW 20.3.67) from El Bosque, Cadiz Province, the pupil in life became distinctly subelliptical when exposed to bright sunlight. In the other (BM 1973.3430San Pedro) the pupils although dilated were more or less pointed at their apices.

CHARACTERS FOUND TO BE USEFUL

Head Scales. The supralabial counts except for most of the Balearic specimens and one from Tangier were 8-8 throughout the range. This specimen (BM (RR) 1987.890) exhibited 8-9 supralabials with a cuneate shield wedged between the 6th and 7th on the left side of the head. A small cuneate shield was also found in a specimen from Ain Draham, Tunisia (BM 1906.8.29.20). The Balearic material exhibited the spectrum of irregularities shown in Fig. 5.

Body Scales. (Table 1). While the dorsal scale counts revealed little additional that was noteworthy it was the ventrals which gave the indications of the distinctness of the N. Algerian/N. Tunisian population. The subcaudals showed little that was significant other than high counts for North Algerian-North Tunisian and particularly the Balearic populations.

Head Pattern. The character states are symbolised as they appear in Table 2.

'V' mark. A = Usually more or less convex on outer margins, the 'arms' separated from the postorbital streak and the nuchal collar (except in dark-headed examples), (Fig. 2 c & d).

B = More or less concave on outer margins, each arm curling around the last supralabial where it unites with the postorbital streak should the latter extend that far (Figs. 1 & 3, a).

Taxon	Population	n	'V' mark	Post-orbital streak	Nuchal collar	Pale collar	Melanocephaly
M. c. brevis	Iberia	11	A	3	I	yes	no
	Morocco	23	A	2 & 3	I & II	yes	yes
M. c. mauritanicus	N. Algeria & N. Tunisia	18	B	1, 2 & 3	I & II	yes	yes
	Balearics	14	B	1 & 3	II	yes	no
M. c. cucullatus	Rio de Oro	2	C	3	III	no	no*
	S. Algeria & S. Tunisia	3	C	3	III	no	yes
	Lybia	12	C	2 & 3	III	no	yes
	Egypt & Palestine	6	C	2 & 3	(III)*	no	yes

* = not yet seen but of probable occurrence. ( ) = not yet seen as a discrete state.

TABLE 2: Head pattern states in *Macroprotodon.* For explanation of symbols see text.

C = Variable; may be short and discrete (Fig. 3, b) or 'arms' uniting with the lateral portions of the nuchal collar although not truly continuous with the postorbital streak, (Fig. 3, c).

Postorbital Streak. 1 = Vestigial, situated on the 5th supralabial or extending marginally beyond the suture between the 5th and 6th (Fig. 3, a).

2 = Interrupted in varying degrees but never vestigial (Figs. 1 & 2, b & c).

3 = Entire or more or less so extending from the 5th to the 8th supralabial or the opposing infralabial and/or even beyond (Figs. 2 d & 3, b & c).

Nuchal Collar. I = Entire, separated from the postorbital streak and the 'V' mark, (Figs. 1 & 2, d).

II = Divided into a median dorsal and two lateral portions separated from the postorbital streak and the 'V' mark, (Figs. 2, c & 3, a).

III = Divided, the lateral portions often fragmented (Fig. 3, b & c). (Two specimens, BM 97.10.28.583 Maryut, Alexandria and EW 1984-1 Benghazi, possess a complete nuchal collar but in both the 'V' mark is firmly united with it and the 'pale collar' (see below) is lacking. This condition is viewed as an early progression towards melanocephaly).

Pale Collar. An interspace between the nuchal collar and the 'V' mark + postorbital streak (Figs. 1, 2, c & d and 3, a).

Melanocephaly. Used as a character state when darkening of the head is pronounced to a sufficient degree as to obscure the pattern elements (Figs. 2, a & b and 3, d).

DISCUSSION

Macroprotodon cucullatus brevis: The discovery of the two individuals with 19 scale rows well to the North of the known range of a taxon characterised hitherto by 21-25 scale rows at midbody could be dismissed on account of their isolation as being of little significance were it not for the existence of a specimen from Marbella (EW 6.80.2), and another indicated by Bons 1967 in his histogram in Fig. 16, from Morocco. The taxonomic value of these dorsal scale counts is therefore somewhat diminished.

The type specimen of *Coronella brevis* Günther agrees with the Iberian and some of the Moroccan material in possessing 23 midbody scale rows; head pattern states A, 3 and I and a reticulate (*'textilis'*) body pattern. The belly however is without spots.

The uniformity of the head pattern in Iberian examples (Figs. 2, d) as Boulenger (1913) pointed out is not always maintained in those from Morocco in which the nuchal collar is subject to division (head pattern state II) and the postorbital streak to interruption (state 2) usually on or at the 7th supralabial. Melanocephaly also occurs here.

Notwithstanding the suggestions of Bons (1973); Pasteur and Bons (1960) that the Iberian population constitutes a third race little could be found to distinguish this population from the Moroccan other than the midbody scale count not being known to exceed 23 (— and that found in only one individual, BM 72.8.23.2). Busack (1986) provides electrophoretic evidence for retaining the two populations as one race. The unique joint possession of head pattern state A and the absence of state I serves to reinforce the unity of the Iberian and Moroccan populations of *M. c. brevis* with which *Macroprotodon maroccanus* Peters is probably a synonym whilst readily separating them from the following forms.

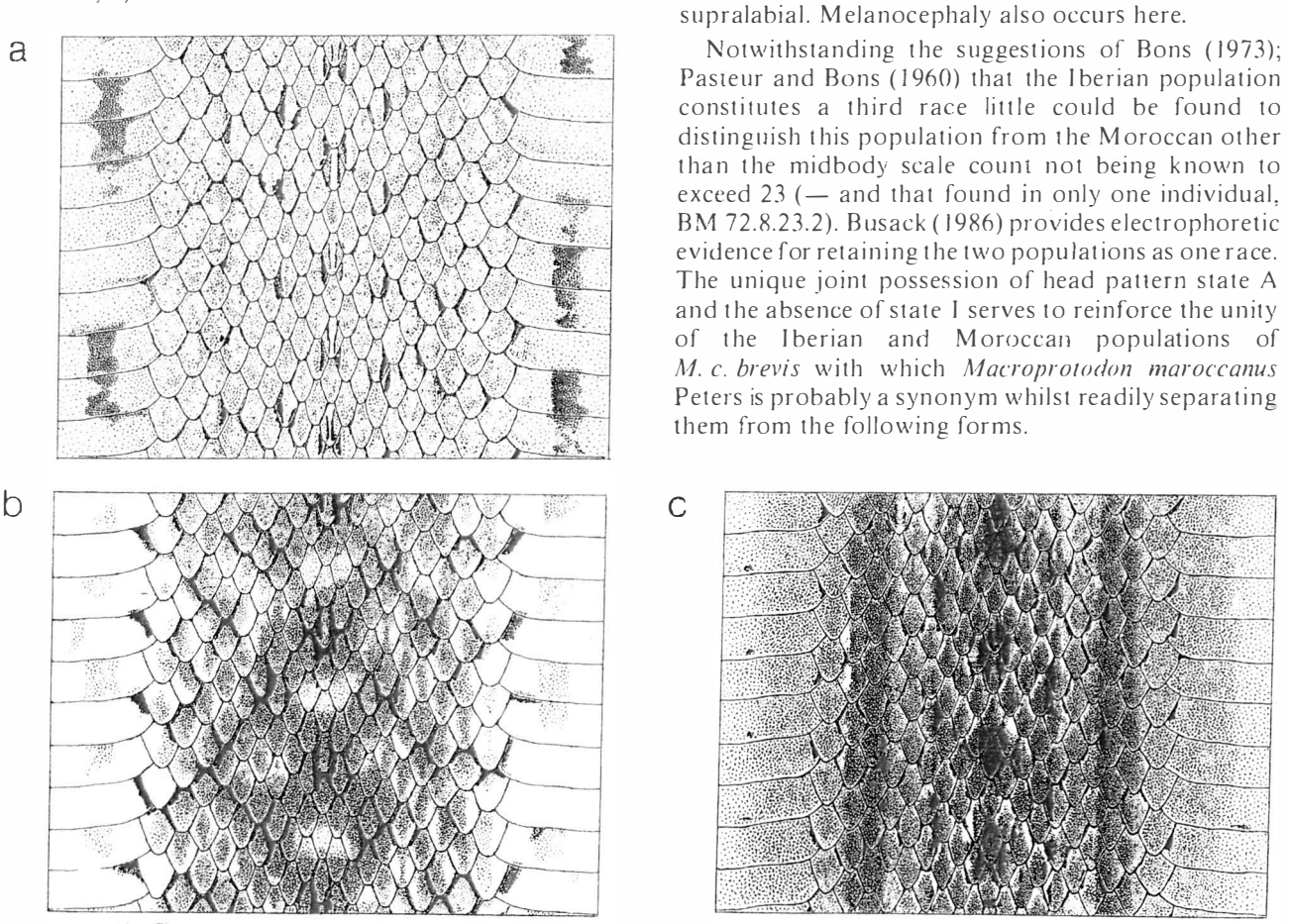

Fig. 4 Variation in the dorsal pattern in *Macroprotodon*:
(a) *M. c. mauritanicus* BM 1920.1.20.1186. Bône, Algeria, showing the undifferentiated ground colour.
(b) *M. c. cucullatus* EW 1982.2. El Agheila, Lybia, showing the 'textilis' pattern.
(c) *M. c. mauritanicus* EW 19.6.78.2. Menorca, showing the 'taeniatus' pattern.

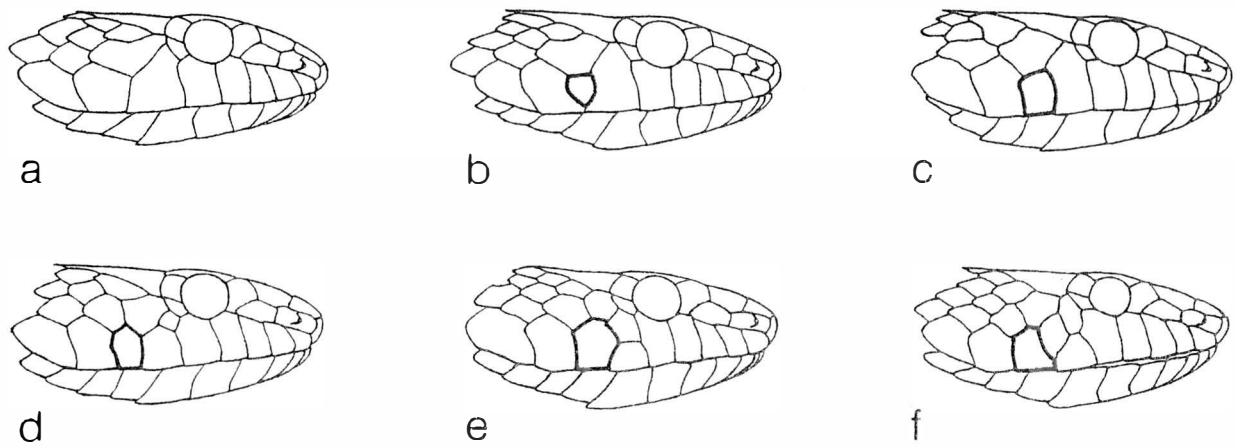

Fig. 5 Variation in the head scutellation in *Macroprotodon cucullatus mauritanicus* from the Balearics. (a) EW 28.1.79. Mallorca. (b) EW 10.7.80.3 Menorca. (c) EW 19.6.78.3 Menorca. (d) EW 10.7.80.2 Menorca. (e) EW 19.6.78.1 Menorca. (f) NM 78.144.
The Additional supralabial is shown in bold outline.

Macroprotodon cucullatus mauritanicus: The form under consideration here from Northern Algeria and Northern Tunisia has been hitherto considered within the nominate race. It shares with *M. c. brevis* the pale collar, head pattern states I: II, 2 and 3. It differs from that race as follows: the dorsal scale count is normally 19 (exceptionally 20 or 21) as opposed to 21-25 (exceptionally 19), the ventral and subcaudal counts are higher on average, head pattern state B is manifest as opposed to state A and state 1 occurring only in some members of this group alone. In addition to Boulenger Hediger (1935) also found melanocephaly in material from Algeria.

The earliest name available for this group is *Macroprotodon mauritanicus* Guichenot 1846: type locality = 'Algeria'. The four syntypes MHNP 2172 and 2172 A-C agree completely with the British Museum material from the regions in question. The midbody scale counts in all four was 19; the ventral and subcaudal counts are as follows: ♂♂ 164, 174 : 52 55 and ♀♀ 184, 186 : 48, 52. All were found to exhibit the pale collar and head pattern states B and II; two possessed state 1 and two state 3. The body patterns approximated that shown in Fig. 4, a. The belly was checkered in three individuals but virtually immaculate in one.

Although the type specimen of *Lycognathus taeniatus* Duméril & Bibron, 1854 'must be considered as lost' (Prof. E. Brygoo in litt.) the original description would indicate that this taxon belongs with *M. c. mauritanicus.*

The Balearic population exhibited the head pattern states B, II and a pale collar in every one of the fourteen specimens seen. All except one — in which state 3 occurred — state 1 was shown. The striated (= 'taeniatus') pattern (Fig. 4, c) was strongly manifest in all except two specimens in which the ground colour contrasts were reduced in one and virtually absent in the other. Melanocephaly has not been recorded in the Balearics.

This population is remarkable in that its members exhibit the anomalous supralabial condition of the specimen BM (RR) 1987.890 from Tangier to the extent of it being the norm there (Fig. 5). Nine out of the fourteen exhibited supralabial counts of 9-9, three 9-8 and two 8-8 but even in both these a cuneate shield was wedged between the 6th and 7th on one side. The 6th supralabial is subject to fragmentation (Fig. 5, d, e & f). The average ventral counts are rather lower than those in material from Northern Algeria and Northern Tunisia (♂♂ 165.4; ♀♀ 178.5 as opposed to ♂♂ 169.6, ♀♀ 183.8) yet the subcaudal numbers (already high in that form) in the Balearic population exceed those found anywhere in the range of *Macroprotodon.*

The above notwithstanding, the possession of 19 midbody scale rows, head pattern states B in all and state 1 in all except one individual argue for the inclusion of the Balearic population within *M. c. mauritanicus.*

Macroprotodon cucullatus cucullatus: The increase in the number of ventrals from East to West within the nominate race (as Kramer and Schnurrenberger understood it) is abrupt with North Algerian and North Tunisian animals having markedly higher counts. The implication of taxonomic separation between these populations and those further East is supported by the dissimilarity of the head patterns.

The material from Southern Tunisia eastwards to Southern Israel (*M. c. cucullatus* s. str.) in contrast to *M. c. mauritanicus* lacks the pale collar and the head pattern states B and 1 while possessing instead states C & III. Melanocephaly frequently occurs in this form particularly in specimens from Cyrenaica to Israel.

Although neither ventral nor subcaudal counts were given the black headed individual from Gafsa described by Mosauer and Wallis (1927) as *Macroprotodon cucullatus* subsp. *melanocephala* would seem to belong here.

Lycognathus textilis Duméril and Bibron 1854; type locality: 'deserts of Western Algeria' is clearly a synonym of *M. c. cucullatus* s. str. The holotype MHNP 849 — a ♀ — has 19 scale rows at midbody, 168 ventrals and 45 subcaudals. The 'V' mark is very faint but the head pattern state C is just discernable. The pale collar is absent and the nuchal collar is represented by state III.

The two above mentioned specimens together with BM 1920.1.20.3109 from Périana (= Fériana) and 1920.1.20.3859 from Bir Oum Ali (= Oum Ali, Algeria?) show a Westerly extension of *M. c. cucullatus* s. str. inhabiting the more arid regions of Tunisia and in all probability a substantial part of Algeria also.

Amongst the Lybian material two specimens had been collected in sand. In these and some others (Fig. 3, c) the head is deeper and shorter than is usual, and the eye larger (not necessarily being an artefact of juvenility) and more centrally placed in relation to the line of the south.

Two two specimens from Rio de Oro, BM 1903.16.13. 42 and 43 are best viewed as faded representatives of *M. c. cucullatus* agreeing with this form in all essentials. No specimens from the Hoggar were seen but that population likewise is probably assignable to this race.

No material from Lampedusa was seen but from the account of Lanza and Bruzzone (1960) two individuals exhibited 9-9 supralabials, in another the internasals were fused as one and the upper postocular was united with the supraocular. The ventrals were admittedly high, even allowing for any difference in the method of counting. They range in ♂♂ from 156-176 (mean 163.8) and in ♀♀ 173-178 (mean 175). The head markings however, match those of the Bir Oum Ali specimen and two from Lybia so closely (compare Lanza and Bruzzone, Fig. 2, A, B, and C with Fig. 3, d, c and b respectively) as to argue for the assignment of the Lampedusa population to *M. c. cucullatus*.

It would seem from the foregoing that the validity of *M. c. brevis* is upheld while the nominate race s. lat. is divisible into two subspecies, *M. c. mauritanicus* and *M. c. cucullatus* each producing their island isolates in the Balearics and Lampedusa respectively. The author shares the opinion expressed by Bons supra cit. that the specimens from Rio de Oro and the Hoggar represent relict populations of a formerly much wider distribution before the Sahara became desertified.

Some intergrading between the character state combinations would not be unexpected. The only example seen from any of the critical areas of range contact was a specimen of *M. c. mauritanicus* from Batna, BM 1920.1.20.108 in which the 'V' mark failed to curl round the 8th supralabial on the left while it only just did so on the right. Although the nuchal collar was divided as in head pattern state II the lateral portions were reduced in size. The right pale collar was bisected by a thin shaft issuing from the backward extension of the 'V' mark. This approach to head pattern states C and III would be consistent with the intergrading of habitats. According to Leviton and Anderson (1970) the Batna region is a grassy plain, though sufficiently arid as to be suitable for such xeric species as *Lytorhynchus diadema.*

Habits

Information on the habits of *Macroprotodon* is relatively scarce. Almeida and Almeida summarise the feeding habits of the species in Iberia and Morocco. They state that other authors (Salvador, 1974, Arnold and Burton, 1978, etc.) give small lacertids and geckos as the principle prey. Whilst recording the slow worm (*Anguis*) as an item of prey in one of the North Portuguese individuals they stress the dependence of *M. cucullatus* largely on amphisbaeneans on account of their sharing nocturnal and crepuscular habits.

The finding of *Acanthodactylus erythurus* and *Psammodromus algirus* in the stomachs of two Moroccan examples and a ¾ — grown *Lacerta pater* in a specimen from Ain Draham may indicate that *Macroprotodon* is crepuscular and nocturnal. All three lizards are active diurnal species the last named being a

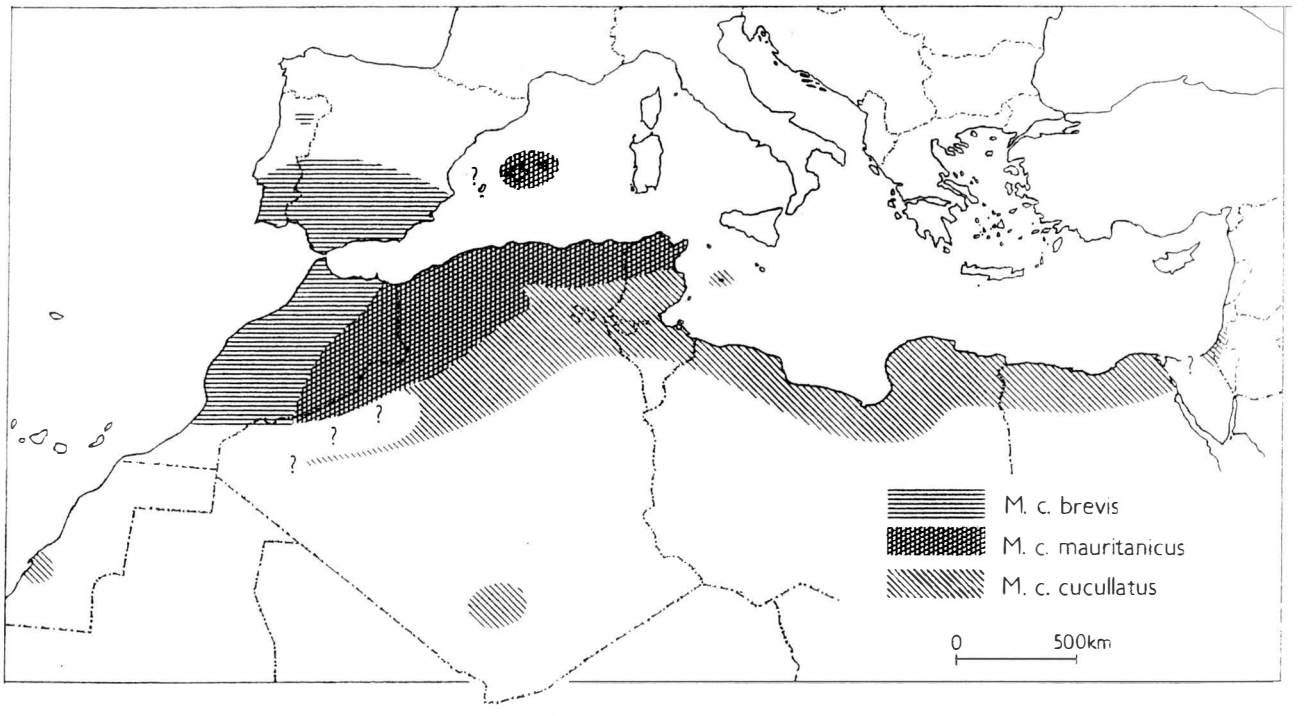

Fig. 6 Distribution of the subspecies of *Macroprotodon cucullatus.*

powerful animal and would be unlikely to be overcome in its full daytime vigour even if the snake used its venom.

Rasmussen (1985) discovered a pure cone retina in a specimen from West Morocco. This indicates that *M. c. brevis* may be at least partially or occasionally diurnal there.

Of those kept in captivity the Balearic individuals were found to be the least secretive often active in broad daylight. Individuals of *M. c. brevis* from Southern Spain and especially *M. c. cucullatus* from Lybia normally remained in hidding during the day.

Out of four Iberian individuals three readily accepted *Lacerta vivipara* and of these one would eat slow worms. The Fourth could not be induced to feed — possibly due to a dependence on *Blanus*.

Although mammals are not as a rule included in the list of food items there is at least one mention — that of Duméril and Bibron (1854) in which small rodents head the list. Whilst none of the Iberian specimens could be induced voluntarily to accept small mice nine out of twelve Balearic adults did so readily. In addition to mice all the Balearic specimens accepted lacertid lizards: two, however showed sudden cannibalistic tendencies — one individual actually succeeded in swallowing its tankmate.

Three out of four specimens of *M. c. cucullatus* s. str. from Lybia, readily accepted mice whereas the fourth from the El Agheila dunes could only be induced to eat *Hemidactylus turcicus* having refused, in addition to mice, *Lacerta vivipara, Mesalina guttulata* and *Sphenops sepsoides*.

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SHORT NOTE:

ON THE TYPE LOCALITY OF *CHTHONERPETON CORRUGATUM* TAYLOR (AMPHIBIA: GYMNOPHIONA)

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Chthonerpeton corrugatum Taylor is known only from the holotype, No. A00265 in the Zoologische Museum, Hamburg, and the paratype, a specimen without data in the Academy of Natural Sciences of Philadelphia (No. 13948). When Taylor described *C. corrugatum*, he suggested that the type locality was erroneous (Taylor 1968:289-292). Two labels are associated with the holotype, one, in the specimen jar, indicated 'Kamerun', a second, attached to the specimen indicated 'Tedda b. Mekka'.

On a map of Africa dated 1912, Taylor found a territory marked 'Teda' in what is now Chad, almost directly west of Mecca, but he considered this interpretation to be unlikely because all other species of *Chthonerpeton* are known only from South America. No genus of caecilians is known with certainty from both land masses.

Recent examination by us of another caecilian from the Hamburg Museum, No. A00252, proved illuminating. It is clearly a specimen of *Herpele squalostoma* (Stutchbury), a species known to occur widely in Equatorial West Africa, including Cameroon. The locality data accompanying this specimen is Brazil. It also seems most unlikely that *Herpele squalostoma* occurs in South America.

The records of the Zoologische Museum reveal an interesting history for the specimen of *Herpele squalostoma*. The original determination is recorded as *Chthonerpeton indistinctum* (Reinhardt and Lütken). Dunn (1942) examined the animal and erroneously identified it as *Caecilia tentaculata* Linnaeus. He also erroneously identified the holotype of *Chthonerpeton corrugatum* as a species of *Bdellophis* (= *Scolecomorphus*), an African genus, probably being mislead in both instances by the locality data. Dunn (1942) wrongly described the range of *Caecilia tentaculata* as including Brazil based on his misidentification.

One interpretation of these facts is that the locality data associated with these two specimens were switched after the original determination of the Brazilian specimen as *Chthonerpeton indistinctum* and before Dunn (1942) mistakenly determined the then erroneously labelled *Herpele squalostoma* as