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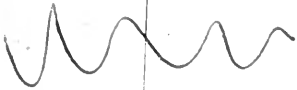
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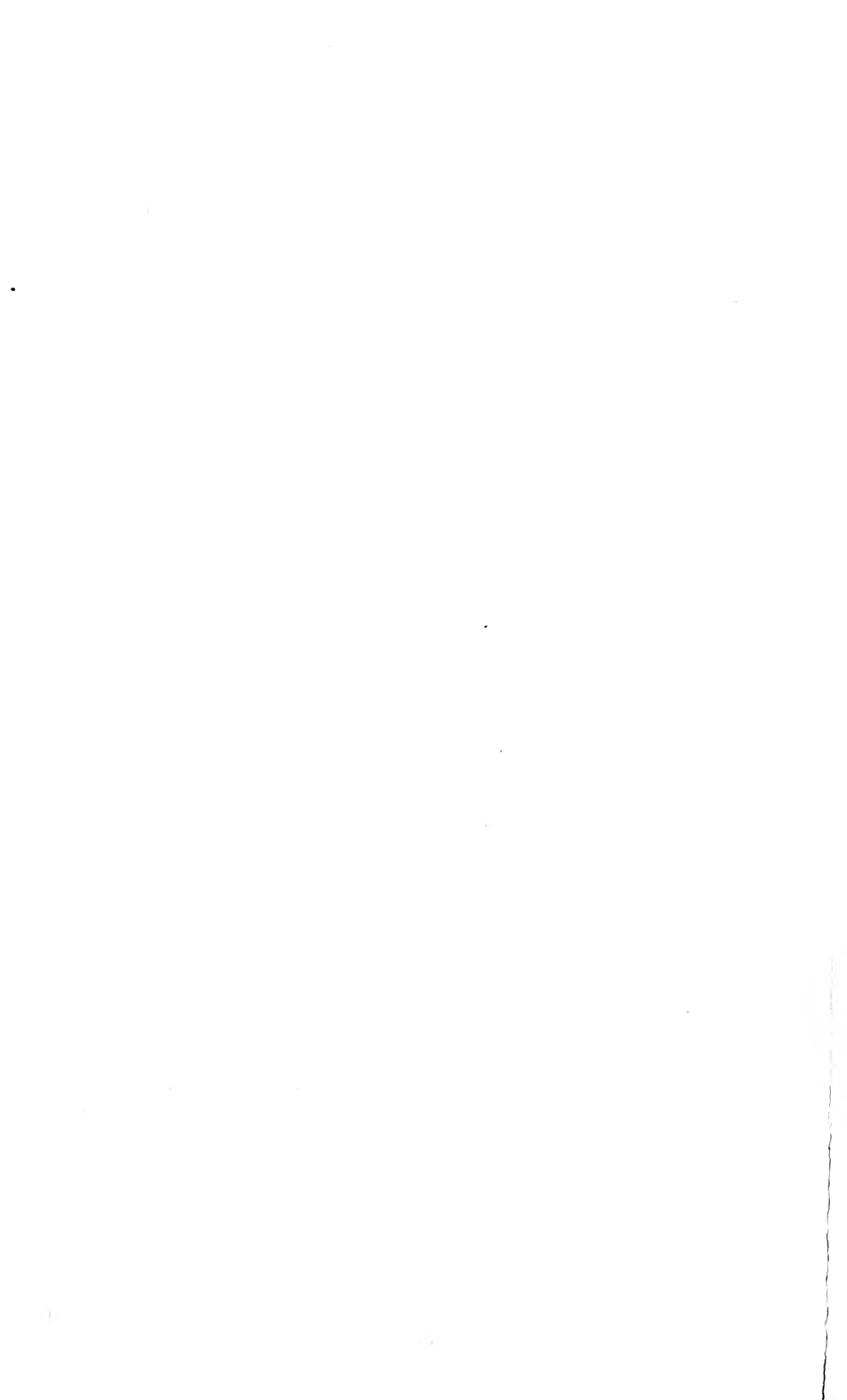
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JAN 29 1934





FIELD COLUMBIAN MUSEUM

PUBLICATION 22.

ZOOLOGICAL SERIES.

VOL. I, No. 8.

LIST OF FISHES AND REPTILES

OBTAINED BY

FIELD COLUMBIAN
MUSEUM EAST AFRICAN
EXPEDITION

TO

SOMALI-LAND IN 1896.

BY

S. E. MEEK,

ASSISTANT CURATOR OF DEPARTMENT.

D. G. ELLIOT, F. R. S. E.,

CURATOR OF DEPARTMENT.



CHICAGO, U. S. A

November, 1897.

The collection of fishes brought back by the Field Museum East African Expedition were, with one exception, taken in the waters of the Gulf of Aden, near the town of Aden. The exception is the new species *Pterois ellioti*, which was obtained at Berbera, on the African coast. The lack of time alone prevented us from making a much larger collection, as we only remained a week in Aden, for fish were very plentiful and specimens were easily obtained. The reptiles were procured at various places as we journeyed through the land. Lizards were very plentiful wherever we went, especially the small species, but snakes were only occasionally seen. Perhaps, as we did not hunt for them, may account for their apparent rarity. Many are poisonous, and I was surprised to find a green tree snake, nine feet long, that was killed by Mr. Dodson near our camp at Bohobgashan, was furnished with long fangs and was evidently a dangerous customer. The shot injured the skin so much that it was not brought back with us.

D. G. E.

PISCES.

SERRANIDÆ.

Epinephelus tauvina (Forsk.).

Five specimens.

No.	Length.	Head.	Depth.	D.	A.	Scales.	Eye.	Snout.	Maxillary.
495	12	2½	3½	xi-15	iii-8	96	6	4½	2
496	8¾	2½	3¼	xi-17	iii-8	100	4½	5½	2
497	9	2½	3½	xi-17	iii-8	89	4¼	5¼	2
498	8	2½	3¼	xi-17	iii-8	100	4¼	5	2½
499	7¾	2½	3¼	xi-17	iii-8	95	4½	5½	2½

Body covered with many dark spots. A few faint light vertical bands on the sides of the body. Operculum flap very long and pointed, reaching beyond first dorsal spine. Pectoral broad, its posterior margin rounded.

According to Dr. Boulenger this is a very variable species.

PRISTIPOMATIDÆ.

Pristopoma hasta Bloch.

Seven specimens.

No.	Length.	Head.	Depth.	D.	A.	Scales.	Eye.	Snout.	Maxillary.
455	7	3	2⅝	xii-14	iii-7	54	4	3	3¼
456	7¼	3	2¼	xii-15	iii-7	55	4¼	3	3¼
457	6¾	2⅝	2¾	xii-14	iii-7	54	4	3	3¼
458	6	2⅝	2¾	xii-15	iii-7	54	3¾	3	3¼
459	6¾	3	2¾	xii-13	iii-8	54	4½	3	3¼
460	11½	3	2⅝	xii-15	iii-8	58	5	2¾	3
450	14¼	3	2⅝	xii-14	iii-7	53	5¼	3	3¾

Caudal fin scaly on its basal half. The brown spots on upper two-thirds of the body form irregular or wavy lines.

Dorsal with three or four rows of small black spots.

Pristopoma stridens (Forsk.).

Two specimens.

Dark sides, with three slightly darker lateral bands.

***Pristopoma punctulatum* Ruppel.**

Two specimens.

Pectoral fin slender, its tip reaching anal fin. The deepest portion of the body is at the origin of the first three dorsal spines. Profile from the first dorsal spine to the tip of the snout nearly straight.

Longitudinal narrow stripes on the sides of the body.

***Pristopoma argenteum* (Forskål).**

One specimen.

***Pristopoma maculatum* (Bloch).**

Six specimens.

No.	Length.	Head.	Depth.	D.	A.	Scales.	Eye.	Snout.	Maxillary.
448	6	3	$2\frac{2}{3}$	xi-14	iii-6	50	$3\frac{1}{8}$	$3\frac{1}{4}$	$3\frac{1}{4}$
449	$5\frac{1}{4}$	3	$2\frac{2}{3}$	xi-13	iii-6	52	$3\frac{1}{4}$	3	3
450	$6\frac{1}{4}$	3	$2\frac{2}{3}$	xi-13	iii-6	53	$3\frac{1}{4}$	3	3
451	$6\frac{1}{2}$	$3\frac{1}{5}$	3	xi-13	iii-6	52	$3\frac{1}{8}$	$3\frac{1}{4}$	$3\frac{1}{4}$
452	7	3	$2\frac{2}{3}$	xii-12	iii-7	55	$3\frac{1}{4}$	3	3
453	$7\frac{1}{4}$	3	$2\frac{1}{4}$	xi-13	iii-7	55	$3\frac{1}{2}$	3	3

Sides of the body with four black blotches. The first one between the nape and the dorsal fin.

Lower half of the body silvery. Middle of each scale with a brownish spot forming faint longitudinal lines on the sides.

***Diagramma griseum* (Cuv. & Val.).**

Five specimens.

No.	Length.	Head.	Depth.	D.	A.	Scales.	Eye.	Snout.	Maxillary.
463	$8\frac{1}{4}$	$3\frac{1}{2}$	3	xii-20	iii-7	74	$3\frac{2}{8}$	$2\frac{3}{4}$	$3\frac{1}{8}$
464	$8\frac{1}{4}$	$3\frac{1}{2}$	3	xii-20	iii-7	73	$3\frac{1}{8}$	$2\frac{3}{4}$	3
465	8	$3\frac{1}{2}$	3	xii-20	iii-8	72	$3\frac{1}{8}$	$2\frac{3}{4}$	3
466	10	$3\frac{1}{2}$	3	xii-20	iii-8	70	$3\frac{2}{8}$	$2\frac{3}{4}$	$2\frac{3}{4}$
467	$8\frac{3}{4}$	$3\frac{1}{2}$	3	xii-20	iii-8	72	$3\frac{2}{8}$	$2\frac{3}{4}$	$3\frac{1}{4}$

Color uniform black. Small oblique lines on the sides. Branchiostegal membrane dark.

The scales are smaller in the specimens before me than the number given by Dr. Day. They, however, extend on the caudal fin and are difficult to count accurately.

Diagramma gaterina (Forskål).

Two specimens.

Black spots on the sides about as large as pupil. Those on upper and posterior part of the body are largest.

Profile strongly decurved.

SPARIDÆ.

Mesoprion fulviflamma (Forskål).

Twelve specimens.

Therapon jaruba (Forskål).

Five specimens.

Genyorge bengalensis (Bloch).

Three specimens.

According to Dr. Day, this species is very variable. It is likely that more than one species is included in Dr. Day's description.

The specimens before me are very slender, depth $2\frac{3}{4}$ in the length.

Genyorge gibba (Forskål).

Two specimens.

The profile in the larger specimen, 15 inches in length, is concave, in the smaller specimen, 7 inches, convex.

Genyorge rivulata (Cuv. and Val.).

One specimen.

Length, $10\frac{1}{2}$ inches; head, $2\frac{1}{2}$; depth, $2\frac{1}{3}$; D., x-14; A., iii-11; scales, 56; eye, $4\frac{1}{2}$; snout, $2\frac{1}{3}$; maxillary, $2\frac{1}{2}$.

Color dark. Scales on lower sides of the body with white edges.

A white spot on side above the lateral line and near the extremity of the pectoral.

Lethrinus harak (Forskål).

Two specimens.

Black blotch on the side about twice as long as deep; its depth equals the diameter of the eye.

Lethrinus nebulosus (Forsk.)

Thirteen specimens.

o.	Length.	Head.	Depth.	D.	A.	Scales.	Eye.	Snout.	Maxillary.
501	13	2 $\frac{6}{7}$	2 $\frac{3}{4}$	x-9	iii-8	50	4 $\frac{1}{2}$	2	3
502	12	3	2 $\frac{3}{4}$	x-9	iii-8	49	4 $\frac{2}{3}$	2	3
503	11 $\frac{1}{2}$	3	2 $\frac{1}{2}$	x-9	iii-8	48	4 $\frac{1}{4}$	2	3
504	9 $\frac{1}{2}$	3	2 $\frac{1}{2}$	x-9	iii-8	46	4	2	2 $\frac{1}{2}$
505	9 $\frac{1}{4}$	3	2 $\frac{1}{2}$	x-9	iii-8	46	4	2	2 $\frac{2}{3}$
506	11	3	2 $\frac{5}{7}$	x-9	iii-9	50	4	2	2 $\frac{3}{4}$
507	10 $\frac{1}{2}$	3	2 $\frac{5}{6}$	x-9	iii-8	48	4	2	2 $\frac{3}{4}$
508	10 $\frac{1}{4}$	3	3	x-9	iii-8	48	4	2	2 $\frac{3}{4}$
471	6 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	x-9	iii-8	48	3	2	2 $\frac{1}{2}$
472	10	3 $\frac{1}{6}$	2 $\frac{3}{4}$	x-9	iii-8	52	4 $\frac{1}{2}$	2	3
473	7	3	3	x-9	iii-8	46	3 $\frac{1}{6}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$
487	6	2 $\frac{1}{2}$	2 $\frac{1}{2}$	x-9	iii-8	48	3	2	2 $\frac{1}{2}$
470	6 $\frac{3}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	x-9	iii-8	49	3 $\frac{1}{2}$	2	2 $\frac{1}{2}$

The specimens referred to this species vary considerably. None have well-developed molar teeth. Nos. 505-6-7-8 have a sharper angle at the nape than the other specimens. The smallest specimens have dark, faint, vertical bars. Other variations shown in the table seem to be of little taxonomic value.

The profile of 501 is slightly concave, and the cheeks have a few scattered dark blotches. A noticeable dark band from eye to a little above the angle of the mouth.

Chrysophrys haffara (Forsk.)

One specimen.

Length, 10 $\frac{1}{2}$ inches; head, 3 $\frac{1}{4}$; depth, 2 $\frac{1}{4}$; D., xi-14; A., iii-10; scales, 64; eye, 3 $\frac{5}{8}$; snout, 2; maxillary, 2 $\frac{2}{3}$.

A faint dark blotch at the origin of the lateral line.

GERRIDÆ.

Gerres oyena (Forsk.)

Four specimens.

No.	Length.	Head.	Depth.	D.	A.	Scales.	Eye.	Snout.	Maxillary.
414	8 $\frac{3}{4}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$	ix-11	iii-7	47	3 $\frac{1}{2}$	3	2 $\frac{1}{2}$
415	8 $\frac{1}{2}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$	ix-10	iii-7	44	3 $\frac{1}{2}$	3	2 $\frac{2}{3}$
416	8 $\frac{1}{2}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$	ix-10	iii-7	44	3 $\frac{1}{2}$	3	2 $\frac{2}{3}$
436	9	3 $\frac{1}{4}$	2 $\frac{3}{5}$	ix-10	iii-7	46	3 $\frac{3}{5}$	3	2 $\frac{2}{3}$

Indistinct horizontal lines along the rows of scales.

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PTEROIS ELLIOTI. (TWICE NATURAL SIZE.)

No. 414 has the upper lobe of the caudal nearly twice as large as the lower. In the other specimens the lobes are about equal.

MULLIDÆ.

Upenus macronemus (La cepede).

One specimen.

SCORPÆNIDÆ.

Pterois ellioti sp. nov. (Plate XL.)

Length $2\frac{5}{8}$ inches; Head $2\frac{2}{3}$; Depth $2\frac{3}{4}$; D. xi-1-11, A. iii-6; Scales 56.

The diameter of the eye equals the length of the snout, $\frac{3}{4}$ in the head; maxillary 2 in head, its tip reaching almost to vertical from middle of the pupil. Supraorbital tentacles very long $1\frac{1}{2}$ in head.

Nape scaly; interorbital very concave, not scaly, its width $1\frac{1}{2}$ in the diameter of the eye.

Spines on the head well developed. One interior and two posterior supraocular spines, two post ocular, one tympanic, and one occipital spine; a ridge formed of three spines from posterior margin of orbit to the upper angle of the opercle. Margin of the preopercle with three prominent spines.

Dermal flaps between nostrils reaching pupil; two dermal appendages on lower angle of preopercle. Scales without dermal flaps.

Dorsal spines with short basal membranes, the dorsal spine increases in length to the sixth, the sixth, seventh and eighth of equal length, nearly equaling the length of the head.

Pectorals very long, tips of longest rays almost reach tips of the caudal fin. Tips of ventrals reaching base of fourth anal ray. Pectoral rays 16: 11th, 12th, 13th, 14th and 15th, the longest. The upper rays of the pectoral fins detached for most of their length, the middle and lower for about $\frac{1}{2}$ their length.

Orbital tentacle black with five yellow bands, the last yellow band forms the tip.

Color brownish, irregularly banded with darker, six quite distinct dark bands between front of dorsal fin and its last ray, these usually alternating with other dark bands half as wide, only the broader bands extend on the belly. An indistinct dark band passes around the body across the nape, being more prominent on breast in front of the paired fins. Three dark spots on each

side of the snout and one on anterior part of the cheek. A dark band as wide as pupil from base of supraorbital tentacle through the pupil to lower preopercular angle. Soft dorsal, caudal and anal fins barred, spinous dorsal imperfectly so.

Upper half of pectoral fin black with two indistinct lighter bars, lower half (the first seven rays) white, a white streak from upper angle of the opercle extending downward to the base of upper pectoral rays and ending near the middle of sixth pectoral ray. A small yellowish humeral spot (not shown in the figure), outer ventral margins white, membrane of the fin mostly black, its rays white.

This species bears some resemblance to *Pterois volitans*, from which it differs in having the second anal spine the longest, shorter dorsal spines, larger scales, longer pectoral fins with the rays much more detached, longer and banded supraorbital tentacles, and the last two dorsal spines of nearly equal length. The pectoral and ventral fins are also differently colored.

Named for Professor D. G. Elliot, under whose direction the Museum's East African Expedition was made and to whom the writer is under obligations for assistance in the preparation of this paper.

One specimen from Berbera, West Coast of Africa.

TEUTHIDÆ.

Teuthis oranim (Bl. & Schn.).

Two specimens.

The smaller specimen is notably more slender than the larger. Can detect no other appreciable difference. Evidently a variable species.

CARANGIDÆ.

Caranx affinis (Ruppel).

Seven specimens.

No.	Length	Head	Depth.	D.	A.	Scales.	Eye.	Snout.	Maxillary.	Pectoral.
396	7½	3 ³ / ₈	3½	vii, i-23	ii, i-20	50	4	3 ³ / ₈	2½	3½
397	7	3 ¹ / ₂	3½	vii, i-24	ii, i-20	48	4	3 ³ / ₈	3	3½
398	7½	3½	3½	vii, i-23	ii, i-19	48	4	3 ³ / ₈	3	3½
399	7½	3 ³ / ₄	3½	vii, i-24	ii, i-21	45	3 ³ / ₈	4½	2 ³ / ₈	3½
400	7	3 ⁵ / ₈	3½	vii, i-24	ii, i-20	48	3½	4½	2 ³ / ₈	3
401	7	3 ³ / ₈	3½	vii, i-24	ii, i-19	50	3½	4	2 ³ / ₈	3
433	7	3 ³ / ₈	3½	vii, i-23	ii, i-19	50	3½	4	2 ³ / ₈	3

Pectoral fin reaches to first anal ray. Lateral line slightly curved, curved portion $1\frac{1}{3}$ to $1\frac{2}{3}$ in the straight portion. Maxillary short, scarcely reaching front of pupil. A black opercular spot about size of eye. Branchiostegal membrane black.

Sides with from six to nine vertical cross bands.

Caranx carangus (Bloch).

One specimen.

Length, $8\frac{1}{2}$ inches; head, 3 1-5; depth, $2\frac{2}{3}$; D. vii, i-18. A. ii, i-16; scutes, 29, eye, $3\frac{3}{4}$; snout, $3\frac{3}{4}$; maxillary, 2. Tip of maxillary reaching nearly to posterior margin of the eye. Pectoral 2 4-5 in the body, its tip reaching beyond the curved portion of the lateral line to about eighth anal ray.

Upper profile more curved than the lower. A narrow post-orbital adipose lid.

Caranx crumenophthalmus (Bloch).

One specimen.

Length, $6\frac{1}{4}$ inches.

Head, 3; depth, $3\frac{2}{3}$; D. vii-25; A. ii, 21; eye, $2\frac{2}{3}$; snout, 4.

Lateral line some wavy, very little curved. Scutes, 30. Longest dorsal ray 2 in. head. Pectoral reaching anterior soft rays of the anal.

Caranx ferdau (Forsk.)

Six specimens.

No.	Length	Head.	Depth.	D.	A.	Scutes.	Eye.	Snout.	Maxillary.	Pecoral.
405	9	$3\frac{1}{3}$	3	vii, i-27	ii, i-24	18	$4\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{2}{3}$
406	$8\frac{1}{2}$	$3\frac{1}{4}$	3	vii, i-27	ii, i-24	20	$4\frac{1}{8}$	$2\frac{2}{3}$	$2\frac{1}{2}$	$2\frac{1}{2}$
407	$8\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{3}$	vii, i-26	ii, i-24	18	4	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{2}{3}$
408	$9\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{3}$	vii, i-27	ii, i-23	20	4	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{2}{3}$
409	10	$3\frac{1}{2}$	3	vii, i-26	ii, i-24	15	4	$2\frac{2}{3}$	$2\frac{2}{3}$	$2\frac{2}{3}$
420	9	$3\frac{1}{8}$	3	vii, i-37	ii, i-25	22	4	$2\frac{2}{3}$	$2\frac{2}{3}$	$2\frac{2}{3}$

The lateral line not strongly curved, the curved portion longer than the straight.

Tip of pectoral fin reaching to the straight portion of the lateral line. Upper and lower profiles of the body about equally curved. A faint brownish opercular spot.

Caranx latus Agassiz.

One specimen.

Length, 12 inches.

Head, 3 1-5; depth, 3; D. viii, 1-21; A. ii, 1-15; scutes, 28; eye, 3 3/4; snout, 4; pectoral, 2 3/4. Its tip reaching beyond straight portion of the lateral line and beyond the front of the anal.

Longest dorsal rays, 1 2/3 in head. Curved portion of lateral line, 1 1/3 in the straight portion. Body elongated and less compressed than other species of *Caranx* in the collection. Opercular spot quite distinct.

Caranx sansum (Forsk.)

Four specimens.

No.	Length	Head.	Depth.	D.	A.	Scutes.	Eye.	Snout.	Maxillary.	Pectoral.
403	8 1/2	3 1/8	2 1/2	vii, i-20	ii, i-17	33	4 1/6	3 1/4	2 1/8	2 2/3
404	8 1/2	3 1/8	2 1/2	vii, i-20	ii, i-17	34	4	3 1/8	2 1/3	2 1/5
430	7 1/4	3 1/3	2 2/5	vii, i-21	ii, i-18	34	3 1/2	3 1/4	2 1/3	2 3/4
432	11	3 1/8	2 2/3	vii, i-20	ii, i-17	30	4 1/4	3	2 1/4	2 5/6

Chorinemus sanctipetri C. & V.

Three specimens.

The smaller specimen has the anal finlets connected by a membrane; the dorsal less so.

The tip of the pectoral fin reaches to about seventh anal ray. The curved portion of the lateral line 1 1/3 to 1 1/2 in the straight portion. The upper lobe of the caudal end of longest dorsal soft rays dark, nearly black in the smallest specimens.

Trachinotus ovatus (Linnaeus).

One specimen.

Length, 8 1/4 inches.

Head, 3 1/2; depth, 2 1/4; D. vi, 23; A. ii, 120; eye, 3 1/3; snout 4; maxillary, 3; longest dorsal ray, 1 2-5 in the head. Lateral line with the anterior half slightly arched; axil black; snout blunt, vertical before the eye.

SCOMBRIDÆ.

Scomber microlepidotus Ruppel.

Five specimens.

MUGILLIDÆ.

Mugil seheli Forskal.

Three specimens.

SCOMBERESOCIDÆ.

Belone choram (Forsk.).

Four specimens.

Dorsal fin from 20 to 22 rays, anal 20 or 21. A darker spot at the base of each short anal ray.

CHIROCENTRIDÆ.

Chirocentrus dorab (Forsk.).

Two specimens each 16 inches in length.

Head, $5\frac{1}{3}$; depth, $7\frac{3}{4}$; D., 16; A., 32.

AMPHIBIA.

RANIDÆ.

Rana delandi (Günther).

No. 414. One specimen. Hulleh.

The only example of this frog that was procured was found at the bottom of a hole in the sandy bed of a river, where some of my men were digging in their search of water. The frog was down three or four feet from the surface. The beds of the Torgs, or rivers, so-called in this part of Africa, are usually dry, water only running immediately after a shower for an hour or so, when it sinks and disappears in the sand, and sometimes it is necessary to dig holes six to ten feet in depth before water is reached. The rivers, it may be said, all run under ground. As the water would not come to him this frog had gone to it. Another case of Mahomet and the mountain. D. G. E.

PHRYNOBATRACHUS.

About ten miles from our camping place at Haili, on our journey back to Berbera, we stopped in the middle of the day to rest and escape, if possible, the terrific heat of the sun. The place chosen was near a small spring, the waters of which, increased by the heavy showers that occurred nearly every day, had flooded a small patch of ground on which some green grass was actually growing. On reaching this we observed a number of small frogs, which on being disturbed made, for their size, the most enormous leaps I had ever seen. After considerable effort we collected a number of specimens of this and the two following species, which represented, I think, all the varieties that were present. It was the only spot in all our journeying that we met with frogs above ground. Haili is at the foot of the Gobis range, about thirty miles southeast of Berbera. D. G. E.

Phrynobatrachus hailiensis sp. nov.

Two specimens. Haili.

Body rather slender, snout narrower, slightly rounded, with obtuse canthus rostralis; tympanum distinct, round about $1\frac{1}{2}$ in diameter of orbit. Toes two-thirds to three-fourths webbed; tips of fingers and toes not dilated into discs; two metatarsal

tubercles, three metacarpal. The leg carried forward along the sides of the body, the proximal carpal joint extends slightly beyond the tip of the snout. Skin smooth, with a narrow dermal fold on sides extending backward from tympanum.

Tongue large, not deeply notched behind. Width of tongue, $1\frac{1}{3}$ in in its length. No teeth on the vomer.

Color above dirty slate color, slightly lighter on anterior two-thirds of the head: no trace of vertebral line; a light streak under each orbit to arm; under parts uniform white; margins of mandible speckled with darker. Upper and hinder portion of thigh with irregular longitudinal white streaks. Legs and arms with darker cross bands.

This species to some extent resembles *P. acridoides*. It however differs in having the tips of fingers and toes not dilated, two metatarsal tubercles, longer hind limb, skin smooth, larger tympanum, and no trace of a vertebral line.

	TYPE.	
	No. 417.	No. 418.
Distance from snout to vent.....	1.20 in.	1.25 in.
Length of head.....	.53 "	.53 "
Width of head.....	.43 "	.43 "
Distance from anterior margin of orbit to nostrils.....	.15 "	.15 "
Distance from anterior margin of orbit to tip of snout.....	.24 "	.24 "
Diameter of orbit.....	.16 "	.16 "
Diameter of tympanum.....	.10 "	.11 "
Distance from areil to elbow.....	.23 "	.23 "
Distance from elbow to middle of metacarpal tubercle.....	.30 "	.31 "
Distance from metacarpal tubercle to end of toe.....	.30 "	.30 "
Length of humerus.....	.65 "	.65 "
Length of crus.....	.63 "	.73 "
Length of tarsus.....	.31 "	.32 "
Distance from metatarsal tubercle to tip of longest toe.....	.61 "	.70 "

BUFONIDÆ.

Bufo garmani sp. nov.

Two specimens. Haili.

Head without bony ridges; snout short, rather pointed; inter-orbital space flat, as broad as the upper eyelid; tympanum rather distinct, vertically oval, its vertical diameter about $1\frac{1}{2}$ in diameter of the orbit. Parotids large, prominent, width about one-half length. Second finger much shorter than the first, tips of the latter reaching beyond the tips of the former; toes about one-half webbed; fingers and toes with subarticular tubercles; two metatarsal and two larger metacarpal tubercles. A long narrow gland on the underside of forearm. A prominent inner tarsal fold.

The leg carried forward along the side of the body, the metatarsal tubercles reaches the posterior margin of the orbit.

Upper parts covered with small irregular (in size) warts, no evident pores; lower part with smaller, more regular and close set warts, giving a granular appearance.

Tongue elliptical, its width $1\frac{1}{2}$ in its length.

Color above brownish. Upper surface of head from middle of orbits to nostrils, brownish gray; this color continues in a narrow band downward on end of snout.

The smaller specimen has three pairs of faint burnt-like spots with narrow black margins on the back, the first between hinder margins of orbit, the second between posterior ends of parotids, and the third on the middle of the back; these spots are about the size of the tympanum. Legs and arms with a few cross bars, under parts uniform light colored.

This species resembles *Bufo regularis*, Reuss from which it differs in being less robust, having the snout more pointed, the tympanum much smaller, the parotids and warts more developed, and in the anterior half of the head brownish gray.

	TYPE.	
	No. 415.	No. 416.
Distance from tip of snout to vent.....	1.58 in.	1.50 in.
Length of the head.....	.49 "	.43 "
Width of the head (greatest).....	.62 "	.53 "
Distance from anterior part of orbit to nostril.....	.15 "	.14 "
Distance from anterior part of orbit to tip of snout.....	.17 "	.16 "
Diameter of the orbit.....	.18 "	.17 "
Width of interorbital space.....	.14 "	.13 "
Diameter of tympanum.....	.12 "	.10 "
Length of parotid.....	.34 "	.31 "
Width of parotid.....	.16 "	.14 "
Distance from axil to elbow.....	.33 "	.31 "
Distance from elbow to middle of metacarpal tubercle.	.40 "	.38 "
Distance from metacarpal tubercle to tip of longest finger	.38 "	.31 "
Length of femur.....	.62 "	.50 "
Length of crus.....	.61 "	.53 "
Length of tarsus.....	.43 "	.40 "
Distance from metatarsal tubercle to end of longest toe.	.65 "	.57 "

Named for Prof. S. Garman, of the Museum of Comparative Zoölogy, Cambridge, Mass.

Bufo viridis somalacus var. nov.

Six specimens. Haili.

Head without bony ridges.

Snout rounded, short, interorbital space about equal to upper eyelid ; tympanum distinct, its diameter less than half the diame-

ter of the orbit ; tip of first finger extends slightly beyond the tip of second ; toes about half webbed, with simple subarticular tubercles, a narrow tarsal fold. The leg carried forward along side of body, the metatarsal tubercles reaches hinder margin of the orbit. Parotids not very conspicuous, about twice as long as broad. Tarsal tubercles two, smaller than the metacarpal tubercles. Upper part of the body covered with small distinctly porous warts. Belly granular, somewhat warty on chin and under the thighs, no evident pores.

Tongue elliptical, its width $1\frac{1}{3}$ in. its length.

Color uniform, slate colored, slightly lighter anteriorly. Throat and chin same color as the back, except being more or less sprinkled with white ; belly white.

The variety here described is more slender, has a more pointed snout, and less developed parotids than the typical *B. viridis*, Laurenti, as described by Dr. Boulenger. The uniform slate color on the upper part of the body extends on the chin and throat, though being some speckled with white.

In our specimens there is no trace of a vertebral line.

As described by Dr. Boulenger *Bufo viridis* is a very variable species and has a wide geographical range. No doubt a more critical study of a larger number of specimens from different localities would result in the discovery of several well-marked geographical varieties.

	TYPE.	No. 420.	No. 421.	No. 422.	No. 423.	No. 424.
	No. 419.					
Distance from tip of snout to vent.	1.60in.	1.40in.	1.30in.	1.36in.	1.44 in.	1.85 in.
Length of head.....	.50 "	.45 "	.44 "	.50 "	.46 "	.50 "
Width of head (greatest).....	.55 "	.50 "	.44 "	.53 "	.50 "	.51 "
Distance from anterior part of orbit to nostril.....	.12 "	.13 "	.13 "	.14 "	.13 "	.14 "
Distance from anterior part of orbit to tip of snout.....	.20 "	.20 "	.20 "	.21 "	.20 "	.20 "
Diameter of the orbit.....	.22 "	.20 "	.19 "	.23 "	.20 "	.20 "
Width of interorbital space.....	.12 "	.12 "	.12 "	.13 "	.12 "	.13 "
Diameter of tympanum.....	.08 "	.09 "	.08 "	.09 "	.09 "	.08 "
Length of parotid.....	.24 "	.23 "	.24 "	.24 "	.24 "	.23 "
Width of parotid.....	.13 "	.11 "	.11 "	.11 "	.12 "	.11 "
Distance from axil to elbow.....	.32 "	.29 "	.32 "	.30 "	.29 "	.32 "
Distance from elbow to middle of carpal tubercle.....	.32 "	.32 "	.33 "	.32 "	.34 "	.32 "
Distance from metacarpal tubercle to tip of longest finger.....	.32 "	.33 "	.33 "	.31 "	.30 "	.29 "
Length of femur.....	.56 "	.54 "	.52 "	.48 "	.50 "	.52 "
Length of tibia.....	.63 "	.60 "	.55 "	.54 "	.55 "	.56 "
Length of tarsus.....	.38 "	.36 "	.36 "	.35 "	.36 "	.38 "
Distance from metatarsal tubercle to end of longest toe58 "	.58 "	.58 "	.55 "	.54 "	.55 "

OPHIDIA.

COLUBRIDÆ.

Zamenis rhodorhachus (Jan.).

One specimen. South of Toyo Plain.

Philothammus semivarigatus (Smith).

One specimen.
Sheik, Golis Range.

Psammophis sibilans (Linnæus).

One specimen.
Sheik Golis, Range.

Naia nigricollis (Reinh).

One specimen.
Deregodleh.

This snake was found lying at a water hole at this place in the bed of the Tug, coiled and evidently waiting the approach of its prey, possibly a sand-grouse, some of which we killed here, or a Dik-Dik. D. G. E.

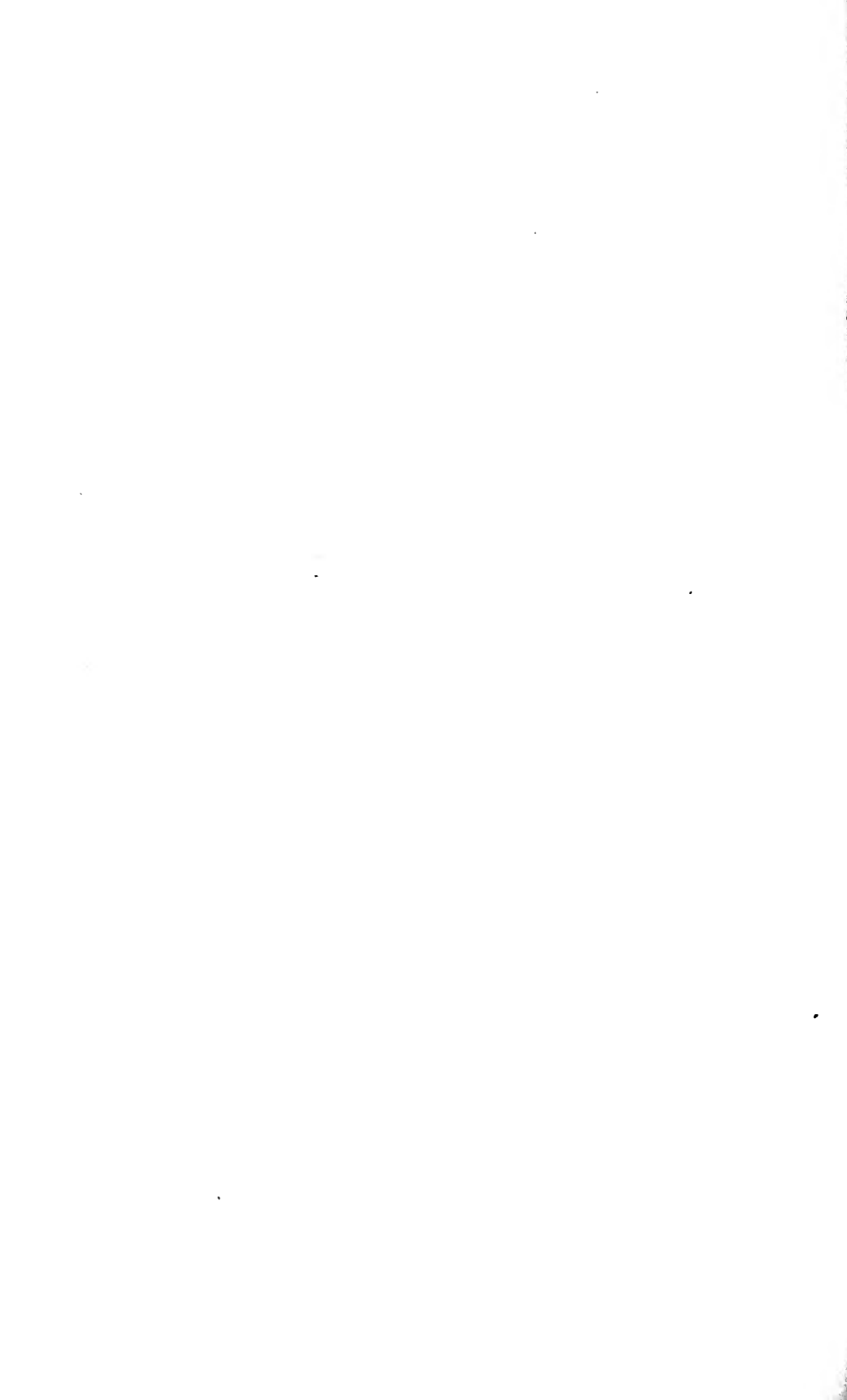
VIPERIDÆ.

Atractaspis microlepidota Gunther.

One specimen.
Hersi Barri, Ogaden.
Fourth upper labial the largest and the only one entering the eye. Scales, 29; caudals, 250; subcaudals, 32. All single.
This snake was lying at the foot of a tree, coiled, and Mr. Dodson stepped over it without seeing it. The natives state that it is very poisonous and its bite soon fatal. D. G. E.

Echis carinatus (Schneid).

One specimen.
Hullier.



LACERTILIA.

VARANIDÆ.

Varanus albigularis (Daud).

Two specimens.

Better An, Guban, south of Toyo Plain.

LACERTIDÆ.

Eremias brenneri Peters.

Two specimens.

Better An, Guban.

Lastastia carinata (Peters).

One specimen.

The Hand.

The color of the specimen has much faded. Some irregular dark spots on the sides, but without traces of "large blue ocelli."

SCINCIDÆ.

Mabuia varia (Peters).

Durban Guban.

One specimen.

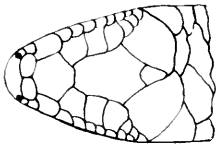
The tail is scarcely as long as the head and body. Brown dorsal and lateral bands. The lateral bands are separated from the dorsal by narrow white bands.

Lyogsoma akeleyi sp. nov..

Berbera.

Two specimens.

Lower eyelid scaly. Nostril directly over the suture between the rostral and the first labial; a post nasal; three loreals, the anterior one in contact with the second and third labials; supranasals in contact behind the rostral; fronto-nasal slightly broader than long, and in contact with the frontal; no fronto parietals.



Interparietal very small, in contact with frontal and parietals; parietals in contact behind interparietal; four supra-oculars, the first three in contact with the frontal, the fourth is small; five post-oculars; a row of small scales between the supra and post-oculars and the eye; seven superciliaries. The fifth labial is the sub-ocular. Tail about as long as the head and body. The oppressed limbs do not meet by a distance greater than the length of the arm.

Brownish above, some scales are black with white centers, being more numerous on the anterior half of the body. On posterior portions each third row of scales are black with white centers, forming broken rings. The rings are regular on the tail. Under parts white.

	TYPE.	
	No. 366.	No. 369.
Total length.....	$6\frac{1}{8}$ in.	$7\frac{9}{10}$ in.
Length of head and body.....	$3\frac{1}{4}$ "	$3\frac{11}{16}$ "
Distance from tip of snout to axil.....	$\frac{1}{16}$ "	1 "
Distance from tip of snout to leg.....	3 "	$3\frac{1}{2}$ "
Length of arm.....	$\frac{5}{8}$ "	$\frac{1}{16}$ "
Length of leg.....	$\frac{1}{16}$ "	1 "
Distance from snout to ear.....	$\frac{1}{2}$ "	$\frac{9}{16}$ "

Named for Mr. C. E. Akeley, taxidermist for the Museum's East African Expedition.

CHAMÆLEONTIDÆ.

Rhampholeon mandera sp. nov.

Mandera. One specimen.

Body much compressed, its width 2 in. greatest depth. Head covered with tubercles and small granules; superciliary ridges prominent and directed forwards. Height of each ridge 2 in the diameter of the eye, no dermal appendages. A brownish tubercle on nape connected by a row of small tubercles to the superciliary ridges. A medium row of small tubercles, bifurcated anteriorly, between tubercle on nape and superciliary ridges. A ridge on each side of head behind middle of the orbit. The tubercles on the back are larger than on the other parts of the body. Each toe with a cusp, no second cusp. Feet spinose, legs and arms very slender.

Color uniform dark bluish.

Total length.....	$3\frac{5}{6}$ in.
Length of head and body.....	$1\frac{7}{8}$ "
Length of tail.....	$1\frac{7}{8}$ "
Length of arm.....	$1\frac{11}{16}$ "
Length of leg.....	$1\frac{11}{16}$ "
Length of gape of mouth.....	$\frac{3}{8}$ "
Greatest depth.....	$\frac{3}{8}$ "
Distance between tips of superciliary ridges.....	$\frac{1}{8}$ "
Diameter of the eye.....	$\frac{1}{8}$ "

CHELONIA.

TESTIDUNIDÆ.

Testudo pardalis (Bell).

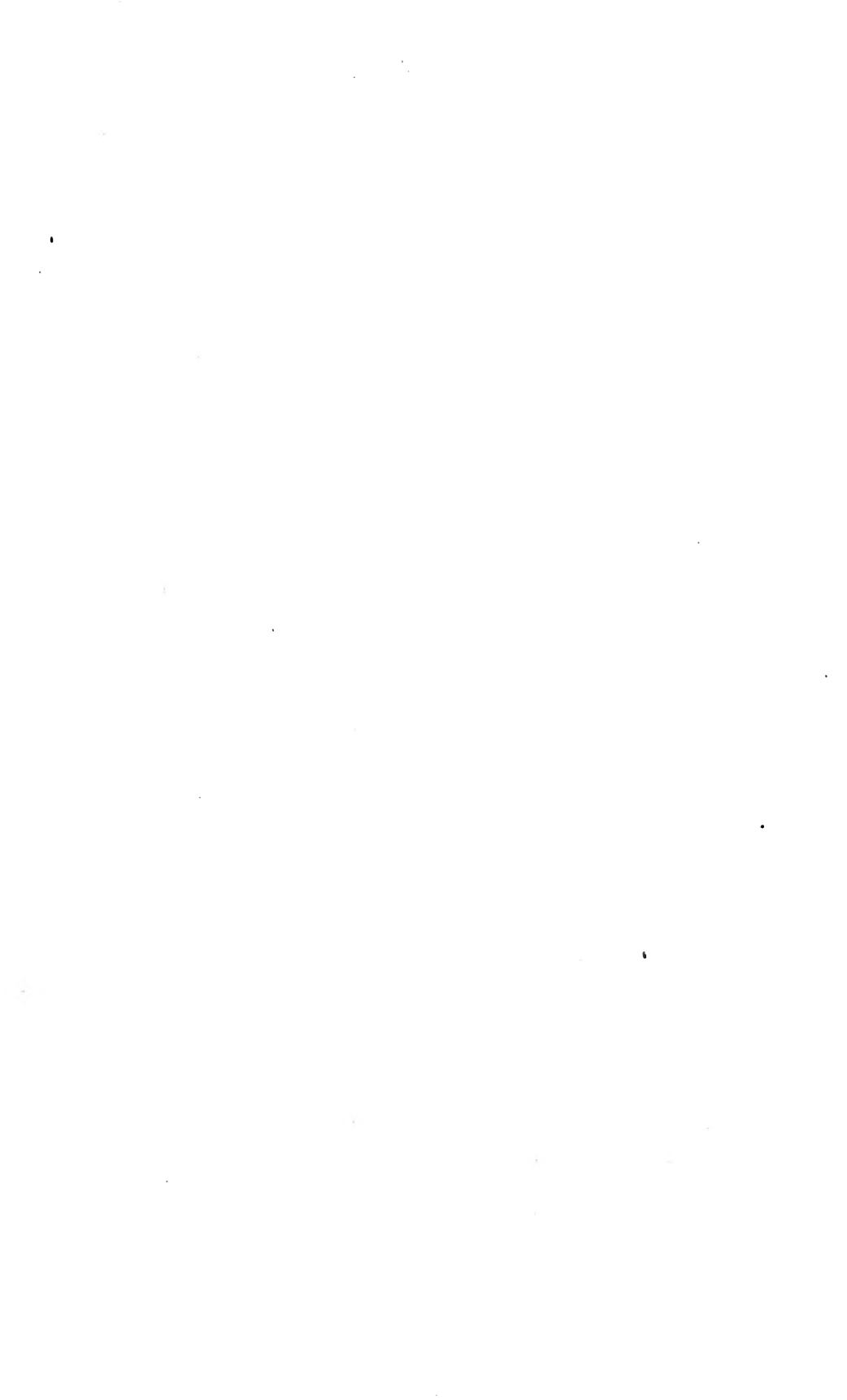
One specimen.

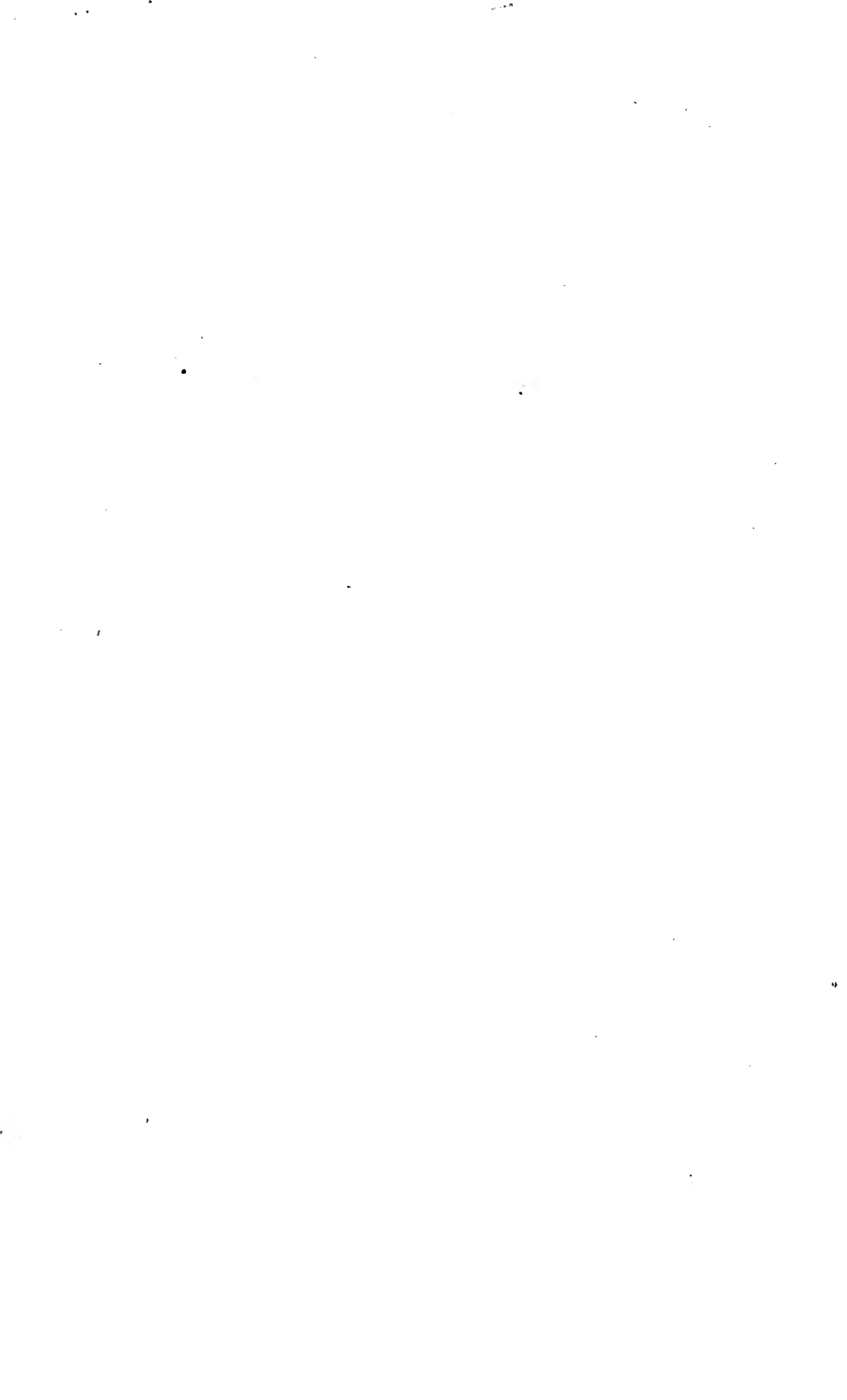
Length of shell 20 inches.

Free margins of anterior and posterior lateral shields strongly reverted outwards and notched, the posterior more so than the anterior. Supracaudal single, rather pointed, its free portion slightly curved under the body.

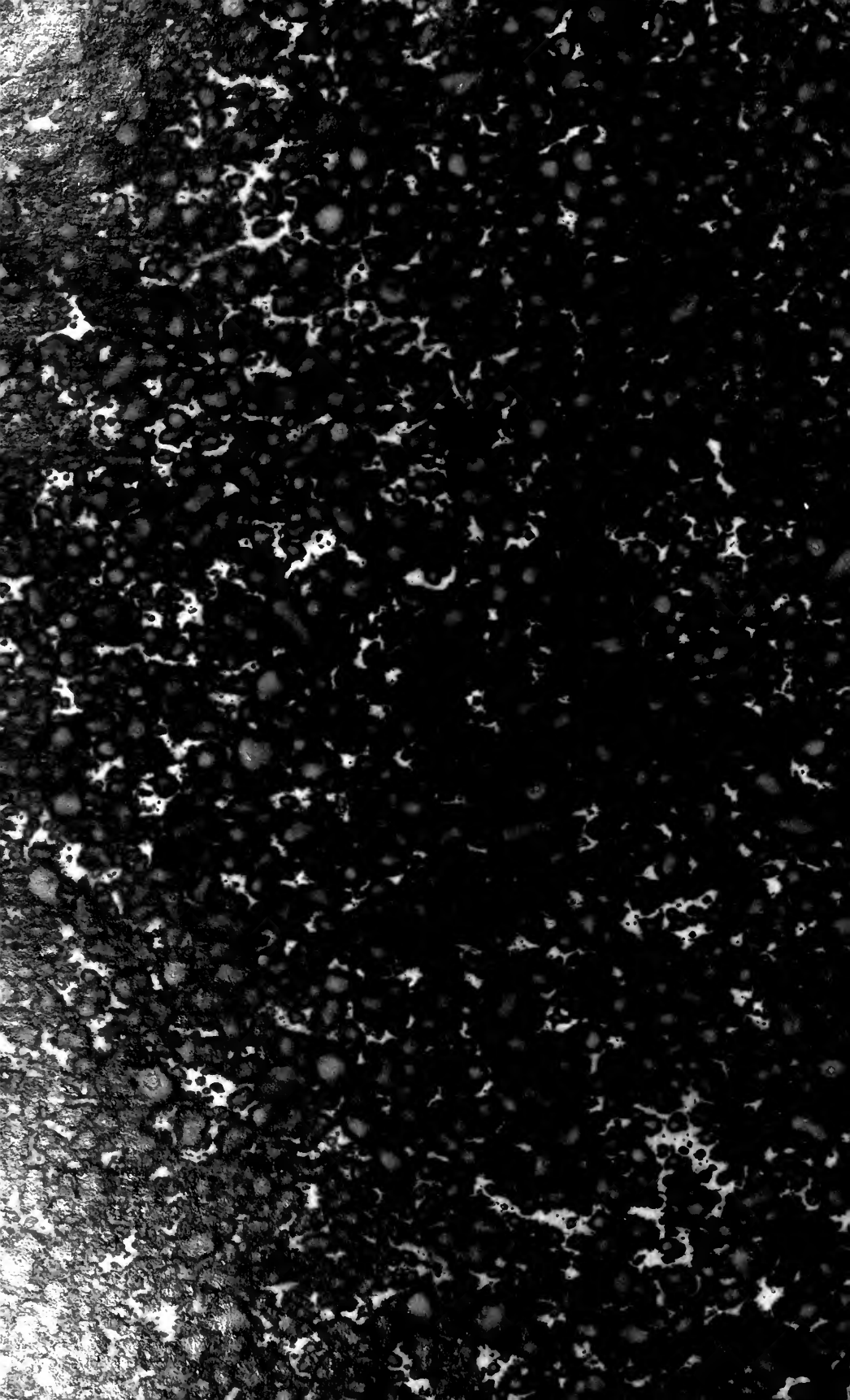
On Toyo plain and the country lying to the south we frequently met with this tortoise in all stages of growth, from the small individual to an enormous creature that looked like a house moving slowly along. It was the characteristic species of the land. Occasionally the huge shells would be found empty, the occupant having probably fallen a victim to some hungry lion, who had neatly scooped out the body of the reptile at the openings of the shell with his sharp, knife-like claws. As may be supposed all the movements of this tortoise are made with extreme deliberation, and I never saw one hasten his steps for any cause whatever. The specimen brought back was somewhat over half as large as many that were seen, but even it was a good load for a strong man. I met it one morning on Toyo just as I was leaving camp and strapping the head and legs in the shell, put it on the shoulders of one of my men and sent it to the tents.

D. G. E.











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