

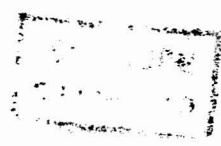
THE ANNALS
AND
MAGAZINE OF NATURAL HISTORY.

INCLUDING
ZOOLOGY, BOTANY, AND GEOLOGY.

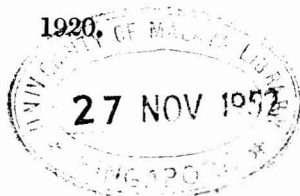
(BEING A CONTINUATION OF THE 'ANNALS' COMBINED WITH LOUDON AND
CHARLESWORTH'S 'MAGAZINE OF NATURAL HISTORY.')

CONDUCTED BY
WILLIAM CARRUTHERS, Ph.D., F.R.S., F.L.S., F.G.S.,
SIR ARTHUR E. SHIPLEY, G.B.E., M.A., Sc.D., F.R.S.,
AND
RICHARD T. FRANCIS, F.Z.S.

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largely pale; stigma dark brown; a broad brownish seam along vein *Cu* and narrower ones along the cord; veins dark brown, those of the costal region more yellowish; strong setæ in the apical cells of the wing from R_2 to Cu_1 . Venation: petiole of cell M_1 short; *m-cu* long.

Abdomen rather long for the male sex of this genus of flies (about 12 mm.). Basal abdominal segments dull yellowish, segments 3 to 8 more brownish; tergites with a narrow, more or less distinct, dark brown sublateral stripe; lateral margins of the segments pale. Hypopygium yellowish, the sclerites fused into a ring. Region of the ninth tergite produced caudad into a broad depressed median lobe whose posterior margin is gently concave or feebly notched, with numerous minute blackened spicules. Outer pleural appendage narrowed basally, broadened distally, the outer face densely covered with a long pale pubescence and a few long black setæ. Inner pleural appendage with a posterior fleshy pale lobe whose proximal face is provided with long pale setæ, the anterior blade compressed. Region of the ninth sternite profoundly incised beneath on the mid-ventral line. Eighth sternite unarmed, the dorsal margin with a row of about eight black spinous setæ. Ovipositor with the tergal valves acicular, the sternal valves shorter, compressed.

Hab. South Africa.

Holotype, ♂, Pretoria, Transvaal, December 5, 1918
(*A. J. T. Janse*).

Allotopotype, ♀, January 4, 1919.

Paratopotype, ♂, February 2, 1919.

V.—*A new Crab of the Genus Sesarma from Basra.*

By W. T. CALMAN, D.Sc.

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SPECIMENS of the crab described below have recently been presented to the Museum by Capt. C. L. Boulenger, who obtained them while on service in Mesopotamia. Other specimens from the same locality, and clearly of the same species, have been in the Museum for many years under the name "*Sesarma dehaani*, Milne-Edwards," given to them by Mr. E. J. Miers. A comparison with Japanese and Chinese specimens of *S. dehaani**, however, reveals certain definite, if not very striking, differences, and the Basra specimens are therefore recorded under a new specific name.

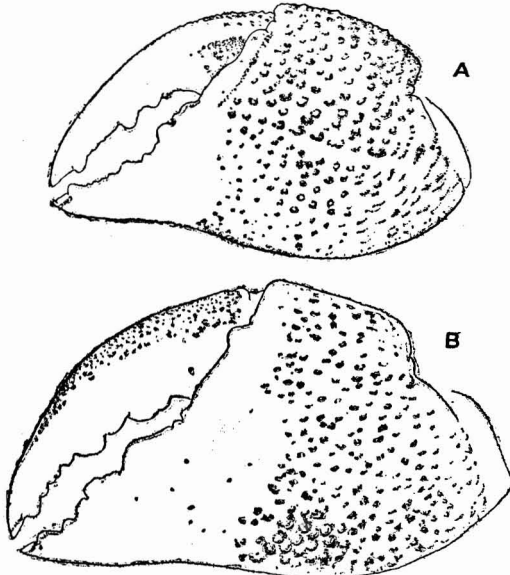
* This species has recently attracted attention as one of the intermediate hosts of the lung-trematode, *Paragonimus westermanni*.

Sesarma (Holometopus) boulengeri, sp. n.

Description.—Closely resembling *S. dehaani*, M.-E., from which it differs in the following characters:—

The carapace, as a rule, is slightly wider in specimens of similar size. The inter-regional grooves on the posterior part of the carapace are rather less deep. The sides of the front are distinctly concave.

The merus of the chelipeds has the anterior margin rather more expanded distally and more coarsely dentate; the distal



A. *Sesarma boulengeri*, male, holotype; Basra. Outer surface of left chela.
 B. *Sesarma dehaani*, Milne-Edwards, male; Hong Kong. Outer surface of left chela.

tooth on the upper edge is blunt and indistinct. The inner angle of the carpus—which in *S. dehaani* is rounded or bluntly angled, with sometimes an apical granule—is produced as a small but distinct and acute tooth*. The palm is more inflated, especially in the male; on its outer surface is an obscure row of granules about the middle; above this the granules are larger, becoming less prominent towards the upper margin; below the middle the granules are smaller

* A specimen collected by Major C. Christy, and received since this was written, has the carpal angle of one of the chelipeds blunt; in the other cheliped the angle forms an acute tooth as described above.

and more closely set, but there is no definite group of enlarged granules as in the male of *S. dehaani*. The convex lower margin of the palm becomes gently concave in passing into the lower margin of the immovable finger. The granules forming a row on the inner surface of the palm are large. The upper edge of the immovable finger is distinctly concave and the fingers gape when closed. The dactylus has on its upper surface a row—or, rather, a narrow central band—of tubercles which show a tendency to break up into obliquely transverse groups. In *S. dehaani* the lower margin of the palm passes in a straight line, or with only a very slight concavity, into the lower margin of the immovable finger, and the upper edge of the latter is straight or slightly convex; the fingers meet when closed, and the immovable finger in both sexes is much more broadly triangular than in the new species. The walking-legs are conspicuously less hairy than in *S. dehaani*, the longer hairs being less numerous and always shorter than the width of the segments. The meropodites are, as a rule, less broad than in *S. dehaani*.

The penultimate segment of the abdomen of the male is distinctly more than twice as broad at its anterior or proximal margin as it is long.

Localities. Ashar Creek, Basra; 2 ♂ (including holotype), 2 ♀, collected by Capt. G. L. Boulenger.

Basra; 1 ♂, 1 ♀, collected by L. E. Adams, B.M. Reg. 83. 23 (determined by E. J. Miers as *S. dehaani*).

Measurements of S. boulengeri and S. dehaani.

		Length of carapace in mm.	Ratio of exorbital width to length of carapace = 1.	Ratio of length of meropodite of penultimate leg to width = 1.
<i>S. boulengeri</i> :				
83. 23	♂.	23.0	1.108	1.85
	♀.	21.75	1.183	1.72
Boulenger	♂, holotype.	23.0	1.119	1.91
	♂.	17.75	1.154	1.71
	♀.	22.5	1.133	1.7
	♀.	19.5	1.192	1.69
<i>S. dehaani</i> :				
54. 10, North China.	♀.	21.5	1.104	1.89
	♂.	21.5	1.081	2.15
	♂.	23.0	1.108	2.21
61. 44, Hong Kong.	♂.	10.5	1.238	2.04
	♂.	22.5	1.088	2.11
753, Japan	♂.	27.75	1.045	2.32

Remarks.—The presence of a distinct tooth at the inner angle of the carpus of the chelipeds brings this species,

according to Tesch's key (Zool. Meded. Leiden, iii. 1917, p. 235), into the neighbourhood of *S. eydouzi*, M.-E., and *S. granosimana*, Miers. In the former species, as redescribed by Tesch (*l. c.* p. 150), the upper margin of the palm of the chelipeds is provided with a "distinct, horny-coloured, granulate crest," and the outer surface is very minutely granulated and has a short oblique ridge about the middle. In *S. granosimana*, of which I have examined the two syntypes, the outer surface of the palm is rather coarsely and evenly granulate, its upper margin has a low denticulate crest, the upper margin of the immovable finger is (except for a notch near the base) nearly straight, and the walking-legs have no brushes of short fur on the anterior surface of the carpus and propodus of the first three pairs as they have in *S. dehauni* and *S. bouleengeri*.

The specimens of *S. bouleengeri* presented to the Museum thirty-six years ago were accompanied by a note on the habits of the species by the collector, Mr. Lionel E. Adams, as follows:—"Collected at Basra, 60 miles up the Euphrates, in perfectly fresh water; burrows in the banks of the river and especially in a canal in connexion with the river, where it climbs the fibrous roots of trees laid bare to the extent of 6 or 7 feet at low tide (there being 4 or 5 feet of tide at Basra) by the aid of the large claws. Sometimes they ascend the trunks to the height of 10 feet."

VI.—*The Cirripede Genus Stramentum (Loricula): its History and Structure.* By THOMAS H. WITHERS, F.G.S.

[Plates III. & IV.]

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Introduction.

ALTHOUGH the cirripede generally known as *Loricula* is represented by more specimens approaching completeness than is any other Cretaceous cirripede, still our knowledge of its structure has not greatly advanced since 1851, when Darwin redescribed *Loricula pulchella*, G. B. Sowerby, the first-discovered member of the genus. Particularly does this apply to the number, structure, and homologies of the capitular valves and to the peduncle when complete, on which points there have since been wide differences of opinion.