

ZOOLOGISCHE MEDEDELINGEN

UITGEGEVEN DOOR HET

RIJKSMUSEUM VAN NATUURLIJKE HISTORIE TE LEIDEN

(MINISTERIE VAN CULTUUR, RECREATIE EN MAATSCHAPPELIJK WERK)

Deel 42 no. 6

8 maart 1967

ON A NEW SPECIES OF *UCA* FROM THE WEST INDIAN REGION (CRUSTACEA, BRACHYURA, OCYPODIDAE)

by

L. B. HOLTHUIS

Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands

A paper on the Ocypodid crabs of the Netherlands Antilles, which is now in preparation, was held up by the fact that one of the species of *Uca*, commonly found on practically all of the islands, proved to need a new name, which I expected to be introduced by Dr. Jocelyn Crane in her coming monograph of the genus *Uca*. However, Dr. Crane has now decided to refrain from giving a new name to this form. As several authors dealing with the species should like to have a valid name for it, the new name is now proposed here.

Uca burgersi new species

Gelasimus affinis Streets, 1872: 131 (not *Gelasimus affinis* Guérin, 1829).

Gelasimus vocator p.p. Kingsley, 1880: 147.

Uca mordax p.p. Rathbun, 1918: 391 (not text-fig. 166, nor pl. 134 fig. 3, 4).

Uca affinis Holthuis, 1959: 76; Holthuis, 1959a: 265, 266.

Holotype. — Plantage Knip, Westpunt, Curaçao, Netherlands Antilles; 15 December 1956; leg. A. C. J. Burgers and L. B. Holthuis (L. B. Holthuis no. 1023). — 1 ♂, carapace breadth 18 mm, carapace length 12 mm. Preserved in the collection of the Rijksmuseum van Natuurlijke Historie, Leiden, under Reg. No. Crust. D. 23012.

Additional material. — Numerous paratypes, among which the syntypes of *Gelasimus affinis* Streets, were examined. They originate from Key Biscayne, S. Florida (U.S.A.), the province of Veracruz (Mexico), and the West Indian islands of St. Thomas, St. Croix, Anguilla, St. Martin, Nevis, Barbuda, Antigua, Tobago, Trinidad, the Islas de Aves, Bonaire, Curaçao and Aruba. A more extensive enumeration of the material will be published

later. I am most indebted to various persons for providing me with this material, foremost among these Dr. P. Wagenaar Hummelinck of Utrecht, and Dr. H. O. von Hagen of Münster (W. Germany).

Discussion. — During a visit in 1952 to the U. S. National Museum, Washington, D.C., I could compare part of the present material with material from the West Indies identified by Dr. Mary J. Rathbun as *Uca mordax* (Smith). I am much indebted to Dr. Fenner A. Chace, Jr., for making Miss Rathbun's material available to me. The comparison showed my material to be conspecific with Miss Rathbun's, so that I then used the name *Uca mordax* for it. When, however, material of the true *Uca mordax* from the type locality (Belém, Brazil) and from Suriname later became available to me, a comparison of these South American specimens with those from the West Indies showed constant differences between the two and it became clear that the West Indian form must be considered a good species distinct from *Uca mordax* (Smith). The differences between the two species have already been enumerated elsewhere (Holthuis, 1959a: 265, 266), the present West Indian form there being indicated with the name *Uca affinis* (Streets).

The main distinctive characters of the present new species are the following. The carapace is convex, but not subcylindrical. The breadth of the front, when measured at the base (i.e. where the upper and lower margins of the eyebrow meet), is slightly more than $\frac{1}{3}$ of the anterior breadth of the carapace. The lateral margins are convex in their anterior part and make no sharp angle there. The eyebrow is inclined and clearly visible in dorsal view. The teeth on the lower margin of the orbit are distinct throughout, especially those in the external part being well developed. The suborbital area is usually naked except for a row of short hairs just below the lower orbital margin and a few scattered hairs in the external part.

The inner surface of the large cheliped of the adult male shows a distinct oblique carina bearing several, more or less distinct, rows of large rounded tubercles. This carina does not stop at the carpal cavity, but curves dorsally and follows the rim of the cavity. The dorsal marginal carina of the carpal cavity bears only a single row of tubercles, and curves downward from the dorsal margin of the cavity, following the rim. Where the two carinae meet, a field of pearly tubercles extends from the carpal cavity almost to the two ridges at the base of the dactylus. Of these two ridges the one nearest the dactylus is straight and only indistinctly tuberculated, it runs along the anterior margin of the palm; the other ridge is more strongly tuberculated and is distinctly curved, at first moving away from the first ridge and then curving back towards it. The outer surface of the palm is convex, the upper part is curved inward and actually forms the upper surface of the palm,

the dorsal carina of the palm then lying on the inner part of this upper surface. The outer surface of the palm is covered with low rounded granules, which are most distinct in the upper part. The lower margin of the palm bears a carina, which fades out at the base of the fixed finger. The tip of the fixed finger is trifid, the dactylus ends in a simple tip.

The upper part of the carpus and propodus of the second to fourth pereopods shows a short velvety pubescence, the lower part of these segments always is entirely bare. In the fifth pereopod no velvety pubescence is seen at all on these segments. Scattered strong bristles are present on the carpus, propodus and dactylus of the second to fifth pereopods. The merus of these legs shows no pubescence, only some transverse rows of bristles in the upper part. There is no essential difference in the pubescence of the legs of the males and females. In the males the merus of the fifth legs is about 2.8 times as long as wide, in the females 2.4 to 2.5 times.

The male pleopod is very similar to that of *Uca mordax*.

Size. — The carapace breadth of the largest male from the type locality measured almost 20 mm. The ovigerous females have a carapace breadth of about 18 mm.

Habitat. — The type locality is an old neglected coconut grove on the S.W. coast of Curaçao. At the time of collecting the soil was extremely wet, being partly even flooded. The *Uca* specimens were found on the muddy bottom under fallen coconuts. The species was very common there and a large series, including several adult males and ovigerous females, was collected.

The present species was first recognized as a distinct taxon by Streets (1872) who described it as new under the name *Gelasimus affinis*. Streets's description was based on material collected by H. E. van Rijgersma at the island of St. Maarten, Netherlands Antilles. His account of the large cheliped of the male fits well for the cheliped as found in the present species, but unfortunately the pubescence of the legs, one of the very important characters in this genus, is not dealt with by him. The identity of Streets's species, however, could be made fully certain, as his type specimens are still extant in the collection of the Museum of the Academy of Natural Sciences at Philadelphia (some duplicates being in the Leiden Museum). These specimens, forming Lot 753 of the Philadelphia Museum, were labelled "*Uca vocator* v. Martens". It is evident that when Kingsley studied the *Uca* material of the Philadelphia Museum for his 1880 revision of the genus, he removed Streets's original label of *Gelasimus affinis* and replaced it by his own new label bearing the name *Gelasimus vocator*.

Kingsley (1880: 147) namely placed *Gelasimus affinis* Streets in the synonymy of *Gelasimus vocator* (Herbst), incorrectly using the author's name Von Martens for the latter species. Rathbun (1918: 391) included *Gelasimus affinis* Streets with some doubt in the synonymy of *Uca mordax* (Smith) and indicated the types as being not extant. Kingsley's changing of the labels of the type lot evidently led her astray.

The rediscovery of Streets's types removed any doubt about the identity of his *Gelasimus affinis*, and consequently I used that name in my papers of 1959. Subsequently, however, I found that the name *Gelasimus affinis* Streets, 1872, is preoccupied by *Gelasimus affinis* Guérin, 1829. Guérin's name appears only in the legend of plate 1 of the Crustacean part of Duperrey's "Voyage autour du monde ... sur la corvette ... La Coquille ...", which was published in 1829 (see Holthuis, 1961). In his text, which was published as late as 1838, Guérin placed his *Gelasimus affinis* in the synonymy of *Gelasimus tetragonon* (= *Uca tetragonon* (Herbst)), where it has been left by all subsequent authors. There can be no doubt that, although *Gelasimus affinis* Guérin, 1829, is a junior subjective synonym of *Cancer tetragonon* Herbst, 1790, it is an available name, and being a senior primary homonym of *Gelasimus affinis* Streets, 1872, invalidates the latter name. As no other name is available for Streets's species, the new name *Uca burgersi* is now proposed here for it. The specific name is given for Dr. A. C. J. Burgers of the Zoological Laboratory at Utrecht, who has published several important contributions on the physiological aspects of hormonal regulations of *Uca* and other crustaceans. During his stay at Curaçao Dr. Burgers often assisted me in collecting Decapoda there; he obtained many interesting specimens among which the holotype of the present species. It is a great pleasure to show my appreciation for his help and interest by dedicating this new species to him.

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