

NEW SPECIES OF *CALLIANASSA* (DECAPODA, THALASSINIDEA)
FROM THE WESTERN ATLANTIC ¹⁾

BY

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In the course of prior research on mud shrimp of the family Callianassidae, specimens of three new species were obtained. The specimens were from widely separated localities which placed them beyond the scope of the previous problem.

I am indebted to several individuals who provided specimens of the new species. I would like to thank Richard Heard of the Marine Institute, Sapelo Island, Georgia, Albert Sanders of the Charleston Museum, Charleston, South Carolina, Dr. Enrique Boschi of the Instituto de Biología Marina, Mar del Plata, Argentina, and Dr. Herbert Levi of the Museum of Comparative Zoology, Harvard, for the loans of the various specimens and for the opportunity to describe these species.

Measurements given in the sections on material examined refer to the total length of the animal measured from the tip of the rostrum to the posterior margin of the telson. Pereiopods are abbreviated by using P and the appropriate number, e.g. P3 = third pereopod. The diagnoses can be used to differentiate the species from other western Atlantic species but not necessarily from all known species of *Callianassa*.

***Callianassa biformis* sp. nov. (fig. 1)**

Holotype. — ♂, 24 mm; Georgia, McIntosh County, south end of Sapelo Island, mouth of Doboy Sound; fine sand; lower intertidal; 1 June 1969; USNM 135052.

Paratypes. — 18 ♂, 15-29 mm, 8 ♀, 20-22.5 mm, 6 ♀ (ovigerous), 20.5-26.5 mm; data as in holotype; USNM 135053.

4 ♂, 27-32 mm, 1 ♀ (ovigerous), 26 mm; Georgia, McIntosh County, south end of Sapelo Island; fine sand over sand-mud; July 1969; USNM 135054.

1 ♂, 26 mm, 1 ♀ (ovigerous), 27 mm; South Carolina, Edisto Island, mouth of Big Bay Creek; 26 July 1937; H. M. Rutledge; Charleston Mus. 37.141.4.

1 ♀ (ovigerous), 24 mm; South Carolina, South Edisto Island, mouth of Big Bay Creek; mud and sand; 19 July 1937; H. M. Rutledge; Charleston Mus. 38.159.

Diagnosis. — Total length less than 40 mm. Ischium and merus of third maxilliped wide, combined length 1.1-1.4 times greatest width. Antennular peduncle noticeably shorter than antennal. Male with two forms of large cheliped, proximo-ventral hook on merus. Smaller hook or spine in central half of ventral

¹⁾ Contribution No. 1296 of the University of Miami, Rosenstiel School of Marine and Atmospheric Sciences. The work was supported in part by National Science Foundation Grant GB-7075X.

margin of merus of small cheliped. Postero-lateral corner of telson with two spinules, distal margin of telson convex, lacking median projection.

Description. — Rostrum triangular, acute, length 0.3-0.5 times length of eyestalks. Distinct lateral projections lacking, front beyond lateral margins of eyestalks broadly rounded. Eyestalks shorter than first antennular segment, length 1.3-1.7 times width, lateral margin slightly concave, broadly rounded distally, distal margin

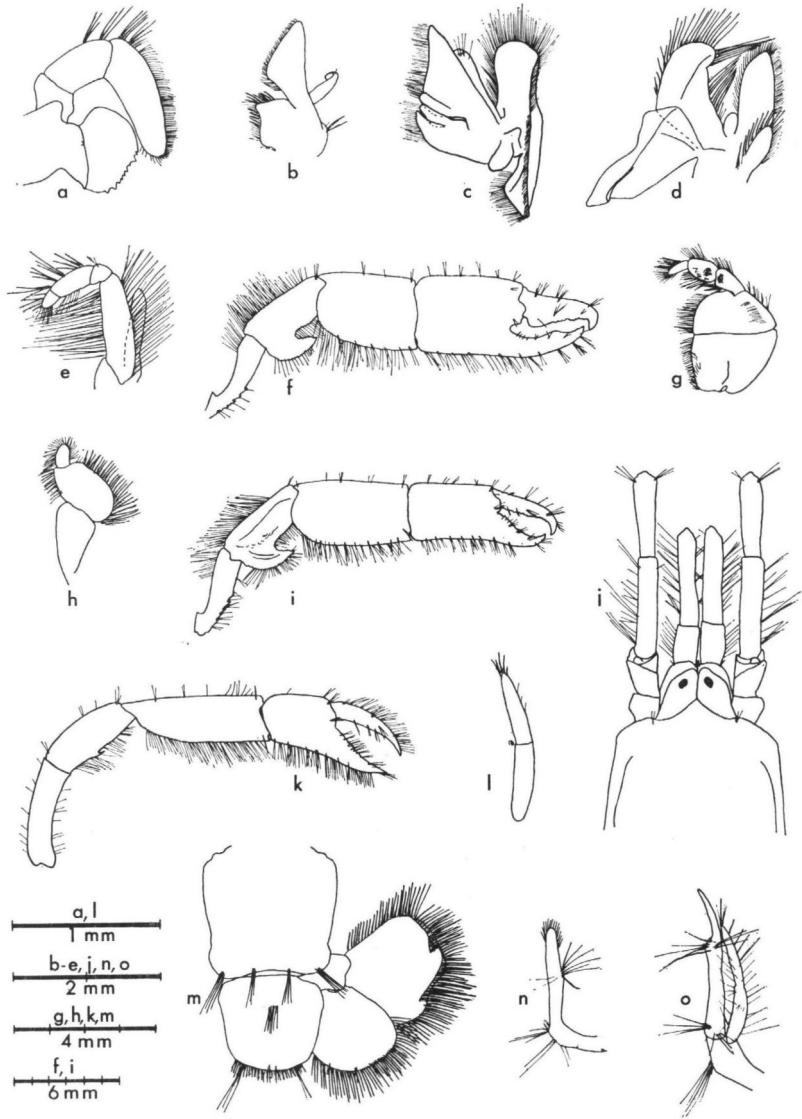


Fig. 1. *Callianassa biformis* sp. nov. (composite from Sapelo Island specimens). a, mandible; b, first maxilla; c, second maxilla; d, first maxilliped; e, second maxilliped; f, male large cheliped, first form; g, third maxilliped; h, P3; i, male large cheliped, second form; j, dorsum; k, small cheliped; l, male first pleopod; m, tail fan; n, female first pleopod; o, female second pleopod.

rounded, lacking projection; small rounded denticle on dorsal surface near mesial margin just anterior to pigmented area; pigmented area central, subterminal, covering 0.05 exposed dorsal surface of eyestalks.

Third segment of antennular peduncle 2.0-3.0 times length of second segment. Fourth antennal segment 0.95-1.2 times length of third antennular segment. Fifth antennal segment 0.7-0.9 times length of fourth segment. Antennal flagellum 3.1-5.3 times length of antennular. Segments of antennal peduncle with scattered tufts of setae. Segments of antennular peduncle with sparse fringe of elongate setae laterally.

Incisor process of mandible with 10 acute teeth along margin, molar process bifurcate ventrally, entire or with single weak tooth dorsally. First maxilla with wide basal endite, coxal endite with small distal lobe. Exopod of first maxilliped with broad distal lobe, epipod quadrate dorsally, basal endite narrowing distally. Small epipod present on second maxilliped, exopod shorter (0.9) than first segment of endopod. Merus and ischium of third maxilliped wide, combined length of both segments 1.1-1.4 times greatest width, mesial surface of ischium lacking denticles; propodus narrow, width 0.2-0.3 times width of ischium; width of dactylus 0.35-0.45 times width of propodus.

Large cheliped of male with two forms, stronger form as follows: ischium with distinct distally-directed spur or hook on proximo-dorsal margin, disto-dorsal margin with series of tufts of fine elongate hair separated by rounded denticles, ventral margin with series of five or six subacute spines in proximal half. Length of merus 2.25-2.7 times width, strong hook proximo-ventrally, margin of hook serrate and setose, acute distally, remainder of ventral margin with irregular rounded denticles, dorsal margin with rounded denticles on proximal half, separated by tufts of fine elongate hair. Length of carpus 1.05-1.1 times length of merus, longer medially due to convex proximal margin, length 1.15-1.35 times width, dorsal margin entire, ventral margin entire distally, serrate proximally. Length of palm 1.25-1.4 times width, 1.05-1.1 times length of carpus, ventral margin entire. Propodal finger with prominent rounded tooth centrally, inconspicuously serrate distally, upturned and subacute at tip. Notch between fingers extending proximally into palm. Dactylus hooked distally, length 0.7-0.75 times length of palm, longer than propodal finger, cutting edge with broad rounded tooth proximally, series of small rounded teeth along remainder of edge.

Ischium and merus of second form as in first. Carpus more elongate, length 1.4-1.85 times width, 1.1-1.35 times length of merus, ventral margin serrate proximally. Propodus narrower, length 1.3-1.65 times width, 0.7-0.9 times length of carpus. Propodal finger distinctly wider proximally, cutting edge with series of rounded denticles, no strong median tooth. Notch between fingers extending only slightly into palm. Dactylus narrow, length 0.7-0.85 times length of palm, hooked distally, cutting edge with series of small rounded teeth, no strong dentition.

Small cheliped of male identical to both chelipeds of female. Ischium lacking spur, spines, or dorsal elongate hairs; ventral margin entire. Merus lacking dorsal

hairs, ventral hook, and serrations; length 1.65-2.5 times width, single distally-directed spine on ventral margin in central third. Carpus narrow, elongate, length 2.3-3.45 times width, 1.5-1.6 times length of merus, margins entire. Palm sub-quadrangle, width increasing distally, length 0.45-0.5 times length of carpus. Propodal finger wide proximally, acute at tip, series of acute denticles on proximal half of cutting edge. Dactylus curved, about as long as propodal finger, length 1.2-1.5 times length of palm, cutting edge entire or with inconspicuous median serrations.

Chela of P2 asymmetrical, propodal finger much broader proximally than dactylus. Propodus of P3 bilobed, broadly rounded, length 1.8 times width. P4 simple, P5 chelate.

Branchial formula as follows; two arthrobranchs on third maxilliped and P1-P4, lacking pleurobranchs, podobranchs, or epipods, lacking rudimentary gill on second maxilliped.

First abdominal somite lacking transverse dorsal ridge, anterior margin widely rounded, lateral margins diverging. Lateral margin of sixth somite weakly indented in posterior quarter, antero-lateral margin slightly convex or straight, posterior corners rounded.

Telson slightly wider (1.0-1.3) than long, truncate posteriorly, lateral margins convex, posterior margin slightly convex, almost straight, fringed with plumose setae, no median tooth, two small spinules at each postero-lateral corner.

First pleopod of male uniramous, two-segmented, distal segment rounded at tip. Second pleopod of male lacking. First pleopod of female uniramous, two-segmented or fused, blade-like distally, rounded at tip. Second pleopod biramous, exopod shorter than endopod, blade-like, rounded distally; endopod two-segmented, both segments elongate, distal segment rounded at tip. Appendix interna of third through fifth pleopods conical, with hooks mesially.

Endopod of uropod rounded, length 1.0-1.25 times width, extending just beyond posterior margin of telson, distal margin fringed with plumose setae, fringe of simple setae dorsally immediately proximal to distal margin, no median ridge on dorsal surface. Exopod of uropod bilobed, posterior lobe fringed with single row of plumose setae, anterior lobe densely fringed with plumose setae, series of strong simple setae adjacent to indentation. Upper exopodal plate 0.9-0.95 times length of lower, no distinct suture or dorsal ridges. No basal spine.

Color. — Entire animal white when preserved in alcohol, unknown in fresh material.

Measurements of holotype. — Total length 24 mm, carapace length 6.5 mm. Length of telson 2.4 mm, width 2.5 mm. Length of endopod of uropod 2.2 mm, width 1.9 mm. Large cheliped, second form: length of merus 5.0 mm, width 1.9 mm; length of carpus 5.4 mm, width 3.5 mm; length of propodus 4.6 mm, width 3.4 mm; length of dactylus 3.8 mm.

Discussion. — Although this species has been present in collections for some

time, it has not been recognized as a separate species until recently. In the past, *C. biformis* has been confused with juveniles of *C. atlantica* Rathbun, a very similar species from the same general area. *Callianassa atlantica* and *C. fragilis* Biffar from the western Atlantic and *C. uncinata* H. Milne-Edwards and *C. harmandi* Bouvier from the Pacific show morphological similarities to *C. biformis*, but the spinules on the telson, the relatively short peduncle of the antennule, and the spine on the merus of the small cheliped can be used to separate the new species from the others.

After examining many other species of *Callianassa* from the western Atlantic and certain other areas, it was rather unexpected to find two forms of the large cheliped in the male and no large cheliped in the female. If some of the chelipeds had not been attached to animals, it would have been tempting to consider one form as female and the other as male. This would be consistent with the situation in species with sexually dimorphic chelipeds in that the general shape and the dentition of the second form are very much like those found in the large chelipeds of females of *C. fragilis* and several other species. At present, it is not possible to explain the existence of the two forms, but the full range of variation in the sizes of the chelipeds of both forms clearly shows that differences between juvenile and adult morphology are not sufficient to explain the situation. Observations of external features seem to rule out hermaphroditism and no parasites are evident. Hopefully further research will provide some clue.

Remarks. — This species is primarily intertidal but it is also found subtidally. It inhabits areas with fine sand and/or mud where the salinities in the bays and estuaries range from 12 to 30‰, averaging around 25‰, and with occasional reduction to 10‰ or less (R. Heard, personal communication).

Callianassa argentinensis sp. nov. (fig. 2)

Holotype. — ♀, 101 mm; Argentina, Provincia Santa Cruz, Rio Deseado, beach on the north coast of Isla del Rey, 47°42'S 66°W; sand-mud; 50 m; 4 July 1962; USNM 135055.

Paratypes. — 1 ♂, damaged, 1 ♀, 49 mm, 1 ♀, damaged; data as in holotype; Natural History Museum, Buenos Aires.

1 ♂, 143 mm; Argentina, Provincia Río Negro, Golfo San Catías, 43°15'S 64°54'W; under stones; 13 m; 26 June 1963; USNM 135056.

3 ♂, 24-43 mm, 2 ♀, 42-48 mm; Argentina, Provincia Buenos Aires, Riacho Jabali, Bahía San Blas, 40°30'S 62°20'W; 4 October 1968; USNM 135057.

Diagnosis. — Ischium and merus of third maxilliped narrow, combined length 2.8-4.25 times greatest width. Palm of cheliped with serrate dorsal margin; merus broad, convex dorsally, ventral margin with 2-3 acute tubercles. Telson shorter than uropods, distal margin with median concavity. Sternal plate and coxae of pereopods with numerous curved spines.

Description. — Front with three broad triangular projections. Rostrum 0.2-0.65 times length of eyestalks, acute at tip, anterior margin fringed with short hairs. Lateral projections just beyond lateral margin of eyestalks, rounded anteriorly. Dorsal oval strongly convex, scattered tufts of setae along either side of midline,

antero-median margin of oval produced into ridge terminating on dorsal surface of rostrum. Dorsal area posterior to cervical groove raised along midline with rounded prominence near posterior margin of carapace. Branchiostegite with numerous fine hairs, densest midway between linea and ventral margin.

Eyestalks extending almost to distal margin of first antennular segment, length

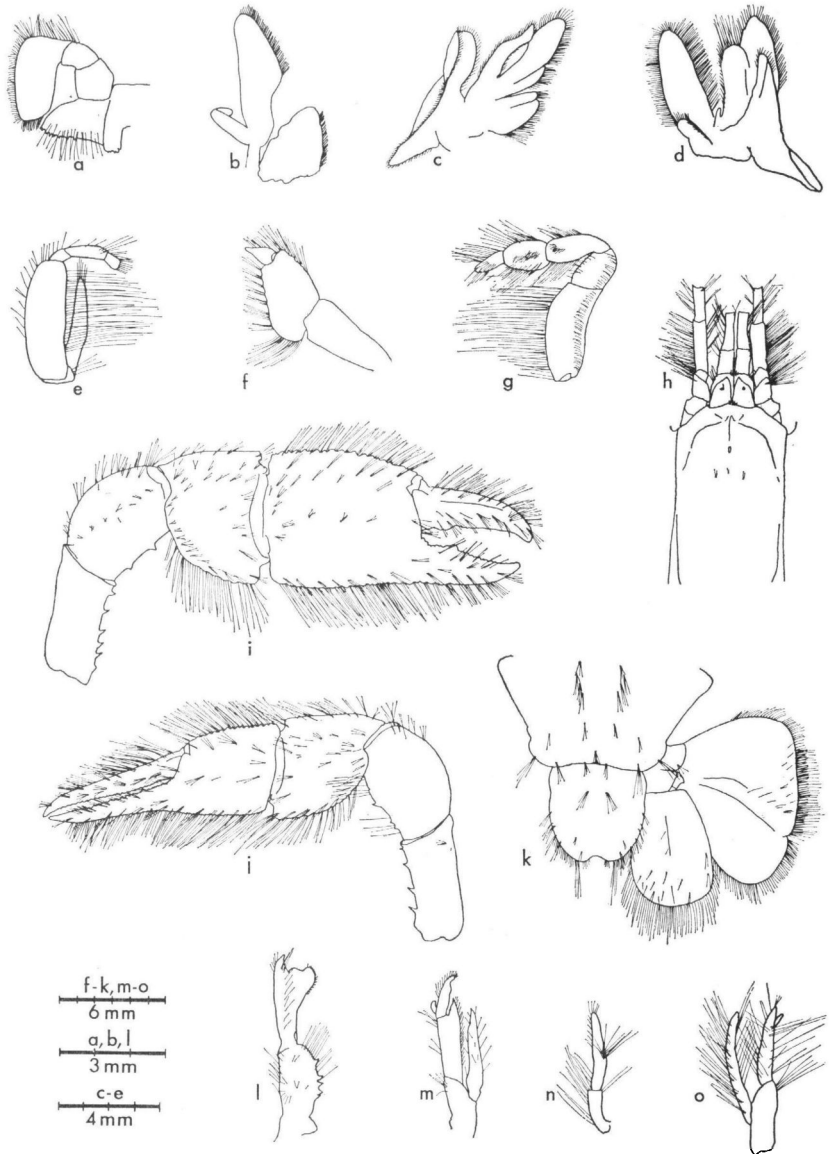


Fig. 2. *Callianassa argentinensis* sp. nov. (composite from Santa Cruz specimens). a, mandible; b, first maxilla; c, second maxilla; d, first maxilliped; e, second maxilliped; f, P₃; g, third maxilliped; h, dorsum; i, large cheliped; j, small cheliped; k, tail fan; l, male first pleopod; m, male second pleopod; n, female first pleopod; o, female second pleopod.

1.3-1.55 times width, lateral margins convex, smoothly rounded, distal margins concave laterally, mesio-distal subacute triangular projection curving outward; all specimens except one lacking pigmented area, pigmented area small, subterminal, central.

Third segment of antennular peduncle 1.4-1.75 times length of second segment. Fourth antennal segment 1.25-1.45 times length of third antennular segment. Fifth antennal segment 0.63-0.83 times length of fourth segment. Antennal flagellum 2.5-4.0 times length of antennular. Second and third segments of antennule with dense fringe of setae ventrally. Segments of antennal peduncle with similar dense fringe laterally.

Incisor process of mandible with about 11 acute teeth on dorsal half, molar process with six rounded denticles ventrally, remainder entire. First maxilla with narrow basal endite, only slightly expanded distally, lacking distal lobe on coxal endite. First maxilliped with distinctly bilobed exopod, narrow basal endite rounded distally, epipod broadly rounded laterally, quadrate distally. Exopod of second maxilliped 0.9-0.95 times length of first segment of endopod. Merus and ischium of third maxilliped narrow, elongate, combined length of both segments 2.8-4.25 times greatest width, no spines or denticles on mesial surface of ischium; propodus narrow, width 0.55-0.8 times width of ischium; width of dactylus 0.4-0.5 times width of propodus.

Ischium of large cheliped relatively short, wide, dorsal margin entire or with inconspicuous small spine and denticles proximally, ventral margin with five or six well separated spines. Merus wide, length 1.3-1.5 times width, dorsal margin smoothly rounded, ventral margin with 2-3 small spines on proximal half. Carpus short, length 0.5-0.9 times width, 0.75-0.95 times length of merus, dorsal margin entire or weakly serrate, lateral surface with scattered tufts of fine setae or hair, ventral margin inconspicuously serrate. Palm widest proximally, length 0.9-1.1 times width, 1.4-1.8 times length of carpus, dorsal margin serrate, fringed with tufts of fine hair, ventral margin serrate, fringed with fine hairs. Propodal finger broad, rounded at tip, cutting edge with proximal serrations, one or two strong triangular teeth medially, distal serrations. Dactylus strong, rounded at tip, length 0.7-1.0 times length of palm, slightly longer than propodal finger, cutting edge with strong rounded tooth proximally, inconspicuously serrate or entire on remainder. No sexual dimorphism evident.

Small cheliped similar. Ischium with 4-7 small spines ventrally. Merus with 2-3 ventral spines, length 1.3-1.6 times width. Carpus similar to that of large cheliped, slightly more elongate, length 1-1.25 times width, 0.9-1.05 times length of merus. Palm narrower, length 1.0-1.1 times width, 0.75-1.0 times length of carpus. Propodal finger narrower, more elongate, straighter than in large cheliped, cutting edge serrate, lacking strong dentition. Dactylus elongate, narrow, length 1.4-1.7 times length of palm, cutting edge serrate, lacking strong dentition.

Chela of P2 asymmetrical, much wider at base of fixed finger, strong dorsal spine on basis. Propodus of P3 bilobed, length 1.85 times width, dactylus nar-

rowing distally, subacute, two dorsal spines on basis. P4 subchelate, P5 chelate. Sternal plate and coxae of pereopods with numerous curved spines, particularly along ventral midline.

Branchial formula as in *C. biformis* except rudimentary gill present on second maxilliped.

First abdominal somite with weak transverse ridge dorsally, anterior area quadrate, posterior area wider, lateral margins diverging posteriorly, fringed with fine hairs, some specimens with series of spines below fringe. Dorsal surface of third somite with dense fringe of hair postero-laterally, scattered tufts elsewhere. Fourth somite with continuous covering of hair dorsally. Sixth somite trapezoidal in shape, much wider anteriorly, lateral margin indented forming rounded posterior corner, ventral surface of somite with several curved spines. Similar spines may occur on first through third somites in large specimens.

Telson slightly wider (1.0-1.33) than long, lateral margins convex, slight concavity in central third, posterior corners rounded, strong concavity in center of posterior margin, fringe of hair postero-laterally, scattered tufts of hair on dorsal surface.

First pleopod of male uniramous, wide proximally with mesial spines, narrowing medially, expanded distally, complex; folded slightly along midline, elongate lobe subacute at tip, curving toward shorter lobe, shorter lobe indented distally forming two rounded lobes. Second pleopod biramous, exopod blade-like, subacute at tip, endopod three-segmented; first segment acute distally, extending beyond articulation of second segment, second segment subrectangular, extending beyond distal end of first segment, third segment small, finger-like, with hooks at tip, articulating proximo-mesially on second segment. First pleopod of female uniramous, two-segmented, second segment blade-like, rounded at tip. Second pleopod biramous, exopod elongate, blade-like, rounded at tip, endopod two-segmented; first segment blade-like, second segment finger-like, with hooks distally, articulating mesially on first segment. Appendix interna of third through fifth pleopods an elongate shallow cup with hooks along mesial margin.

Endopod of uropod rounded distally, length 1.3-1.5 times width, 0.33-0.5 of its length extending beyond distal margin of telson, fringed distally with hairs, scattered tufts of hair on dorsal surface, weak median ridge. Exopod of uropod indented on distal margin, otherwise lacking distinct upper exopodal plate, suture weak, fringe of short setae distally, scattered tufts on dorsal surface, two small subacute basal spines present.

Color. — Yellowish-brown body, pinkish tint on pereopods and tail fan when preserved in alcohol, unknown in fresh material.

Measurements of holotype. — Total length 101 mm, carapace length 27 mm. Length of telson 10 mm, width 10.25 mm. Length of endopod of uropod 10.75 mm, width 8.25 mm. Large cheliped: length of merus 10.75 mm, width 7.75 mm; length of carpus 8.0 mm, width 12.5 mm; length of propodus 12.0 mm, width 13.0 mm; length of dactylus 10.5 mm.

Discussion. — The form of the ischium and merus of the chelipeds differs from that found in other species of western Atlantic callianassids with the exception of the species to be described below and *C. minima* Rathbun. In these cases, the ischium is shorter and broader and the merus is noticeably wider and more convex than in other species. For further morphological similarities of *C. argentinensis* see the discussion section after the description of the following species.

***Callianassa agassizi* sp. nov. (fig. 3)**

Holotype. — ♀ (ovigerous), 111 mm; Venezuela, Cumana; L. Agassiz; MCZ 12872.

Paratypes. — 1 ♂, 67 mm, 2 ♀, 107-112 mm, 1 ♀ (ovigerous), 103 mm; data as in holotype.

Diagnosis. — Rostrum spinous, length 0.45-0.75 times length of eyestalks. Ischium and merus of third maxilliped narrow, combined length 5.0-5.65 times greatest width. Dorsal margin of carpus and palm in both chelipeds with strong acute denticles. Sixth abdominal somite with acute antero-lateral projections. Distal margin of telson smoothly rounded.

Description. — Rostrum elongate, subacute, length 0.45-0.75 times length of eyestalks, flattened dorso-ventrally except for dorsal ridge extending posteriorly onto dorsal oval. Lateral projections rounded, inconspicuous, situated over lateral margin of eyestalks. Dorsal oval with scattered tufts of hair, continuation of rostral ridge in anterior half, ending as rounded prominence. Similar stronger prominence on midline of dorsal carapace near posterior margin.

Eyestalks elongate, length 1.65-2.15 times width, not reaching distal end of first antennular segment, lateral margin more or less straight, smoothly curving distally, rounded mesio-distal projection; cornea subterminal, central, specimens lacking pigment.

Second segment of antennule 0.45-0.65 times length of third segment. Fourth antennal segment 1.5-1.6 times length of third antennular segment. Fifth antennal segment 0.5-0.65 times length of fourth segment. Antennal flagellum 2.85-3.15 times length of antennular. Antennular peduncle not extending beyond tip of fourth antennal segment. Segments of antennal peduncle with dense lateral fringe of elongate hairs. Antennular peduncle with moderately dense fringe on lateral surface.

Incisor process of mandible with 10 irregular teeth along edge plus single ventral tooth set between edge and molar process, molar process with five small teeth; distal segment of palp broad, distal margin straight. First maxilla with narrow basal endite, coxal endite lacking distal lobe. Second maxilla with elongate narrow lobes on coxal and basal endites. Basal endite of first maxilliped elongate, narrow, exopod expanded proximally. Exopod of second maxilliped 0.9 times length of first segment of endopod. Merus and ischium of third maxilliped elongate, combined length 5.0-5.65 times width of merus, mesial surface of ischium with series of about 25 acute denticles; width of propodus 1.0-1.05 times width of merus; width of dactylus 0.5-0.55 times width of propodus.

Ischium of large cheliped with series of 11-16 subacute denticles ventrally, distal

denticles strongest. Merus wide, length 1.45-1.5 times width, dorsal margin strongly convex with single acute or rounded projection distally, ventral margin with 5-6 subacute denticles on proximal half. Carpus short, length 0.6-0.7 times width, 0.65-0.75 times length of merus, ventral margin entire, dorsal margin with

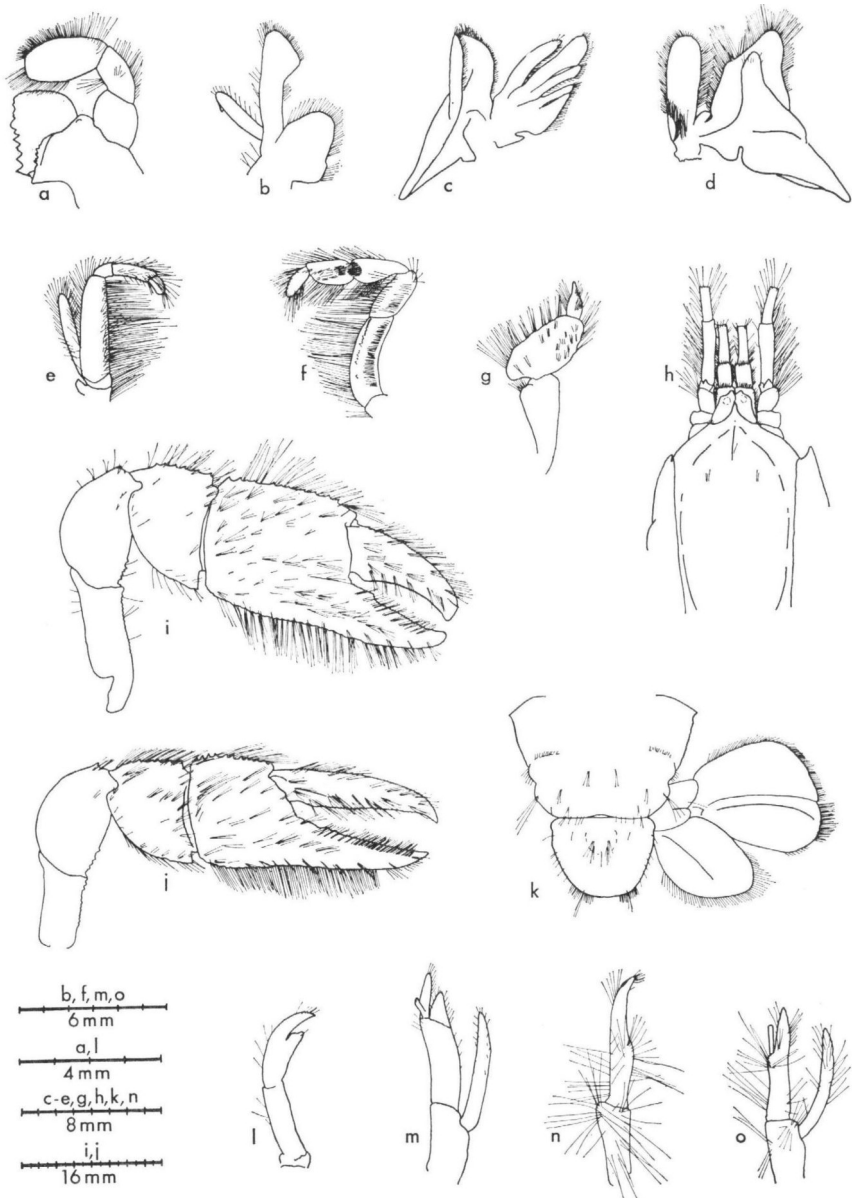


Fig. 3. *Callianassa agassizi* sp. nov. (composite from Cumana specimens). a, mandible; b, first maxilla; c, second maxilla; d, first maxilliped; e, second maxilliped; f, third maxilliped; g, P3; h, dorsum; i, large cheliped; j, small cheliped; k, tail fan; l, male first pleopod; m, male second pleopod; n, female first pleopod; o, female second pleopod.

6-8 strong acute projections, lateral surface with scattered tufts of hair. Length of palm 1.55-1.8 times length of carpus, 0.9-1.05 times own width, ventral margin serrate with interspersed tufts of hair, dorsal margin with 9-14 strong projections, lateral surface with numerous tufts of elongate hair. Propodal finger strong, curving upward distally, cutting edge with numerous rounded serrations, single strong triangular tooth in proximal third. Dactylus strong, length 0.9-1.1 times length of palm, cutting edge with numerous rounded serrations, 2-5 projections proximo-dorsally, elongate hairs very evident. No sexual dimorphism noted.

Ischium and merus of small cheliped as in large, length of merus 1.45-1.6 times width. Carpus as in large cheliped, length 0.75-0.9 times width, 0.7-0.8 times length of merus, ventral margin entire in all but one specimen, exception with acute laterally-directed serrations. Palm as in large cheliped, length 0.7-0.8 times width, 0.95-1.15 times length of carpus. Propodal finger elongate, not as strong as that of large cheliped, cutting edge inconspicuously serrate, single triangular tooth in proximal third. Dactylus elongate, length 1.8-2.1 times length of palm, cutting edge weakly serrate.

Chela of P2 asymmetrical, propodal finger flattened, wide proximally. Propodus of P3 with distinct proximal lobe, length two times width, dactylus narrowing distally, coxa with small spine on mesial surface. P4 subchelate, dactylus narrowing distally. P5 chelate. Sternal plate with single strong rounded tubercle laterally near coxae of P3.

Branchial formula as in *C. biformis*, small lamellate arthrobranch present on second maxilliped.

First abdominal somite with weak transverse ridge dorsally, margin of anterior section rounded, widening posteriorly, antero-lateral corners of posterior section with short series of tufts of setae. Second somite short, postero-lateral area of carapace expanded to form rounded flap over portion of third somite. Sixth somite with small antero-lateral projections, lateral margin fringed with setae, transverse row of setae on either side of somite in posterior half.

Telson wider (1.05-1.1) than long, widest proximally, two small proximal lobes on lateral margin, remainder of lateral margin and distal margin smoothly rounded, fringe of setae latero-distally, dorsal surface with prominent convex area proximally, more or less smooth otherwise.

First pleopod of male two-segmented, elongate acute lobe of distal segment curving over shorter bilobed section. Second pleopod of male biramous, exopod blade-like, narrowing distally, endopod four-segmented; proximal segment flattened, rectangular, second segment subtriangular, third segment articulating at same level as second, narrow and elongate, fourth segment small, finger-like, with hooks distally. First pleopod of female two-segmented, distal segment blade-like, rounded at tip. Second pleopod of female biramous, exopod blade-like, endopod two-segmented; first segment blade-like, narrowing distally, second segment finger-like. Appendix interna of third through fifth pleopods an elongate shallow cup with hooks along mesial surface.

Uropods extending beyond distal margin of telson. Length of endopod 1.3-1.5 times width, fringed with setae distally. Upper exopodal plate as long as lower plate, both thick distally, fringed with numerous setae, suture distinct, one heavy basal projection present.

Color. — Yellowish-brown in alcohol, unknown in fresh material.

Measurements of holotype. — Total length 111 mm, carapace length 30 mm. Length of telson 8.25 mm, width 9.1 mm. Length of endopod of uropod 9.4 mm, width 6.75 mm. Large cheliped: length of merus 9.9 mm, width 6.9 mm; length of carpus 7.25 mm, width 10.75 mm; length of propodus 11.25 mm, width 12.0 mm; length of dactylus 11.5 mm.

Discussion. — *Callianassa agassizi* shows morphological similarities to *C. argentinensis* in the form of the third maxillipeds, the chelipeds, and all pleopods except those of the male's first abdominal somite. The similarity of the pleopods suggests that the species may be more closely related to each other than to other species in the western Atlantic. In most of the other species, the pleopods are distinct enough to allow specific identifications to be made.

ZUSAMMENFASSUNG

Bei der Durchsicht mehrerer Museumssammlungen wurden drei neue Arten der Gattung *Callianassa* gefunden. Diese werden beschrieben. Eine Art, *C. biformis*, stammt von der gut durchforschten Ostküste der U.S.A. *C. argentinensis* und *C. agassizi* kommen von den Küsten Argentiniens bzw. Venezuelas. Beide Gebiete sind noch relativ unerforscht. Die Callianassiden umfassen im westlichen Atlantik nun 22 Arten.