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TWO NEW SPECIES OF AEGLEA FROM CHILE

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By

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Hitherto three species of *Aeglea* have been reported from Chile:

- (1) *Aeglea* (*) *laevis* (Latreille) (M. Edw., Hist. Nat. Crust., Vol. 2, p. 260. "Habite les côtes du Chili").
- (2) *Aeglea denticulata* Nicolet (*in* Gay, Hist. Chile, Zool., Vol. 3, p. 200, 1849. "Esta especie se halla en la República").
- (3) *Aeglea intermedia* Girard (U. S. Naval Astronomical Exped., Vol. 2, p. 255. "Specimens were collected in the upper affluents of the Rio de Maypu, 2,000 feet above the level of the sea, near Santiago").

Almost without exception, more recent authors have considered both the second and third of these synonyms of *Aeglea laevis*.

At this time I have in progress studies on an extensive series of specimens obtained from many sources, in part borrowed from other museums. From what I have so far learned, both *A. denticulata* and *intermedia* very properly may be valid species, and still other species of *Aeglea* occur in Chile.

While travelling in South America in 1925-27 under the auspices of the Walter Rathbone Bacon, Scholarship of the Smithsonian Institution, I myself had the great pleasure of collecting one such species in the environs of the city of Concepcion, January 13 and 14, 1927, in company with the estimable Dr. Carlos Oliver Schneider, Director of the Museo

(*) This genus, founded by Leach (Diet. Sci. Nat., Vol. 18, p. 49, 1920), is spelled **Aegla** by him, not **Aeglea**. This last, perhaps regrettably, became the spelling commonly used beginning with Desmarest (Considérations Générales . . . des Crustacés, p. 186, Paris, 1825). No other bibliographic references are given here, as a more detailed account of this genus will appear in a larger paper now in preparation.

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Concepcion, and our mutual good friend, Señor Carl Junge. This species is described as *Aeglea concepcionensis* new species, both in memory of that most enjoyable outing and in honor of the city near which it was found. The second new species, *A. abtao*, was collected in the course of the investigations carried on in South America by the late Dr. C. H. Eigenmann. The specimens were taken at Abtao, Chile, February 22, 1919.

Aeglea denticulata Nicolet has yet to be taken again. Nevertheless, it should be readily recognizable by the bold longitudinal ridge on the carapace depicted by Nicolet which, in effect, carries the rostral carina backward to the posterior margin of the carapace.

Girard's *A. intermedia* also remains to be rediscovered, but in his statement that the carpus is provided with two rows of subconical tubercles (teeth) upon its upper and inner portion we have a characterization at once distinguishing his species from the others known from Chile.

Aeglea concepcionensis new species, Lám. V, fig. 1.

Description.— A fairly large species attaining a length of carapace and rostrum together of at least 33 mm.

Carapace moderately convex. Rostrum somewhat elongate-triangular-tongue-shaped, exceeding the eyestalks by not quite twice the length of the cornea, inclined downward but anteriorly recurved, transversely flattened, excavate either side of median carina. Crest of rostral carina furnished with two rows of tiny corneous scales situated fairly close together behind the level of the posterior margin of the orbit and very closely juxtaposed, or at times even intermingled or imbricated, anterior to that level, and in the anterior half of the free portion of the rostrum apparently becoming a somewhat broken or irregular single line of scales; the more prominently raised portion of the carina extends backward about to the level of the epigastric prominences of the carapace, posterior to these the carina is less prominently marked to between the anterior margins of the protogastric lobes where the carina fades out. Epigastric prominences blunt-nodular, anterior margins of protogastric lobes scarcely or poorly marked, obsolescent, and not scaled. Areola short and wide, squat looking.

Orbits of good size, fairly deep, typically without an orbital spine, and usually with scarcely any or only rarely a very slight interruption or offset in the outward sweep of the orbital margin at the point where it passes over into the inner

margin or slope of the anterolateral spine of the carapace. In the very largest specimens, such as the type, there is more of an offset than in any other specimens of the species that I have seen. There may be one or a few tiny spinules along the outermost portion of the orbital margin, but in no sense is any of them of sufficient consequence to be considered as representing an orbital spine.

Anterolateral spine of good size, anterior extremity reaching nearly or about to the level of the middle of the cornea; the dorsal surface of the anterolateral lobes is much flattened, almost, or slightly, excavate, giving the impression that the anterolateral spines are inclined upward to a greater extent than in any other species of *Aeglea*. Anterolateral angle of first hepatic lobe slightly scabrous and more or less rounded off; just within and below the angle of the right first hepatic lobe of the type is a low projection or tubercle, which is occasionally present in other specimens on one or the other side or sometimes on both sides, second and third hepatic lobes slightly indicated, in some specimens only scarcely so.

The larger hand is of good size, moderately inflated or swollen; on the upper surface of either palm there is a faint, obsolescent, yet plainly discernible, low, obliquely longitudinal, narrow swelling running from near the outer posterolateral angle of the palm to the posterior margin of the sinus between the fingers; this ridge is scabrous like the rest of the hand, and is more evident in the smaller specimens than in the very largest ones. On the outer margin of the movable finger of either hand, near its posterior end, there is a well defined lobe or projection, anteriorly angled and carrying there a small spine or spinule; lobe otherwise scabrous, or very small-spinulose. What there is of a palmar crest (on inner margin of palm) is broadly and shallowly serrate, fairly thin-edged, and furnished with a scattering of small spinules; the crest runs back from below the movable finger to form a higher crest at the posterior end than at the anterior end; posteriorly the crest is somewhat troughed or excavate with upturned margin, standing well away, almost at a right angle, from the inner margin of the palm proper just in advance of the articulation with the carpus.

Carpus of either cheliped carries two longitudinal ridges, the first is the usually somewhat nodulated ridge with more or less short transverse rows of small corneous scales situated above the spines arming the inner margin of the carpus; the second, scarcely to be called a ridge, is on the mid-dorsal surface of the carpus. It consists of an irregular, scattered row

of slight elevations anteriorly scabrous. Antero-internal angle of carpus of cheliped fairly blunt, scarcely subacute, sparsely small spinulated. Dorsal longitudinal margin of merus armed with a row of corneous tipped or blunted, somewhat conical tubercles which become more conically spine-like as they approach the distal margin of the joint. Upper margin of merus of first ambulatory legs furnished distally with some inconspicuous, short, slender, procumbent corneous tipped spines hidden in the marginal fringe of hair.

Holotype.— A large male measuring 33 mm. in length of carapace and rostrum, U. S. N. M. no. 79078.

In all, I have examined about 30 specimens of this species. Several are of good size, the majority, however, are of medium or small size. In company with Dr. Carlos Oliver Schneider and Señor Carl Junge, I collected the specimens near Concepcion, Chile, January 13 and 14, 1927.

Remarks.— In a general way and in many particulars, all species of *Aeglea* bear one another a very close resemblance, so much so that the genus has been considered monotypic by nearly every author in the past. It is believed that the line drawing accompanying the brief diagnosis given above recognizably portrays this species.

Although a great many *Aegleas* from many localities have been examined, no differences of particular note have been observed in the tail fan, or indeed in the abdomen as a whole, except in the contours of the epimera of the second (in lateral view, apparent first) abdominal somite. In the species under discussion the anterior dorsal angle of this "first" epimeron is produced to form a tiny spine-tipped angle.

Only one ambulatory leg, the first on the left side, has been sketched, chiefly to show the proportions of the several joints, but these proportions have not as yet proven to be of specific value. There seem to be some differences in the relative proportions of the protruding sperm ducts on the reduced fifth legs. The importance of these is being investigated.

Aeglea abtao new species. Lám. V, fig. 2.

Description.— A species of moderate size, attaining a length of carapace and rostrum together of at least 26 mm.

Carapace moderately convex. Rostrum elongate triangular, but not particularly long, exceeding eyestalks by less than the length of the cornea, sometimes by no more than half the length of the cornea, fairly straight, not anteriorly reflexed, sharply triangular, transversely flattened and only moderately troughed or excavate either side of median carina. Crest

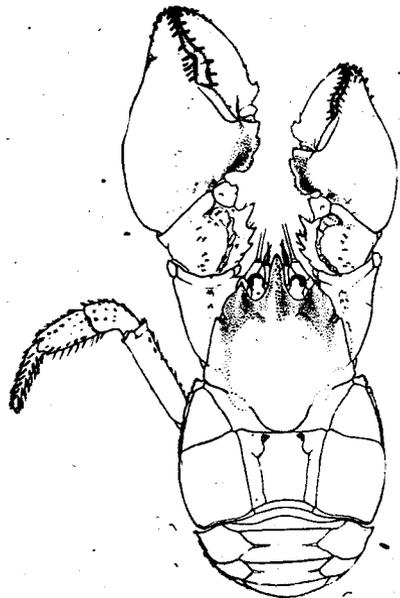


Fig. 1.—*Aeglea concepcionensis*.

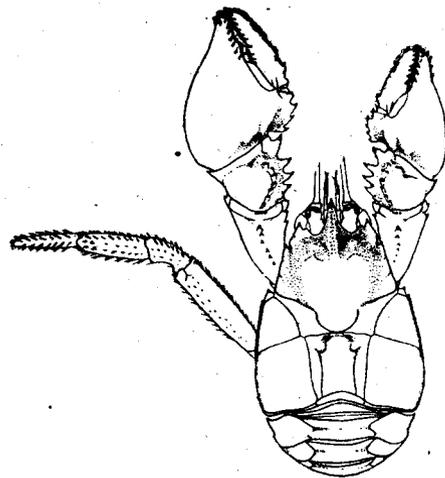


Fig. 2.—*Aeglea abtao*.

of rostral carina, which almost fades out near the distal end of the rostrum, scaled much as in *A. conceptionensis*; raised portion of carina becomes broader and blunter posteriorly, extending backward about to the anterior margin of the protogastric lobes. Epigastric prominences low and blunt, anterior margins of protogastric lobes not particularly set off from the rest of the carapace, but nevertheless well marked by a row of thick, close-set corneous scales much larger than the tiny scales seated in most of the punctae of the anterior portion of the carapace. Areola moderately broad.

Orbits fairly shallow, orbital sinus set off from the distinct and well formed, though small extra orbital-sinus by a not large, but yet well developed orbital spine.

Anterior extremity of relatively small antero-lateral spine scarcely falling short of, or scarcely reaching the posterior margin of the cornea; anterolateral lobes of carapace not particularly flattened; the anterolateral spines of this species are among the most reduced in size of any species of *Aeglea*. First hepatic lobe like rest of lateral margin of anterior portion of carapace minutely spinulated, a slightly larger corneous spinule tips the subacute anterolateral angle of this lobe; second and third lobes indicated by slight notchings of the lateral margin.

Larger hand of good size, swollen, no low ridge as in *A. conceptionensis* apparent. There is an evident, though reduced lobe on the outer margin of the movable finger near its base, anteriorly the lobe is small spined. Palmar crest well formed but not high, sharply serrate, serrations spinulated, small spine tipped; in thickness crest tapers more or less evenly from base to margin, dorsal surface not impressed or excavate. No evident ridging on dorsal surface of carpus other than the usual transversely scabrous, somewhat nodulated ridge above the spined inner margin of the joint. Anterointernal angle or lobe of carpus armed with an acute corneous spine of good size almost invariably accompanied by a smaller spine lying immediately against the posterior border of the larger spine; one or two additional still smaller spine or spinules may be inserted on the posterior margin of the carpal lobe. Dorsal longitudinal margin of merus of chelipeds armed with a row of conical tubercles tipped with several or a few closely juxtaposed, pointed corneous scales.

Holotype.— The largest of seven (5 males 2 females) specimens, a male measuring 26.6 mm. in median length of carapace and rostrum together, U. S. N. M. no. 79079.

The smallest specimen is also a male and measures about

11 mm. in median length of carapace and rostrum. The specimens were collected by the late Dr. C. H. Eigenmann at Abtao, Chile, February 22, 1919.

Remarks.— This species differs at once from the preceding by the fact that it possesses orbital spines and definite, though small extraorbital sinuses. Direct comparison with the other species so far recorded from Chile is less easy, but the longitudinal ridging of the carapace of *A. denticulata* seems to be characteristic of that species alone; while the second row of conical spines on the carpus of the cheliped above that arming the inner margin of the same joint distinguishes *A. intermedia* from its Chilean congeners equally well. By virtue of these characters these two species may also be distinguished from *A. laevis*. I base my findings on several specimens from Santiago which I believe represent this last named species and which I was enabled to borrow for study from the Museum of Comparative Zoology at Harvard University through the kindness of Dr. Fenner A. Chace, Jr., Curator of Crustacea.

In turn, *A. laevis* differs from the first of our two new species, which it in general resembles, in the character of the rostrum, in normally possessing a small orbital spine or spinule even though the extra-orbital sinus may be reduced to a small notch and by the fact that at the point where the outer end of the orbital margin meets the inner slope or margin of the anterolateral spine there is always a pronounced offset, whether the orbital spine or spinule is present, as it usually is, or absent, as it may occasionally be. The rostrum of *A. laevis* is narrower, more lingulate, and less triangular than that of *A. conceptionensis*.

From the second of our new species, *A. abtao*, which also has an orbital spine and small extra-orbital sinus, *A. laevis* distinctly differs in shape of rostrum. This in *A. laevis* is narrow-lingulate, with in part more or less subparallel margins and a blunted, obscurely and microscopically scaled carina.



Extracts from letters from Dr. Carlos E. Porter (editor of Rev. Chilena Hist. Nat.) to Dr. Waldo L. Schmitt (U. S. National Museum).

Feb. 25, 1941:

"I ought to answer you immediately in the part of your letter [of Feb. 5, 1941] regarding the no. of the vol. & page where the diagnosis of the *Aeglea* (n. spp.) are to appear.

"In the Printing Office & Press of the University of Chile there have been great retard in the printing of journals and works because of difficulties in obtaining money from the Government, the strike of the workmen, etc. I am very sorry with this.

"But I can tell you that your paper is included among the first articles of vol. (___year) 44 (1940). Meanwhile [until] it is printed, it cannot be said the pages."

April 20, 1942:

"As you are going to see by the pages of my Journal, Rev. Ch. Hist. Nat., año XLIV (1942), your valuable paper entitled 'Two new species of *Aeglea* from Chile' begins on page 25 and ends on page 31."