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CHARLES WILKES, U.S.N.

ATLAS.

CRUSTACEA.

BY

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EXPLANATION OF PLATES.

PREFATORY REMARKS.

After the engraving of the Plates of this Atlas was completed, a large part of the original drawings were destroyed by fire in Philadelphia. In consequence of this catastrophe, many of the following Plates, which were to have been coloured from the missing drawings, are issued unfinished. Some of the figures here engraved represent known species, the colours of which had either not been given by other authors, or only from dead and faded specimens: as the coloured originals are gone, these figures have lost the principal part of their interest. These facts explain some discrepancies between the text of this Report and the Atlas.

The drawings for this Atlas, issued at this late date, were to a large extent made during the years 1838 to 1842, in the course of the cruise of the Expedition; and in the history of the Science, they would properly have their place in that period.

In closing my labours in connection with the Exploring Expedition, I take this opportunity to observe that, in the preparation of my several Reports, and the Atlas, with which they are illustrated, I have had, half a dozen plates excepted, neither the assistance of an amanuensis nor a draughtsman. The plates, however, owe much to the artistic skill and taste of Mr. Joseph Drayton, Artist of the Expedition, who has superintended the engraving and printing, and contributed in many ways to the beauty of the work.

JAMES D. DANA.

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Fig. 3. a. Eucythere cruciata, instar; b, eye and inner antenna; c, caudal extremity; d, part of caudal segment, more enlarged; e, outer antenna; f, extremity of mandible; g, h, maxilla; k, leg of antennopod pair; l, labium, of pulvillar pair; m, labial, of last pair; n, part of liver.—p. 649.
Fig. 4. a. Podocythere orientalis, enlarged fourteen diameters; b, caudal lamellae, the caudal segment removed; c, caudal segment; d, e, same, oblique lateral view.—p. 652.
Fig. 5. a. Mochusorius crassus, enlarged six diameters; b, caudal extremity; c, inner caudal lamella; d, base of inner antenna; e, one of the thoracic legs; f, one of the scales of the ovigerous pouch; g, h, i, k, l, m, young, in different states.—p. 652.
Fig. 6. a. Squilla stetha, enlarged twenty diameters; b, lateral view; c, mandible, in different positions; d, maxilla of first pair; e, maxilla of second pair; f, lower lip; g, inner antenna; h, outer antenna; i, leg of first pair; j, leg of second pair; k, leg of one of six posterior pairs; l, extremity of leg of last pair.—p. 656.

PLATE 43.

Fig. 1. a. Squilla stetha, enlarged two diameters; b, front, with eye and base of antenna; c, caudal extremity; d, under view of mouth, as covered by the maxillipeds, and showing the extremities of the mandibular palp; e, mandible; f, maxilla; g, lower lip; h, shorter branch of abdominal leg of first pair; k, basal portion of the same leg; k', a process of shorter branch, more enlarged; l', elbited maxillary lamina of same; m, abdominal leg of second pair; b, basal portion of thoracic leg of third pair; c, stomach, side view; d, same, opened longitudinally above and showing inside, the view as seen by transmitted light, the dark parts being thickest; e, liver and duct; f, section of some; g, branch of posterior pair; h, extremity of one of the branches of the same.—p. 649.
Fig. 2. a. Cytherea sparsa, enlarged seven diameters; b, natural size; c, caudal extremity.—p. 618.
Fig. 3. a. Eucythere orientalis, instar; b, eye and inner antenna; c, caudal extremity; d, part of caudal segment, more enlarged; e, outer antenna; f, extremity of mandible; g, h, maxilla; k, leg of antennopod pair; l, labium, of pulvillar pair; m, labial, of last pair; n, part of liver.—p. 649.
Fig. 4. a. Podocythere orientalis, enlarged fourteen diameters; b, caudal lamellae, the caudal segment removed; c, caudal segment; d, e, same, oblique lateral view.—p. 652.
Fig. 5. a. Mochusorius crassus, enlarged six diameters; b, caudal extremity; c, inner caudal lamella; d, base of inner antenna; e, one of the thoracic legs; f, one of the scales of the ovigerous pouch; g, h, i, k, l, m, young, in different states.—p. 652.
Fig. 6. a. Squilla stetha, enlarged twenty diameters; b, lateral view; c, mandible, in different positions; d, maxilla of first pair; e, maxilla of second pair; f, lower lip; g, inner antenna; h, outer antenna; i, leg of first pair; j, leg of second pair; k, leg of one of six posterior pairs; l, extremity of leg of last pair.—p. 656.
make; \( c \), caudal segment, upper view; \( d \), mandible; \( e, f \), maxillae of first and second pairs; \( g \), outer maxillipeds; \( h \), posterior extremity of epipods, showing a glossy gland, \( s \), which had been exerted by pressure; \( s' \), some organ, as it appeared after it had been a short time detached from the animal; \( i \), outline of posterior part of thorax of female.—p. 671.

PLATE 45.

Fig. 1. A. Secura rettakus, female, enlarged; \( b \), extremity of abdomen of same, in profile; \( c \), ibid., of male; \( d \), profile of epipods of male.—p. 672.

Fig. 2. A. Secura pacifica, enlarged.—p. 673.

Fig. 3. A. Ledgeriacusculus, enlarged; \( b \), side view of extremity of abdomen; \( c \), dorsal view; \( d \), base of posterior legs, with rudiments of a palp, \( e \), mandible; \( f \), mandible; \( g \), leg of first pair; \( h \), ibid., of second pair; \( i \), ibid., of third pair.—p. 681.

Fig. 40. A. Secura kusunagia, enlarged; \( b \), caudal extremity.—p. 675.

Fig. 5. A. Secura antennula, enlarged; \( b \), caudal extremity.—p. 677.

PLATE 46.

Fig. 1. A. Ectopelia antennula, enlarged four diameters; \( b \), antenna, more enlarged; \( c \), mouth, \( d \), one of the legs, \( e \), opercular plate of abdomen; \( f \), young, probably of this species; \( g \), from a New Zealand specimen, probably this species, outer antenna; \( h \), ibid., leg of fourth pair.—p. 699, 699.

Fig. 2. A. Ectopelia antennula, enlarged three diameters; \( b \), caudal extremity; \( c \), outer antenna; \( d \), extremity of the flagellum of another specimen.—p. 700.

Fig. 3. A. Ectopelia antennula, enlarged two and a half diameters; \( b \), antenna; \( c \), leg of first pair; \( d \), ibid., of third pair.—p. 701.

Fig. 4. A. Ectopelia antennula, enlarged three diameters; \( b \), part of flagellum of outer antenna.—p. 702.

Fig. 5. A. A. antennula (?), young; \( b \), leg of fifth pair; \( c \), opercular plate of abdomen.—p. 703.

Fig. 6. A. A. antennula, natural size; \( b \), inner antenna; \( c \), leg of last pair, enlarged three and a half diameters.—p. 704. [As the name kusunagia is proposed, it is here changed to occur dissana.]

Fig. 7. A. Ectopelia antennula, enlarged two diameters; \( b \), leg of seventh pair.—p. 704.

Fig. 8. A. Ectopelia antennula, enlarged four and a half diameters; \( b \), inner antenna; \( c \), outer antenna; \( d \), mandible, in one view; \( e \), extremity of outer; \( f \), in another; \( g \), inner maxilla; \( h \), maxilliped; \( i \), leg of fourth pair.—p. 706.

Fig. 9. A. Crustacea antennula, enlarged one and a half diameters; \( b \), inner antenna; \( c \), extremity of outer; \( d \), under view of head, showing maxillipeds; \( e \), mandible; \( f \), maxilliped of first pair; \( g \), ibid., of second pair; \( h \), appendage of first abdominal pair; \( i \), ibid., of second pair; \( j \), outer or opercular pair; \( k \), maxillae.—p. 708.

Fig. 10. A. Ectopelia antennula, enlarged three diameters.—p. 710.

Fig. 11. A. Crustacea owas, enlarged one and a half diameters; \( b \), part of head, with antenna; \( c \), leg of one of three anterior pairs; \( d \), ibid., of fourth pair; \( e \), ibid., of fifth pair; \( f \), one of several abdominal plates.—p. 712.

PLATE 47.

Fig. 1. A. Titus antennula, enlarged four diameters; \( b \), part of outer antenna, enlarged twenty-four diameters; \( c \), caudal lamellae.—p. 717.

Fig. 2. A. A. antennula, natural size; \( b \), under view of abdomen; \( e \), caudal stylets (or lamellae) separated from the abdomen and much enlarged; \( f \), antenna.—p. 715.

Fig. 3. A. Fortanillia (?), antennula, enlarged four diameters; \( b \), antenna; \( c \), leg of posterior pair; \( d \), extremity of abdomen, under view, showing caudal lamellae, the outer appendage of the lamellae not being represented (perhaps, but not probably obsolete).—p. 719.

Fig. 4. A. Secura antennula, enlarged five diameters; \( b \), antenna; \( c \), leg of fifth or sixth pair; \( d \), caudal lamellae, with \( e \), the inner appendage, and \( f \), the outer.—p. 723.

Fig. 5. A. Secura antennula, enlarged three diameters; \( b \), antenna; \( c \), leg of fifth pair; \( d \), under view of abdomen; \( e \), caudal extremity, upper view, showing caudal lamellae (\( d \), with the outer appendage (\( e \), the inner appendage being shown in Fig. 5).—p. 722.

Fig. 6. A. B. Secura antennula, enlarged five diameters; \( c \), under view of head; \( d \), spine of surface of body; \( e \), caudal extremity; upper view, showing part of the caudal lamellae (\( f \), and
the outer appendages; a, f, under view of caudal lamelle, showing both outer (a) and inner (f) of the appendages or lamenae; b, part of antennae, much enlarged.—p. 725.

Fig. 7 a. Porcellio quadridentatus, enlarged four diameters; b, part of body, with the posterior thoracic segments bent down on either side as in some preserved specimens; c, extremity of abdomen; d, extremity of one of the five pairs in succession.—p. 728.

PLATE 48.

Fig. 1 a. Ophonus intermedius, enlarged one and a half diameters; b, abdomen, under view; c, outer maxillipeds.—p. 726.

Fig. 2 a. Ophonus intermedius, enlarged three and a half diameters; b, antennae; c, leg of sixth pair; d, caudal stylet.—p. 730.

Fig. 3 a. Ophonus angustus, enlarged six diameters, mutilated in its antennae; b, outer maxilliped; c, extremity of leg of first pair; d, sixth pair of last pair.—p. 731.

Fig. 4 a. Ophonus maculatus, enlarged six diameters, mutilated; b, outer maxilliped; c, extremity of leg of last pair, upper view; d, sixth pair; e, lateral view; f, tarsus of same, more enlarged; g, caudal stylet.—p. 734.

Fig. 5 a. Sturnus ornatus, enlarged two diameters; b, antennae; c, of same, more enlarged; d, e, maxillipeds; f, antennae; g, h, outer maxillipeds; i, j, lower lip; k, h, last pair of thoracic feet, from different specimens; b, abdominal appendages of second pair; b, i, bilab, of third and fourth pairs; a, i, bilab, of fifth pair; c, one of sixth pair or caudal stylet, much enlarged; d, part of leg of sixth pair; j, bilab, of seventh pair.—p. 734.

Fig. 6 a. Sturnus ornatus, jun. (?), animal, enlarged three diameters; b, outline of back; c, outline of head, in upper view; d, abdomen, upper view; e, antennae, enlarged; f, outer maxilliped; g, extremity of one of the legs; h, third appendage, under view.—p. 735.

Fig. 7 a. Stylodius maculatus, enlarged three diameters; b, antennae; c, extremity of same; d, maxillipeds; e, maxillipeds; f, extremity of one of last pair; g, seventh pair of last pair.—p. 730.

Fig. 8 a. Stylodius longibasis, enlarged four diameters; b, part of flagellum of antennae, more enlarged.—p. 737.

PLATE 49.

Fig. 1 a. Lygia eisenacensis, enlarged one and a half diameters; b, abdomen, more enlarged; c, to g, abdominal appendages of the five pairs in succession.—p. 736.

Fig. 2 a. Lygia euphalesma, enlarged two and a half diameters; b, part of flagellum of antennae, more enlarged; c, outer line of extremity of abdomen; d, part of larger sets of stylet.—p. 739.

Fig. 3 a. Lygia archaealevis, extremity of abdomen, much enlarged.—p. 740.

Fig. 4 a. Lygia mawsemus, enlarged three diameters (mutilated in caudal stylets); b, part of basal half of flagellum of antennae; c, ibid., from apical half; d, extremity of leg of seventh pair; e, outline of extremity of abdomen, more enlarged.—p. 740.

Fig. 5 a. Lygia vituesmis, outline of extremity of abdomen; b, leg of fifth pair.—p. 741.

Fig. 6 a. Lygia palmatula, head and front segment following; b, extremity of abdomen; c, caudal stylet; d, base of antennae; e, part of flagellum, more enlarged; f, apical part of some; g, tarsus of leg of sixth or seventh pair; h, outline of eye, in lateral view.—p. 741.

Fig. 7 a. Lygia oxy mana, abdomen, enlarged; b, part of base of antennae; c, basal part of flagellum; d, apex of same; e, tarsus of leg of sixth or seventh pair.—p. 742.

Fig. 8 a. Lygia tenuis, abdomen, enlarged (stylets wanting); b, antennae; c, extremity of abdomen, more enlarged.—p. 743.

Fig. 9 a. Lygia cephalotes, abdomen, enlarged; b, part of antennae; c, extremity of leg; d, abdomen.—p. 744.

Fig. 10 a. Cymothoa exigua, enlarged one and a half diameters; b, external view; c, of seventh pair; d, caudal appendages.—p. 749.

Fig. 11 a. b. Cymothoa exigua, var. contorta.—p. 750.

Fig. 12 a. Cymothoa frontalis, natural size; b, extremity of abdomen.—p. 750.

Fig. 13 a. Cymothoa hector, enlarged two diameters; b, leg of fourth pair; c, bilab, of fifth pair.—p. 753.

PLATE 50.

Fig. 1 a. Cymothoa exigua, enlarged one and a half diameters; b, external view; c, under view of head; d, mandibles.—p. 752.

Fig. 2 a. Cymothoa exigua, enlarged one and a half diameters; b, stylets, bilab, of same, more enlarged; c, third pair; d, of sixth pair.—p. 752.

Fig. 3 a. Lygia longibasis, natural size; b, caudal appendages.—p. 764.

Fig. 4 a. Lygia chelornata, natural size; b, caudal appendages.—p. 755.

Fig. 5 a. Lygia latifrons, enlarged one and a half diameters; b, lateral view, showing fourth, fifth, sixth, and seventh epimerals, left side; c, caudal stylet.—p. 756.

Fig. 6 a. Neocolia lata, natural size; b, external view; c, antennae of first pair; d, bilab, of second pair.—p. 757.

Fig. 7 a. Neocolia longicollis, enlarged one and a half diameters; b, side view, showing epimerals.—p. 758.

Fig. 8 a. Neocolia brachyotes, enlarged one and one-third diameters; b, antennae of first pair; c, bilab, of second pair; d, appendages of first pair; e, side view, showing epimerals.—p. 759.

Fig. 9 a. Neocolia abbreviata, enlarged one and one-third diameters; b, anterior antennae; c, caudal stylet.—p. 759.

Fig. 10 a. Neocolia abbreviata, natural size; b, under view; c, side view; d, stylet.—p. 761.

Fig. 11 a. Neocolia ventosa, enlarged one and a half diameters; b, under view; c, side view; d, antennae; e, claws of legs; f, caudal appendage.—p. 762.

Fig. 12 a. Azothia brachyotes, enlarged three diameters;
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Fig. 15. **Sarangi latipes**, enlarged three diameters. — p. 765.

**PLATE 51.**

Fig. 1 a. **Orca eystax**, enlarged four diameters; b, antenna; e, leg of one of the three anterior pairs; d, id., of one of the four posterior pairs; v, caudal stylet. — p. 764.

Fig. 2 a. **Sarangi novaezelandiae**, enlarged four diameters; b, anterior antenna; e, posterior antenna. — p. 767.

Fig. 3 a. **Sarangi multifida**, enlarged five diameters; b, antenna; e, leg of first pair; d, extremity of leg of second pair; v, id., of third pair; f, id., of sixth pair. — p. 758.

Fig. 4 a. **Pholiodon magnificus**, enlarged one and a half diameters; b, front view of front; e, leg of second pair; d, leg of seventh pair; e, epimera of first segment; f, id., of seventh segment; g, caudal appendage. — p. 769.

Fig. 5 a. **Cherax australis**, anterior extremity of body, much enlarged, the antenna, except part of basal joint, being concealed beneath; b, posterior, id.; a, part of flagellum of second antennae; d, leg of third pair; e, leg of sixth or seventh pair. — p. 771.

Fig. 6 a. **Cherax laeticus**, abdomen, much enlarged; b, part of flagellum of longer antennae; c, leg of third pair; p, id., of fifth pair. — p. 772.

Fig. 7 a. **Cherax destructor**, enlarged three and a half diameters; b, head, seen from above (facts of the eyes not indicated); c, id., seen obliquely from above and forward, showing its actual form and position of the antennae; d, antennae; e, with the epistome (j); extremity of leg of fifth pair. — p. 774.

**PLATE 52.**

Fig. 1. **Sphéroma brasiliensis**, outline of abdomen, under view, much enlarged, New Zealand specimen; a, under view of mouth and epistome, of Facies superior, var. henneola, of White; b, mandible, id.; c, extremity of same, in different position; d, lower lip, id.; e, maxilla of first pair; f, id., of second pair. — p. 775.

Fig. 2 a. **Sphéroma depressus**, enlarged one and a half diameters; b, mouth and epistome; e, inferior antenna. — p. 776.

Fig. 3 a. **Sphéroma exiguum**, enlarged six diameters; b, outline of abdomen, under view; c, antennae of first pair. — p. 777.

Fig. 4 a. **Sphéroma ohioensis**, enlarged three diameters; b, part of antenna of second pair; c, outline of abdomen, under view. — p. 779.

Fig. 5 a. **Sphéroma apicatum**, enlarged four diameters; b, abdomen, under view. — p. 779.

Fig. 6. **Sphéroma virgatum**, outline of abdomen, under view. — p. 779.

Fig. 7. **Sphéroma akwata**, outline of abdomen, under view. — p. 780.

Fig. 8 a. **Sphéroma stegos**, enlarged three and a half diameters; b, under view of antennae; c, abdomen in outline, under view. — p. 780.

Fig. 9 a. **Sphéroma glabratum**, enlarged six diameters; b, abdomen, more enlarged. — p. 781.

Fig. 10 a. **Sphéroma spatulum**, enlarged six diameters; b, part of flagellum of antenna of second pair; c, antennae of first pair; d, margin of thoracic segments, much enlarged. — p. 782.

Fig. 11 a. **Sphéroma orientalis**, enlarged twelve diameters; b, part of leg of one of three posterior pairs; c, lateral profile of abdomen, showing the abrupt depression on upper side, just behind its middle; d, under view. — p. 782.

Fig. 12 a. **Cancerina laeticus**, enlarged two diameters; b, under view of abdomen; c, caudal appendage, upper view; d, under view of head; e, extremity of leg of fourth pair. — p. 781.

Fig. 13 a. **Amphoridea typica**, enlarged one and a half diameters; b, under view of head; c, abdomen, under view; d, mandible; e, profile of its extremity; f, maxillipeds. — p. 781.

Fig. 14 a. **Anthothoea eugiaea**, e, head, much enlarged; b, abdomen of abdomen, upper view; c, id., under view; d, basal portion of antennae of second pair. — p. 789.

**PLATE 53.**

Fig. 1 a. **Sphaere stocki**, male, enlarged two diameters; b, opercular plates; c, part of flagellum of inferior antenna. — p. 791.

Fig. 2 a. **Sphaere vorax**, enlarged six diameters; e, same; natural size; b, dorsal view; c, one of the anterior legs. — p. 795.

Fig. 3 a. **Tanais (Paranyx?) brasilensis**, enlarged six diameters; b, eye; c, caudal stylet; d, antennae of second pair; e, leg of first pair; f, id., of second pair; g, id., of one of three posterior pairs. — p. 797.

Fig. 4 a. **Paranyx echassum**, enlarged twenty diameters; b, antenna; e, leg of first pair; e, of same; i, leg of second pair. — p. 793.

Fig. 5 a. **Lophocarina wittii**, enlarged sixteen diameters; b, same, inside view; c, leg of last pair; d, caudal stylet. — p. 800.

Fig. 6 a. **Ctenothoe ussuriensis**, enlarged; b, inner antenna; c, id., of second pair; d, id., of third pair. — p. 802.

Fig. 7 a. **Amphoridea fuscus**, male, enlarged twenty-four diameters (length one line); e, extremity of leg; b, e, female; d, leg of fourth pair of female; e, same, in another position; e, leg of fifth pair; f, same, in a different position. — p. 824.

**PLATE 54.**

Fig. 1 a. **Pediae eugiaea**, male, enlarged five diameters; b, band of first pair; c, id., of second pair; d, mandible; e, sp.; f, maxilla of second pair; g, maxillipeds; h, abdomen; i, female; k, antenna of first pair, id.; l, id., of second pair, id.; m, id., of third pair; n, id., of fourth pair, id. — p. 819.

Fig. 2 a. **Prothoe gracilis**, male, enlarged two and a half diameters; e, same, natural size, on a coral; i, part of flagellum of superior antenna; e, extremity of leg of last pair; f, id.; g, id.; h, part of flagellum of inferior antenna, id.; i, head of smaller variety; j, band of second pair in female. — p. 812.

Fig. 3 a. **Cancerella orientalis**, enlarged three diameters; b, head, side view; c, band of second pair; d, abdomen; a, part of flagellum of superior antenna, much enlarged. — p. 815.

Fig. 4 a. **Cancerella orientalis**, male, enlarged four diameters; e, part of female; f, id., of second pair in another specimen; e, extremity of leg of fifth pair, much enlarged. — p. 814.

Fig. 5 a. **Cancerella orientalis**, enlarged four diameters; e, part of flagellum of superior antenna; d, third thoracic segment; e, band of first pair; f, id., of second pair; g, extremity of leg of last pair. — p. 816.

Fig. 6 a. **Cancerella orientalis**, var. obtusitarsis, enlarged five diameters. — p. 817.
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d, bld., second pair; c, maxillipeds; f, part of flagellum of inferior antennae; g, hand of second pair of feet.—p. 872.

Fig. 2 e. Orchestia barnesi, enlarged three diameters; h, mandible; c, maxillae; e, maxillipeds; f, part of flagellum of inferior antennae; g, hand of second pair; ibid., of superior antennae.—p. 872.

Fig. 3 a. Male of Orchestia stimpsonii, enlarged; h, side view of hand; e, part of flagellum of outer antennae; d, extremity of leg of first pair; s, ibid., of second pair; f, ibid., of third pair; g, ibid., of seventh pair; k, stylet of first pair.—p. 875.

Fig. 4 a. Orchestia spinipalpis, male, enlarged four diameters; h, part of flagellum of inferior antennae; c, hand of second pair; d, extremity of leg of last pair; k, ibid., of second pair in female.—p. 875.

Fig. 5 a. Orchestia tarsalis, female, enlarged five diameters; h, mandible; c, maxillae; e, maxillipeds; f, antennae; g, extremity of leg of second pair.—p. 877.

Fig. 6 a. Orchestia maxima, enlarged four diameters; h, mandible; c, maxillae; e, maxillipeds; f, part of flagellum of inferior antennae; g, hand of first pair; b, ibid., of second pair; i, leg of seventh pair; k, stylet of first pair; f, ibid., of last pair; a, side view of extremity of abdomen.—p. 878.

Fig. 7 a. Orchestia quadrunotata, enlarged three diameters; h, part of flagellum of inferior antennae; c, maxillae of first pair; d, ibid., of second pair; c, maxillipeds; f, hand of first pair.—p. 879.

Fig. 8 a. Orchestia longicaudata, female, enlarged three diameters; h, antennae of second pair; c, extremity of leg of first pair; k, ibid., of second pair; a, ibid., of seventh pair; g, stylet of first pair.—p. 880.

Fig. 9 a. Orchestia pecolli, male, enlarged four diameters; h, antennae of superior pair; a, part of flagellum of inferior pair; d, extremity of leg of first pair; s, ibid., of second pair; k, ibid., of seventh pair.—p. 882.

PLATE 60.

Fig. 1 a. Alloscaphites cayuanci, enlarged four diameters; h, mandible; c, maxillae of first pair; s, ibid., of second pair; c, maxillipeds; f, flagellum of inferior antennae; g, part of flagellum of superior antennae; b, extremity of leg of sixth pair; l, posterior caudal stylet.—p. 884.

Fig. 2 a. Alloscaphites ventricelatus, male, enlarged five diameters; h, part of flagellum of second or inferior antennae; a, mandible; s, maxillae of second pair; c, maxillipeds; f, extremity of leg of first pair; y, ibid., of last pair.—p. 886.

Fig. 3 a. Alloscaphites ventricelatus (?), female, enlarged six diameters; h, c, d, parts of the mouth; f, part of flagellum of inferior antennae; b, ibid., from another specimen; h, part of flagellum of inferior antennae, ibid.; i, hand of second pair; l, ibid., extremity of seventh pair, ibid.—p. 887.

Fig. 4 a. Alloscaphites weitzmani, enlarged five diameters; h, part of flagellum of inferior antennae; a, c, maxillae, in different positions; d, maxillae of second pair; e, maxillipeds; f, hand of leg of second pair; g, ibid., of first pair; k, part of leg of sixth pair; l, posterior stylet.—p. 888.

Fig. 5 a. Alloscaphites graciulus, enlarged three diameters; h, part of flagellum of inferior antennae; c, hand of leg of first pair; d, ibid., of second pair.—p. 889.

Fig. 6 a. Alloscaphites huritis, enlarged six diameters; h, mandible; e, maxillae of first pair; s, ibid., of second pair; c, maxillipeds.—p. 890.

PLATE 61.

Fig. 1 a. Alloscaphites antennalis: 1 a to f, male; g to r, female.—1 a, enlarged five diameters; h, part of flagellum of superior antennae; c, ibid., of inferior, ibid.; d, hand of leg of first pair; s, ibid., of second pair; f, ibid., of fifth pair.—p. 891.

Fig. 2 a. Alloscaphites antennalis, enlarged four diameters; h, mandible; c, maxillae of first pair; s, ibid., of second pair; e, maxillipeds; g, part of flagellum of superior antennae; b, ibid., of inferior pair; l, ibid., of second pair.—p. 895.

Fig. 3 a. Alloscaphites antennalis, enlarged six diameters; h, mandible; c, maxillae of first pair; s, ibid., of second pair; e, maxillipeds; a, part of flagellum of superior antennae; g, hand of leg of sixth pair; k, ibid., of second pair.—p. 898.

Fig. 4 a. Alloscaphites antennalis, enlarged three diameters; h, leg of sixth pair.—p. 899.

Fig. 5 a. Alloscaphites antennalis, enlarged five diameters; b, extremity of maxillipeds.—p. 900.

Fig. 7 a. Alloscaphites antennalis, enlarged three and a half diameters; h, mandible; e, maxillae of first pair; s, ibid., of second pair; e, maxillipeds; f, lower lip; g, inferior antennae; b, superior, ibid.; i, leg of first pair; b, ibid., of second pair; l, ibid., of fifth pair; m, stylet of first pair; n, ibid., of second pair; o, ibid., of third or last pair.—p. 902.

Fig. 8 a. Alloscaphites antennalis, enlarged four diameters; h, mandible; c, maxillae; e, maxillipeds; f, part of flagellum of inferior antennae; g, hand of leg of first pair; k, ibid., of second pair.—p. 892.
insertum of superior antenna; \(a\), base of inferior, ibid.; \(b\), spine, adjoining same; \(c\), piece of shell, below same; \(d\), shell of side of head; \(e\), epistome; \(f\), labrum; \(g\), mandibular palp; \(h\), mandible; \(i\), maxillipeds; \(j\), branchiostegal processes of basal joints of same; \(k\), side view of head (lateral like the last, with \(a\), inner maxilla; \(m\), second maxilla; \(n\), lower lip; \(o\), parts below base of maxillipeds); \(p\), same, with maxillipeds turned down; \(q\), spinous process at base of inferior antenna (same as \(s\), in figures \(f\) and \(g\); \(k\), part of flagellum of inferior antenna; \(i\), ibid., of superior antenna; \(j\), longer flagellum of same, from another specimen; \(a\), part of leg of first pair; \(b\), ibid., of fourth pair; \(n\), ibid., of fifth pair; \(p\), caudal segment.—p. 919.

Fig. 5 a. **Euphthias medius**, enlarged six diameters; \(a\), upper view of head; \(b\), part of base of inferior antenna; \(c\), part of flagellum of same; \(e\), \(g\), mandible, in different positions; \(f\), maxilla of first pair; \(h\), maxillipeds; \(i\), same, more enlarged; \(j\), leg of second pair; \(k\), ibid., of third or fourth pair; \(l\), ibid., of fifth pair; \(m\), ibid., of sixth pair; \(n\), ibid., of seventh pair; \(o\), abdominal natatory; \(p\), extremity of abdomen, upper view; \(q\), styles of second pair.—p. 921.

**PLATE 65.**

**Fig. 1.** **Serritum validus**, \(a\) to \(e\), male.—\(f\) to \(s\), female.—1 \(a\), male, enlarged nine diameters; \(b\), part of flagellum of superior antenna; \(c\), maxillipeds; \(d\), leg of first pair; \(e\), ibid., of sixth pair.—2 \(a\), female, enlarged nine diameters; \(b\), mandible; \(c\), maxilla of first pair; \(d\), part of maxilla of second pair; \(e\), maxillipeds; \(f\), hand of leg of first pair; \(g\), ibid., of second pair; \(h\), leg of seventh pair; \(i\), caudal styles and extremity of abdomen.—p. 924.

**Fig. 2 a.** **Euphthias simplex**, enlarged six diameters; \(a\), antenna of superior pair; \(b\), part of flagellum of same, towards extremity; \(c\), same, enlarged; \(e\), mandible, in different positions; \(g\), inner maxilla; \(h\), maxillipeds; \(i\), leg of first pair; \(j\), ibid., of third pair.—p. 926.

**Fig. 3 a.** **Euphthias monodon**, enlarged six diameters; \(b\), upper view of head.—p. 928.

**Fig. 4 a.** **Euphthias proximus**, enlarged; \(b\), \(k\), views of mandible; \(c\), \(d\), maxillipeds; \(e\), caudal extremity; \(f\), branchiostegal, in outline.—p. 929.

**Fig. 5 a.** **Euphthias crenatus**, enlarged eight diameters; \(a\), part of flagellum of superior antenna; \(b\), part of palp of mandible; \(c\), part of leg of first or second pair; \(d\), ibid., of sixth pair; \(e\), caudal extremity; \(f\), stylet of first pair.—p. 931.

**Fig. 6 a.** **Euphthias setigerus**, anterior part of body, much enlarged; \(b\), mandible; \(c\), part of palp, ibid.; \(d\), part of maxillipeds; \(e\), hand of leg of seventh pair; \(f\), extremity of same leg; \(g\), caudal extremity.—p. 932.

**Fig. 7 a.** **Euphthias novasaksalas**, male, enlarged eighteen diameters; \(a\), mandible; \(c\), \(d\), maxillipeds; \(e\), extremity of maxillipeds; \(f\), \(g\), \(h\), hand of first pair; \(i\), caudal extremity.—p. 934.

**PLATE 64.**

**Fig. 1 a.** **Asmatium uniferma**, enlarged eight diameters; \(a\), ibid., more enlarged; \(e\), extremity of leg of sixth pair; \(d\), extremity of abdomen.—p. 936.

**Fig. 2 a.** **Asmatium orientale**, head, enlarged; \(b\), leg of first pair; \(c\), ibid., of second pair; \(d\), ibid., of fourth pair; \(e\), ibid., of seventh pair; \(f\), posterior caudal stylet, side view.—p. 937.

**Fig. 3 a.** **Asmatium transversum**, enlarged five diameters; \(a\), part of flagellum of superior antenna; \(b\), ibid., of inferior ibid.—p. 939.

**Fig. 4 a.** **Asmatium febri*, enlarged seven diameters; \(b\), eye.—p. 940.

**Fig. 5 a.** **Asmatium affinis**, female, enlarged three diameters; \(a\), \(e\), side and front views of head (\(a\), \(a\), antenna; \(f\), abdomen, \(n\), mandible; \(o\), \(o\), maxillipeds of first and second pairs; \(p\), \(p\), maxillipeds; \(q\), \(q\), mandibular palp); \(b\), posterior caudal stylet; \(c\), antennae; \(d\), maxilla of first pair; \(g\), ibid., of second pair; \(h\), mandible; \(i\), hand of female of first or second pair; \(j\), extremity of leg of first pair, in male; \(k\), ibid., of second pair; \(l\), leg of seventh pair; \(m\), caudal stylet of first or second pair.—p. 941.

**Fig. 6 a.** **Asmatium fuscus**, enlarged four diameters; \(a\), part of flagellum of superior antenna; \(b\), ibid., of inferior ibid., from head half; \(c\), ibid., of inferior ibid., from apical half; \(e\), \(e\), mandible, in different positions; \(f\), \(f\), maxilla of first pair; \(g\), ibid., of second pair; \(h\), \(h\), maxillipeds; \(i\), part of leg of first pair; \(j\), ibid., of second pair; \(k\), ibid., of fourth pair; \(l\), outer branch of first pair of stylets; \(m\), posterior stylet.—p. 943.
second pair, in female, much enlarged; c', same, magnified to cor-respond with the figure of the male, 10 a.—p. 954.

**PLATE 66.**

Fig. 1. a. *Gammarus pentemem*, enlarged six or seven diameters; b, part of flagellum of superior antenna, with the appen-
dage; c, same flagellum, towards apex; d, part of flagellum of inferior pair; e, leg of second pair; f, part of hand, in oblique view; g, part of palpus of manus.—p. 957.

Fig. 2. a. *Gammarellus pacificus*, enlarged six diameters; b, mandible, in a position not showing the molar prominence; c, maxilla of first pair; d, lab. of second pair; e, maxillipede.—p. 958.

Fig. 3. a. *Gammarellus pygmaeus*, enlarged seven diameters; b, mandible; c, d, maxillae; e, maxillipede; f, lower lip; g, leg of first pair.—p. 960.

Fig. 4. a. *Gammarellus polyphemus*, male, enlarged four diameters; b, part of flagellum of superior antenna; c, leg of second pair; d, extremity of last pair.—p. 961.

Fig. 5. a. *Melita tessellata*, male, enlarged four diameters; b, maxillae; c, d, part of flagellum of inferior antenna; e, leg of first pair; f, lab. of second pair; g, female, enlarged four diameters; h, part of flagellum of superior antenna; i, maxillae; j, maxillipede; k, lab. of leg of first pair.—p. 961.

Fig. 6. a. *Melita valva*, male, enlarged seven diameters; b, left hand of second pair; c, part of flagellum of superior antenna.—p. 965.

Fig. 7. a. *Melita striata*, male, enlarged seven diameters; b, small hand of second pair.—p. 967.

Fig. 8. a. *Melita angustata*, enlarged eight diameters; b, smaller hand of second pair; c, leg of first pair in female; d, leg of second; e, f, g, h, of same, of size to correspond with b.—p. 967.

Fig. 9. a. *Decionus exilis*, enlarged six diameters; b, head, more enlarged; c, portion of flagellum of superior antenna; d, leg of fourth pair; e, lab. of fifth pair.—p. 969.

Fig. 10. a. *Decionus exilis*, female? enlarged; b, leg of fourth pair; c, lab. of second pair; d, caudal extremity, showing the three pairs of styles; e, caudal stylost of last pair in pro-
file.—p. 970.

**PLATE 67.**

Fig. 1. a. *Decionus speculans*, enlarged (appendage to super-
ior antenna overlooked?); b, part of flagellum of superior anten-
nas; c, lab. of inferior antenna; d, side view of head; e, extre-
mity of leg of third or fourth pair; f, caudal stylost of last pair; g, leg of second pair; h, maxillae.—p. 971.

Fig. 2. a. *Decionus heptacotis*, enlarged nine diameters.—p. 972.

Fig. 3. a. *Picturus maconnellei*, enlarged; b, hand of leg of first pair; c, lab. of second pair.—p. 974.

Fig. 4. a. *Picturus profundus*, male, enlarged second pair; b, part of mandible; c, caudal extremity; d, caudal stylost of last pair; in profile.—p. 975.

Fig. 5. a. *Picturus brachypterus*, enlarged; b, leg of first pair; c, lab. of second pair; d, lab. of fifth pair; e, lab. of seventh pair; f, caudal extremity; g, stylost of second pair; h, lab. of last pair, more enlarged.—p. 976.

Fig. 6. a. *Lestronius fraseri*, enlarged ten diameters; b, abdo-
men, side view; c, base of superior antennae; d, maxillipede.—p. 982.

**PLATE 68.**

Fig. 1. a. *Cyclus maculatus*, enlarged six diameters; b, superior antennae; c, inferior lab.; d, mandible; e, maxillipede; f, leg of sixth pair, with branchia; g, caudal extremity of leg of seventh pair.—p. 990.

Fig. 2. a. *Tauria magnosthiali*, enlarged three diameters; b, same, natural size; c, antenna, as they project from the head; d, extremity of leg of first pair; e, lab. of second pair.—p. 998.

Fig. 3. a. *Doratides semitus*, enlarged six diameters; b, under view of head; c, antennae; d, leg of second pair; e, termination of sixth pair; f, caudal extremity; g, anterior; h, hand of second pair.—p. 999.

Fig. 4. a. *Dornis*, magnified, enlarged six diameters; b, caudal view; c, antennae; d, leg of first pair; e, lab. of second pair; f, termination of sixth pair; g, caudal extremity; h, base.—p. 995.

Fig. 5. a. *Dornis angustipalpis*, enlarged nine diameters; b, anterior; c, hand of second pair; d, maxillae, in different views; e, leg of first pair; f, lab. of second pair; g, lab. of third pair, and spiniform; h, lab. of fourth pair; i, lab. of fifth pair; j, lab. of seventh pair.—p. 995.

Fig. 6. a. *Spongida ultramagula*, enlarged six diameters; a, d, same, in different views; e, of first pair; f, lab. of second pair; g, lab. of third pair; h, and spiniform; i, lab. of fourth pair; j, lab. of fifth pair; j, lab. of seventh pair.—p. 995.

Fig. 7. a. *Utramarina*, male; k, upper view of head; l, head portions of antennae; m, terminal styles; e, caudal style of first pair.—p. 997.

Fig. 8. a. *Spongidea angustipalpis*, enlarged seven diameters; a, upper view of head; c, superior antenna; d, leg of second pair.—p. 998.

Fig. 9. a. *Ancistrocerus pustulosus*, enlarged seven diameters; a, first view of head; c, maxillae of first pair; d, lab. of second pair; e, base of superior antenna; f, lab. of inferior lab.; g, leg of first pair; h, lab. of second pair; i, lab. of third pair; j, lab. of fourth pair; k, lab. of fifth pair; l, lab. of seventh pair; m, caudal extremity.—p. 1001.

Fig. 10. a. *Ancistrocerus testudinaria*, enlarged seven diameters; a, second view of head; c, antennae; d, maxillae; e, leg of sixth pair; f, lab. of seventh pair; g, caudal extremity.—p. 1004.

**PLATE 69.**

Fig. 1. a. *Thomisus antarcticus*, enlarged three diameters; b,

PLATE 72.

Fig. 1 a. Calanus hyperboreus, enlarged; c, extremity of anterior antenna; e, side view, showing alimentary canal, a, b, and heart; c, d, young, possibly of this species,—p. 1053.

Fig. 2 a. Calanus hyperboreus, enlarged; d, extremity of anterior antenna; e, abdomen, in profile,—p. 1060.

Fig. 2 b. Calanus hyperboreus, enlarged; b, antennae of second pair.—p. 1056.

Fig. 4 a. Calanus hyperboreus, enlarged; c, extremity of anterior antenna; b, profile of abdomen,—p. 1065.

Fig. 7 a. Calanus hyperboreus, enlarged; c, extremity of anterior antenna.—p. 1056.

Fig. 8. Calanus hyperboreus, enlarged.—p. 1057.

Fig. 9. Calanus hyperboreus, enlarged.—p. 1058.

Fig. 10. Calanus hyperboreus, enlarged.—p. 1060.

Fig. 11 a. Calanus hyperboreus, enlarged; c, extremity of anterior antenna.—p. 1060.

Fig. 12 a. Calanus hyperboreus, enlarged; b, antennae of second pair.—p. 1061.

PLATE 73.

Fig. 1 a. Calanus hyperboreus, enlarged; c, extremity of anterior antenna.—p. 1062.

Fig. 2 a. Calanus hyperboreus, another individual; c, extremity of anterior antenna; e, side view, showing alimentary canal, a, b, and heart; c, d, extremity of anterior antenna.—p. 1065.

Fig. 4 a. Calanus hyperboreus, enlarged; c, extremity of anterior antenna.—p. 1064.

Fig. 6 a. Calanus hyperboreus, enlarged; a, side view, showing alimentary cavity, a, b, c, extremity of second pair; e, leg of first pair; d, anterior extremity of second or third pair.—p. 1065.

Fig. 7 a. Calanus hyperboreus, enlarged; c, extremity of anterior antenna.—p. 1062.
The text contains descriptions of various crustaceans, with figures and profiles. The content is too detailed and technical to be summarized effectively. However, it seems to describe different species of crustaceans, their features, and possibly their behaviors or habitats. The text includes references to specific figures and plates, indicating that these images are likely illustrations or diagrams accompanying the written descriptions. The text appears to be scientific, possibly a part of an article or book discussing crustacean morphology or taxonomy.
of mandible and its palp; b, maxilla; f, right posterior foot.—1160.

PLATE 85.

Fig. 1 a. Copetes maculiger, male, enlarged; b, lateral view, showing base and alimentary canal; c, antenna of second pair; d, extremity of maxilliped, leg of first pair; e, antenna leg; f, antenna of female; g, abdomen, with external ovian sac of female.—p. 1152.

Fig. 2 a. Cyclops cinctus, female, enlarged; b, extremity of antenna of anterior pair; c, ibid., of posterior pair; d, ibid., of maxilliped or leg of first pair.—p. 1192.

Fig. 3 a. Cyclops minutus, male, enlarged; b, antenna of female; c, mandible, more magnified; d, ovian sac.—p. 1183.

Fig. 4 a. Cyclops Macrasty, female, enlarged; b, extremity of antenna of anterior pair.—p. 1184.

Fig. 5 a. Coetes vitreus, female, enlarged; b, extremity of antenna.—p. 1185.

Fig. 6 a. Castnerpus viridescens, female, enlarged; c', eyes; d, antenna of anterior pair, of female; e, antenna of posterior pair; f, mandible, without the palp; g, part of maxilliped; h, natatory leg; i, foot of first pair; j, ibid., of second pair; k', extremity of longer branch; l, young animal, a day or two old.—1186.

Fig. 7 a. Harapetes conspicus, female, enlarged; b', extremity of antenna of posterior pair (?); c, extremity of a maxilliped or palp of mandible (?); d, foot of first pair; e, ibid., of second pair; f', extremity of maxilliped.—p. 1189.

Fig. 8 a. Harapetes lateralis, male, enlarged; b, eyes; c, hand of antenna of posterior pair, in male; d', extremity of anterior pair; e, leg of first pair; f, ibid., of second pair.—p. 1191.

Fig. 9 a. Castnerpus lineatus, female, enlarged; b, antenna.—p. 1188.

Fig. 10. Castnerpus spiniger, female, enlarged.—p. 1189.

Fig. 11 a. Harapetes acutifrons, male, enlarged; b, extremity of a maxilliped, or the mandibular palp (?); c, ibid. —p. 1192.

Fig. 12 a. Clytieastius scrutatorius, enlarged; b, eyes; c, antenna of posterior pair; d, extremity of a maxilliped; e, chelifid legs (first pair of legs); f', leg of one of the natatory pair.—p. 1194.

PLATE 84.

Fig. 1 a. Setella testiculosa, enlarged; c', beak, with its appendages; a, base of one of anterior antennae; b, one of posterior antennae; g, leg of first pair; h, natatory legs; i, m, young Setella.—p. 1196.

Fig. 2 a. Setella longicruris, enlarged; c', appendage to beak.—p. 1197.

Fig. 3 a, b. Setella cincta, enlarged; c, beak appendage; d, extremity of a maxilla, imperfectly seen; e, leg of first pair; f, abdominal appendages; g, part of caudal setae, showing spinous character of body.—1198.

Fig. 4 a. Setella grascorensis, enlarged; c', profile of head; b, one of anterior antennae; e, extremity of posterior, ibid.; d, leg of first pair; f, abdomen, in profile, showing abdominal appendages beneath.—p. 1198.

Fig. 5 a. Setella arcuata, female, enlarged; c', profile of head; a, one of anterior antennae; b, ibid., of posterior, ibid.; d, leg of first pair; e, ibid., of second pair; f, leg of eggs; g, g, abdomen.—p. 1208.

PLATE 85.

Fig. 1 a, c. Cyclops gracilis, enlarged; b, anterior antenna; e, posterior palp; f, natatory of second or third pair.—p. 1200.

Fig. 2 a, c. Cyctium gracile, enlarged; b, anterior antenna; e, posterior palp.—p. 1208.

Fig. 5 a. Cyclops demersus, enlarged; b, natatory leg.—p. 1210.

Fig. 4 a, b. Cyctium variegus, enlarged; c, side view of abdomen; d, anterior antenna; e, posterior, ibid.; f, leg of first pair; g, ibid., of fourth pair; h, eggs, pressed from the body; k, leg of first pair.—p. 1211.

Fig. 6 a, b. Cyctium hypsilus, enlarged; c, posterior antenna; d, maxilla and anterior foot.—p. 1212.

Fig. 7 a, c. Cyclops chlorospermus, enlarged.—p. 1214.

Fig. 8 a, b. Cyclops leptocerus, enlarged; c, natatory leg.—p. 1215.

Fig. 9 a, c. Coetes vitreus, enlarged; c', posterior antenna; d, of male leg.—p. 1216.

Fig. 10 a, b. Coetes spiniger, enlarged.—p. 1217.

Fig. 11 a, b. Coetes orientalis, enlarged; c, posterior antenna.—p. 1218.

Fig. 12 a, b. Coetes lateralis, enlarged; b, posterior antenna; c, two pairs of maxillae; d, maxillae and maxillipeds and anterior feet, in position (anterior); e, extremity of natatory leg.—p. 1219.

PLATE 86.

Fig. 1 a. Coetes spiniger, enlarged; b, abdomen, side view; c, one of the natatories, second pair; d, ibid., of third pair.—p. 1220.

Fig. 2 a. Coetes minutus, enlarged; b, posterior antenna.—p. 1221.

Fig. 5 a. Coetes lateralis, enlarged; b', posterior antenna; c, posterior palp; d, leg of first pair; e, natatory of second pair; f, abdomen, side view.—p. 1221.

Fig. 4 a, c. Coetes vesciculus, enlarged; b, posterior antennas; c, mandible or inner maxilla; d, leg of first pair.—p. 1222.

Fig. 5 a, b. Coetes incertus, enlarged.—p. 1223.

Fig. 6 a. Coetes levi/us, enlarged; b, abdomen, dorsal view, and extremity of cephalothorax; c, cephalothorax, in profile, showing the exuviae ventral process of posterior antenna. —p. 1224.

Fig. 7 a. Coetes contusus, enlarged; b, posterior antenna.—p. 1225.

Fig. 8 a. Coetes incisus, enlarged; b, natatory of third or fourth pair.—p. 1226.

Fig. 9 a, c. Coetes longispinus, enlarged; b, anterior antenna; c, posterior, ibid.—p. 1226.

Fig. 10 a, c. Antella chaeriemis, enlarged; b, posterior antenna; c, leg of first pair.—p. 1228.
Fig. 11 a. Antasia baikii, lateral view, enlarged; b, head view of female, with the external ovary shown; c, anterior antenna; d, posterior antenna.—p. 1259.

Fig. 12. Antasia baikii, another variety.—p. 1229.

Fig. 13 a, b. Antasia contusa; c, posterior antenna; d, e, anterior feet (d, with the finger closed); e, abdomen, of another specimen.—p. 1230.

Fig. 14 a. Copula megalops, enlarged; b, anterior part, under view, more enlarged (c, concave or convex corona; d, lens of the eye, with the pigment behind it; e, nerve to the antenna); f, anterior and posterior speci mens.—p. 1232.

Fig. 15 a. Copula quadrate; b, posterior antenna; c, under view of mouth; d, natatory leg.—p. 1233.

PLATE 87.

Fig. 1 a. Sapphirina indivisa, female, enlarged; a, one of the anterior antennae; b, posterior antenna; c, anterior foot or maxillipeds.—p. 1259.

Fig. 2 a. Sapphirina indivisa, male, enlarged; a', anterior antenna; b, posterior antenna; c, anterior foot; d, abdominal glands and ducts.—p. 1259.

Fig. 3 a. Sapphirina angusta, enlarged; b, posterior antenna.—p. 1240.

Fig. 4 a. Sapphirina elegans, enlarged; b, posterior antenna.—p. 1241.

Fig. 5 a. Sapphirina metallica, enlarged; b, under view of anterior part; c, caudal lamella.—p. 1242.

Fig. 6 a. Sapphirina compta, male, enlarged; b, posterior antenna.—p. 1245.

Fig. 7 a. Sapphirina inaequalis, enlarged; b, posterior antenna.—p. 1244.

Fig. 8 a. Sapphirina orvala, enlarged; b, posterior antenna.—p. 1245.

Fig. 9 a. Sapphirina splendidissima, enlarged; b, posterior antenna (unfigured sketch); c, caudal lamella.—p. 1246.

Fig. 10 a. Sapphirina ovata, enlarged; b, posterior antenna.—p. 1246.

Fig. 11 a. Sapphirina brachycauda, enlarged; b, under view of anterior segment, showing how far the shell is reflected below; c, posterior antenna.—p. 1247.

Fig. 12 a. Sapphirina insignis, enlarged; b, posterior antenna.—p. 1248.

Fig. 13 a. Sapphirina orientalis, male (not female, as stated on p. 1259), enlarged; b, part of posterior antenna; c, caudal lamella.—p. 1249.

Fig. 14 a. Sapphirina orientalis, female, enlarged; a', posterior antenna; b, anterior antenna; c, under view of anterior part of animal.—p. 1250.

Fig. 15 a. Sapphirina ovata-lanceolata, female, enlarged; b, posterior antenna; c, anterior foot or maxilliped.—p. 1251.

Fig. 16 a. Sapphirina ovata-lanceolata, male, enlarged; b, under view of head.—p. 1251.

PLATE 88.

Fig. 1 a. Sapphirina gregaria, female, enlarged; a', anterior antenna; b, c, posterior antenna, different views; e, anterior foot; d, e, maxillipeds; f, maxillae in profile.—p. 1256.

Fig. 2 a. Sapphirina gregaria, male, enlarged (nerve system colored reddish; d, e, digestive system and oesophagus, greenish; f, g, genital system, bluish; h, lenses of eyes; j, lunular corona or complicip); i, lenses of the eyes and pigmenta, with intermediate minute eyes; k, anterior antenna; l, b, leg of first pair; m, same, in position; n, lower extremity of genital system (same as e in 2 a); o, nervous ganglion and its nerves.—p. 1252.

Fig. 3 a. Sapphirina bella, male, enlarged; b, eye-lenses, with the intermediate eyes; c, posterior antenna; d, caudal lamella and part of abdomen bearing it.—p. 1254.

Fig. 4 a. Sapphirina quadrata, male, enlarged; b, third pair of antennae; c, fourth, hind leg; d, anterior part of body, showing lunular corona on the front, two pairs of antennae, e, f, and the mouth covered by the first pair of legs; g, mouth, with one of the legs removed; h, same, both legs removed; i, same, one of outer maxillae removed; k, same, both of outer and inner maxillae removed; l, one of inner maxillae and mandible; m, l, outer maxillae, in different positions.—p. 1254.

Fig. 5 a. Sapphirina teres, male, enlarged; b, posterior antenna; c, eye-lenses and pigments, and intermediate eye-spots.—p. 1255.

Fig. 6 a. Sapphirina tenella, male, enlarged; a, view showing outline of stomach; b, posterior antenna; c, leg of first pair.—p. 1256.

Fig. 7 a. Sapphirina tenella, female, enlarged; c, anterior antenna; d, posterior, hind leg; e, leg of first pair.—p. 1256.

Fig. 8 a, b. Sapphirina.—c, p. 1258.

Fig. 9. Sapphirina gregaria, enlarged.—p. 1258.

Fig. 10. Sapphirina orientalis, enlarged.—p. 1259.

Fig. 11. Mirasia proflavia, male, enlarged.—p. 1260.

Fig. 12 a. Mirasia crassipes, enlarged; b, appendage to mouth; c, another variety.—p. 1261.

PLATE 89.

Fig. 1 a. Daphnia amabilis, enlarged; a, anterior antenna; d, leg of first pair; e, hind, of fourth pair, magnified three-fourths more than 1 a; f, dorsal abdominal appendage.—p. 1266.

Fig. 2 a, b. Penilia argentata, enlarged.—p. 1266.

Fig. 3 a, b, c. Penilia orientalis, enlarged; d, antenna; e, natatory leg.—p. 1270.

Fig. 4 a. Daphnia aequalis, female, enlarged; a, male, in profile; b, ventral view of head; c, abdomen, in part, with stomach and intestines; e, enlarged view, showing resolution of shell.—p. 1271.

Fig. 5 a. Daphnia ephemer, enlarged; b, upper view of outline of head.—p. 1278.

Fig. 6 a. Ceryxoma tenella, enlarged.—p. 1274.

Fig. 7 a, b. Lymnaea lateralis, enlarged.—p. 1274.

Fig. 8 a. Platypleura subtilis, a, leg of second pair; b, hind, of fourth pair.—p. 1276.

Fig. 9 a. Cytherella americana, view of female, after removal of one valve of shell, showing two pairs of antennae, one of mandibles, one of maxillipeds, and three pairs of legs, with abdomen and its appendages; a, animal, covered by its shell; b, part of shell, more enlarged; c, dorsal view, showing outline; c, outline of shell, with abdomen of male and one leg; f, same, with abdomen thrown out, as often observed, after putting the animal in hot water; g, h, male abdomen, with its two folds or parabola separated; i, another view of same; j, bases of legs, showing busy framework, for their articulation; k, abdominal appendage of female (same as e, in figure 9 a)—p. 1284.
PLATE 90.

Figs. 1, 2, 3, 4, 5, 6 to 9, organs in the order, first antennae, second antennae, mandibles, maxillae, maxillipeds, legs of two pairs of 1. CYPRIS CHELICERAE; 2. CYPRIS AMERICANA; 3. CYPRIS X.; 4. CANDACEA; 5. HALICYPRIS MUNCHII. Fig. 6. Cypriis cheilina, enlarged—p. 1285. Fig. 7. Cypris cheilina, side view, enlarged; b, upper view of shell; c, side view of animal, shell removed—p. 1286. Fig. 8. Cypris venezuela, side view, enlarged; b, upper view; c, anterior antenna; d, posterior antenna; e, leg of first pair—p. 1287.

PLATE 91.

Figs. 1 to 3. CYPRIS LUTERI, enlarged; b, dorsal view, caudal; c, animal, removed from the shell (showing, d, eye; e, anterior antennae; f, posterior, ibid.; g, mandibular feet; h, basale, maxilla, with its processes; i, maxilla of first pair; k, ibid., of second pair; l, ibid., of third pair; m, ovarian feet; n, maxilliped, extreme); p, part of eye; q, one of the lenses; r, anterior antennae; s, part of a plane of posterior antennae; t, part of mandibular foot, with mandibular process of y; y, y', same process, in profile; z, lateral mass and organs, under view (g, mandibular feet; t, maxilla of first pair; b, ibid., of second pair; h, ibid., of third pair; r, t, processes on the anterior and posterior part of the lateral mass; s, dorso, prominent intermediately (see figure 1 e); u, maxilla of first pair, same with b, in figures 1 e and 1 k; v, same, reversed; x, maxilla of second pair, same as v, in figures 1 e and 1 k; w, maxilla of third pair, same as v, in figures 1 e and 1 k; x, y, z, extreme of ovarian feet; a, longer of mandal spines—p. 1291.

Fig. 2 a, b. CYPRIS LUTERI, enlarged—p. 1290.

Fig. 3 a, b. CYPRIS LUTERI, enlarged; c, mandible size—p. 1294.

PLATE 92.

Figs. 1 to 9, CYPRIS ECHINUS, enlarged; b, anterior antenna; c, mandible size; d, mandibular feet; e, maxilla of first pair; f, maxilla of second pair; g, leg of first pair; h, leg of second pair—p. 1290.

PLATE 93.

CALCIDS AMERICANA, p. 1217—v, under view of male, enlarged; a', male, natural size; a', female, natural size; b, female antenna of second pair; c, female, premaxilla leg; d, maxilla; e, extremity of maxilliped; f, f', part of first maxilla of posterior part of body (p. 1229); g, g', valves in the circulation (p. 1214); h, doral, view, showing muscles (p. 1225); i, area in shell, over the eyes; j, digestive system (p. 1237); k, oesophagus, showing glands of surface; l, part of intestine; m, n, glands, near mouth; p, p', p', p', p', p', p', different views of parts of maxilla (p. 1220); q, under view of female, showing nervous and genital systems; r, y, t, antenna; s, nervous ganglia; t, male genital system; u, v, ciliation of tunn, during copulating; r, ventral muscle of figure x, seen in profile; s, abdomen of female, with a common appendage to valve, terminating in a bulb (probably torn from male, in section?) [In text, p. 1232, 1234 line from top, "between y and z"] should read, between y and y.'

PLATE 94.

Fig. 1 a. MONSTRAE VENUS, animal, enlarged; b, profile, showing mouth opening; c, extreme of front mouth; d, mouth, prominence enlarged; e, abdomen, in profile, with last part of cephalothorax and natatory feet—p. 1311.

Fig. 2 a, b, ARCEDES PUNCTICUS, enlarged—p. 1351.

Fig. 3 a, b, ARCEDES PUNCTICUS, male, enlarged; b, abdomen, in profile, with second pair of cephalothorax and natatory feet—p. 1311.

Fig. 4. ARCEDES PROTRACTI, enlarged—p. 1516.

Fig. 5 a. ARCEDES CRASSUS, enlarged; b, posterior antenna of female; c, maxilla; d, leg of second antenna—p. 1316.

Fig. 6 a, b. LETTOSTRUMUS ARIA, female, enlarged; b, anterior antenna of female; c, maxilla, ibid.; d, first pair of feet, ibid.; e, leg of second pair, ibid.; f, posterior antenna of male; g, leg of second pair, ibid.; h, abdomen, ibid.—p. 1516.

Fig. 7 a, b. CALCIDS VERUS, female, enlarged; b, posterior antenna, with the exterior spine; c, e, anterior part of maxilla, showing its forked character; d, e, leg of first pair; f, h, ibid., of second pair—p. 1320.

Fig. 8 a. CALCIDIA KELLY, female, enlarged; b, c, d, e, anterior antenna, and maxilla, and first and second feet, in relative position; f, f', female, leg of last pair; h, under view of abdomen, showing appendages, sometimes observed attached—p. 1329.

Fig. 9 a, b. NODOSA VALLENS, enlarged; b, k, organs, in their relative positions, first and second antennae, mouth, first, second, and third pairs of feet; k, third and fourth pairs of antennae—p. 1368.

PLATE 95.

Fig. 1 a, b. PANDARUS CONTINENS, enlarged; b, anterior antenna—p. 1524.
CRUSTACEA.

Fig. 2 a. Pandarus satyrus, enlarged; b, ventral view, more enlarged; c, caudal extremity, with commencement of external tube of eggs.—p. 1367.

Fig. 3 a. Pandarus brevicaudis, enlarged; b to g, organs, in their natural positions; h, last two pairs of natatoria.—p. 1368.

Fig. 4 a. Dextemura braccata, enlarged; b, ventral view.—p. 1370.

Fig. 5 a. Lek時にはurus, enlarged; a', ventral view; b, buccal trunk, with maxilla either side; c, extremity of same; d, separate view of maxilla; e, posterior antenna; f, maxilliped or foot of first pair; g, peduncle foot; h, i, natatory of first and second pairs; k, one of two posterior pairs of natatoria.—p. 1375.

Fig. 6 a. Stenocerus cucullatus, enlarged; b, eyes; c, under view, showing organs, in order; d, e, hand of pedemide foot, in profile; f, penis of natatoria; g, natatory of fourth or posterior pair; h, mandible and extremity of buccal trunk.—p. 1375.

Fig. 7. Cryptus duodecimtus, jun.? —p. 1375.

Fig. 8. Young of a Schizopoda.

Figs. 9, 10, 11. Young of——?—p. 1375.

PLATE 96.

Fig. 1 a, b. Lampedusa californiensis, enlarged.—p. 1379.

Fig. 2 a. Pycnogonum orientalis, specimen mutilated; b, body, more enlarged, showing branching of alimentary tube; c, appendages to cephalic segment.—p. 1391.

Figs. 5 to 8. Acasta,—p. 1395.

Fig. 9 a to g. Acasta sporillas, of Darwin.
1. *Eurypodius Latreillii*
2. *Oregonia gracilis*
3. *hirta*
4. *Tiarinia angusta*
5. *Pericera trigona*
6. *Tiarinia cornicosa*
7. *Tiarinia majora*
M.U. Exploring Expedition.

Meechius tuberculatus, arenatus, Acanthonyx simplex, Acanthonyx debile, Peltinia scutiformis, Modulus.
1 a 4. Cancer magister
5 a 6. Cancer magister productus
7 a 8. Carpilius gracilis
9 a 10. Carpilius gracilis
11 a 12. Carpilius gracilis
Medaeus ornatus.
Etisus deflexus.
Etisodes frontalis.
Kvis stitis.
Aetaeodes faba affinis & ^
Aetaeodes speciosus
Chlorodius graei
Chlorodius integer
ACTEODES CAVIPES
GAZONIA

"C. N. Expeditions Expedition"

1.9 X
Melia tessellata.

A. antennae
B. scopula
C. mandibles
Trapezia bella, Trapa punctata, and Trapa areolata.

1. Trapezia speciosa
2. Trapezia bella
3. Trapezia punctata
4. Trapezia areolata

5. a. cornishac
6. a. dentata
7. a. calicistrum
8. a. areola.
Grapesus plicatus
Grapsus
Goniograpsus ineripes
Goniograpsus undulatus
Planes cyaneus. Eemigrapsus exdentatus crenulatus. Erassmianus affinis.

Cyrtograpsus an8 trapezii, a, obtusifrons. crawn Ai JD. Mana.
1. Calappa hecata
2. Saginus angustatus
3. Hepatus chilenus
4 a. Heliopus hecata
5 a. Necia species
6 a. Alumaria species
7 a. Biramea paralea
8 a. Biramea
9 a. Biramea cecena
10 a. Biramea talpidae
U.S. Exploring Expedition

ANDEHUR, PL. 20.

1 a. b. Pagurus longipes
2 a. b. Pagurus granum
3 a. b. Pagurus porcellana
4 a. b. Calcinus

5 a. c. Calcinus

E. Calcinus Latreille
1 a 4. Pseudoneeda ventricosa
2 a 7. Oliphas superbus
3 a 6. graminea

1 a 5. Harpactes lutescens
2 a. n. lucifer, gracilis
4 a 6. longiseta
S. Exploring Expedition

Acheta centara

1 - 4

Palmena affinis

5 - 10

Acheta exilis

11 - 15
dactylus

16 - 20
carapace

21 - 25

palps

26 - 30

Palmena tortuosa

31 - 35

rudiment

36 - 40

gradus

41 - 45

basisternum

46 - 50

basisternum
1 = Pseudosquilla longicosta
2 = Squilla mantis
3 = Squilla subtilis
4 = Pseudosquilla longicosta
5 = Squilla mantis
6 = Squilla subtilis
1. **Cyclops superbus**
2. **Ptenopus cristatus**
3. **Macromysis gracilis**
4. **Siriella whitei**

**Cyrtopia rostrata detruncai**
1. a. d. Lysiosoma rayanum
2. a. d. proteus
3. a. d. stenola
d. a. b. Parala eucapripilum
4. a. b. Parala asb cryptocotyle
5. a. b. Ctenophora albus
6. a. b. ophioprepus
7. a. b. gracilis
8. a. b. Calyptridae
9. a. b. Zenia rubella
10. a. b. Ctenophora
11. a. b. Zoarium
1. a. Tylus spinulosus
2. a. d. Armadillo aperiennis
3. a. d. Sphicillo normoltene
4. a.  d. pictolene
5. a. c. lamellosanta
6. a. b. Sphicillo
7. a. b. Penicillo gymnopolitan
8. d. a. i. fuegicenais
9. a. e. r. liwaiensis
10. a. t. liwaiensis

Illustration by J. D. Dana 1858
S. Exphring Expedition.

Ceratotoha linearis.
a.

c.

crassa.

Lioencea longistylis.

emarginata.

Lioencea lata.

Nerocla lata.

Latiuscula.

Ehrasiliensis.

aculeata.

Axmata.

tenxupes.

Kalliuiiilithiania laliceps.
1. a. Serolis planus.
2. a. n. Leadblainro.
3. a. n. Tamia Puritamia, Bradlemonia.
4. a. c. Bumnuma elongatus.
5. a. d. Lepothelocia murieta.
ITS. Exploring Expedition.

Allorhestes novizelandiae. 2 a. l. orientalis. 5 a. b. gramme.

Drawn by J.R. Allorhestes media. 4 a. n. Allorhestes pugetianus. 6 a. j. pugetiana.
1. a. Amphithoe, Ill. or Macromus captivus
2. a. Granasoma, Ill. or Macromus asper
3. a. Prawn, Ill. or Parui.
4. a. G. albidus
5. a. C. tennis
6. a. C. furcieoriiis
7. a. G. teneEus
8. a. J. Gammarus
9. a. G. quadrimanus
10. a. E. brasiliensis
C. S. Exploring Expedition.

1. C. Gammarus pagurus
2. C. ? gammarus
3. C. ? pelagicus
4. C. ? pubescens
5. C. ? sterilis
6. C. Dietrich fenestra
7. C. ? fennica
8. C. ? setipes
9. C. ? arenicola
10. C. ? tarda

Drawings by W. H. Bowen.
STRUCTURE OF CYCLOPODA: 34–63, mandibles; 64–73, mandible, one pair; 74–81, mandibipeds, one pair; 82–83, 1st pair of legs; 84–100, posterior legs; 101–104, abdomen and caudal lamella; 105, Thyone; 106–120, Endopodites of Athame.
Calanus medius, placidus.
Calanus recticornis.
Calaniella pellucida.
Calaniella affinis.
Exploring the marine environment.

1. Callianassa rostrifrons
2. Callianassa corona
3. Callianassa jena
4. Calanus plumulifer
5. Calanus abbreviate
6. Calanus aeiger

Drawn by T. D. Savage.
Catopia Bircata, Acaxtia thompsoni, Arartia Laxa, Calanopia eliptica, Calaspis elliptica, Pontella plumata, C. k. heptica.