











*CB*  
*MS*  
Concerning Stimpson's Prodromus

44391

Smith

One set of extras was issued in covers as published, and on the cover of part VIII appeared the following note or erratum: Dorippe sexdentata changed to Ethusa sexdentata.

Another edition of extras has all the parts in one cover and without the erratum. The cover of this edition has for a second title the following: Descriptions/ of/ Invertebrate Animals/ (Turbellaria and Crustacea)/ Collected by the U. S. North Pacific Expe-/ dition, Capts. Ringgold and Rodgers, 1853-56.

The above taken from letter of S. I. Smith,  
Feb. 1, 1907.

64922  
Smith

INVERTEBRATE  
ZOOLOGY  
Crustacea

MIRATHBUN.

[From the Proceedings of the Academy of Natural Sciences, May and June, 1855.]

*Descriptions of some of the new Marine Invertebrates from the Chinese and Japanese Seas.* By WM. STIMPSON, Zoologist to the U. S. Surveying Expedition to North Pacific, Japan Seas, etc., Lt. John Rodgers, Commander.

(Communicated by the Smithsonian Institution.)

POLYPLI.

1. *ANTHELIA LINEATA*. Polypes elongated, slightly tapering towards the mouth, pale brownish with eight longitudinal lead colored stripes; tentacula bright blue, half as long as the body, with a single series of oblong, somewhat irregular papillæ. Length of a polype 1 inch.

Hab. China.

2. *CERNULARIA AURANTIACA*. Large, branching, pale orange; tubes straight, subcylindrical, (clavate when young); polypes transparent, with a few short linear spiculæ on the sides; stomach crimson; tentacula with a single series of elongated, tuberculated papillæ. Height 2 inches.

Hab. China.

3. *ALCYONUM AGARICUM*. Mushroom-shaped, upper surface only polypiferous; pedicel central, one-third as thick as the disc is broad; disc orbicular, convex, margin entire, revolute; polypi rather large, three-tenths of an inch long and one-eighth of an inch distant, the surface between them covered with minute dots; disc above bluish-grey, polypes lighter, with still paler tentacula; inferior surface and pedicel dark cream-colored. Diameter  $\frac{1}{2}$  inch.

Hab. Japan.

4. *NEPHTHYA COCCINEA*. Lobulose, deep crimson; spiculæ crowded and irregularly projecting around the bases of the polypes, which are hyaline, with triangular, papillate tentacles. Beneath each tentaculum in the skin of the polype are two rows of minute, linear, crimson spiculæ, converging toward each other and forming a succession of V-shaped markings.

Hab. China.

5. *VERETILLUM CLAVATUM*. Variegated, punctate with orange and spotted with brown; foot white, with a pointed extremity; polypes large, the tentacula long and slender, their papillæ oblong; surface of the body between the polypes irregularly papillose. Length 2 inches.

Hab. China.

6. *ACTINIA RADIATA*. Small, smooth, oblong, pale brown, found attached to slender univalves; when contracted, depressed, radiated with gradually widening streaks of white; when expanded, disc narrower than the base, spotted with flake-white around the mouth; tentacula spotted with dark brown and white, tapering, pointed, arranged in an alternating series near the margin. Length  $\frac{1}{2}$  inch.

Hab. Japan.

7. *ACTINIA NIGROFUNCTATA*. Subcylindrical, smooth, pale orange, base somewhat expanded; body encircled by two lines of distant black punctæ, ten in each line, alternating with the others; tentacula rather numerous, long, pointed, dark at base; those indicating the antero-posterior diameter larger than the others, flake-white at base. Diameter  $\frac{3}{4}$  inch.

Hab. Ousima.

8. ACTINIA INORNATA. Body papillose, papillæ oval, not very numerous; tentacula long, crowded in two or three rows; sulcus of the mouth indicated by protuberances at the margin; space between mouth and tentacula rather broad; color dark olive, paler above, darkest in a circle around the mouth. Height two inches.

Hab. China.

9. ACTINIA MULTICOLOR. Subcylindrical, brownish, with large purple papillæ and ten whitish stripes; a smooth band just beneath the tentacula, crowded with vertical crimson lines; mouth large, flesh-colored, with a deep longitudinal sulcus; tentacula also flesh-colored, thick, short, suddenly tapering to a blunt point, rather few in number, crowded together in two rows between the mouth and the margin. Height 1 inch.

Hab. China.

10. ACTINIA NAPENSIS. Smooth, lineated, olivaceous, greenish above and brownish below; upper margin crenulated; disc not broader than the middle of the body; tentacula placed in two rows near the margin, rather stout, pointed, dark-greenish, trimaculate with white on their inner sides; mouth protuberant, much lobed, spotted with white without and streaked with yellow within. Attached to stones beneath the sand. Height 1 inch.

Hab. Loo Choo.

11. CANCRISOCIA, n. g. Tentacula simplicia elongata, omnino retractilia. Basis valde dilatata, pellicula oblonga, coriacea, separabili instructa. Hæc velamentum dorsale cancri (G. Doriippe) format.

12. CANCRISOCIA EXPANSA. Of a pale brownish color; base suboblong, slightly arcuated, with rounded, subtruncate extremities; margin crenulated; pellicle tough, brownish, concentrically striated, with a submarginal nucleus; diameter of the middle of the body half the length of the base, and two-thirds that of the oral disc; tentacula long, slender, tapering, shaded with blackish about the middle, arranged in two or three confluent rows around the margin; space between mouth and tentacula radiated with blackish; mouth greenish without, brown within. In a contracted state, body much flattened, mouth indicated by a depression at the centre. Found on the common *Doriippe* of the China seas, attached by the posterior legs of the animal.

13. EDWARDSIA, Quatref. Polypi saepe non affixi, sed non proprie liberi. Subvermiformes, epidermide instructi; tentaculis paucis et brevibus.

14. EDWARDSIA COLLARIS. Elongated, truncated at base, covered with a dirty brownish epidermis, except at a broad white band just beneath the tentacula, marked with eight fusiform stripes of brown; tentacula small, slender, brownish, about 40 in number. Length 2 inches.

Hab. China.

15. EDWARDSIA BREVICORNIS. Oblong, tapering toward the rounded posterior extremity, pale brown, 20-lineate, and with 20 short dark brown tentacula, banded with white near their blunt extremities. Epidermis scarcely perceptible. Length 1 inch.

Hab. China.

16. EDWARDSIA CLAVATA. Club-shaped, broad above; base small; epidermis dark greenish, brownish below, leaving a narrow naked space below the tentacula, of a purplish-brown color; tentacula in two equal series, the inner ones erect, the outer horizontal; mouth and tentacula purplish-brown, streaked and banded with white. Length 2 inches.

Hab. Kikaisima.

17. EDWARDSIA RUBRICOLLUM. Subclavate, attached to stones beneath the surface of the sand; body covered with a loose brownish epidermis except at a red band beneath the tentacula, the upper margin of which is tuberculated; mouth-disc pale yellow; mouth deep red; tentacula yellowish, stout, tapering

to a point, about 40 in number, arranged in two rows; half as many in the inner as in the outer row. Length 4 inches.

Hab. China.

18. *EDWARDSIA CRETATA*. Body covered with a brownish epidermis, encrusted with sand; anterior extremity naked, striate, and striped with alternately broader and narrower streaks of white; tentacula slender, pointed, black, spotted with white along their inner sides, about 30 in number, the inner ones longest. Length 1 inch.

Hab. Japan.

#### TUNICATA.

19. *ASCIDIA TUBIFERA*. Elongated, cylindrical, smooth, hyaline, pale greenish, attached at the small anterior extremity; branchial tube nearly as long as the body, with a trumpet-shaped aperture, 8-lobed, with 8 red ocelli and the same number of short cirri; anal tube half as long as the branchial, with a contracted aperture, 6-lobed and 6-ocellate; both apertures encircled by a thread of bright yellow. Length 2 inches.

Hab. China.

20. *ASCIDIA CALCATA*. Oblong, somewhat rectangular, flattened, papillose, dark-green; apertures small, sessile on 8- and 6-lobed prominences, encircled with darker green. Length 1 $\frac{1}{2}$  inch.

Hab. Japan.

21. *SCHIZASCUS*, n. g. Tunica exterior fissa; parte posteriore complanata, cavum alterius tamquam operculo claudente et siphones retractos celante. Aperituræ sexangulatæ.

22. *SCHIZASCUS PELLUCIDUS*. Ovate-triangular when contracted; test and opercular thick, hyaline; tubes short, flesh-colored, streaked with crimson; a few transparent tubular processes around the apertures. Length 1 inch.

Hab. China.

23. *SCHIZASCUS PAPILLOSUS*. Subrectangular, transparent; test covered with small papillæ; apertures with salmon-colored ocelli at their angles. Length  $\frac{3}{4}$  inch.

Hab. China.

24. *MOLGULA LABECULIFERA*. Small, globular, encrusted with mud; tubes transparent, the branchial shortest; apertures 6- and 8-lobed; lobes pointed and covered with sordes at their extremities. Diameter  $\frac{3}{4}$  inch.

Hab. China.

25. *CYNTHIA SATSUMENSIS*. Subglobular, smooth when young, corrugated and distorted with age, of a pale orange or flesh-color; tubes short, subconical, rounded; apertures 4-lobed, with deep red markings, the anal one-third the size of the branchial. Diameter 1 inch.

Hab. Japan.

26. *CYNTHIA DELICATULA*. Globular, nearly smooth, of a pale red color; tubes short, subcylindrical; the branchial one with four longitudinal, bluish-white stripes margined with dark red; apertures nearly equal in size, rounded in expansion, cross-shaped when closed; a red circle at the mouth of the branchial cavity. Diameter  $\frac{3}{4}$  inch.

Hab. Tanegasima.

27. *CYNTHIA OCCELLIFERA*. Body rounded, coriaceous, of a pale red color with darker clouds; tubes large, rather produced, about equal in size, striped alternately with red and white toward their extremities; branchial aperture somewhat trumpet-shaped, with four inconspicuous red ocelli at the margin. Length 1 inch.

Hab. China.

28. *CYNTHIA GEMMATA*. Free, encrusted with sand and shells, compressed, rounded; tubes nearly equal in size, short, slender, tapering, flattened, bright

yellow, with four longitudinal crimson stripes corresponding to the angles of the small, lozenge-shaped apertures. Diameter  $\frac{3}{4}$  inch.

*Hab.* China.

29. *CYNTHIA ARANECOSA*. Ovate, or subglobular, of a pale orange color, surface divided into slightly prominent, irregular, polygonal spaces, separated by an irregular reticulation of crimson lines; tubes short, lineated and shaded with red, the branchial longest, the anal conical; apertures nearly circular when expanded. Length 1 inch.

*Hab.* China.

#### GASTEROPODA.

30. *CORIOCELLA PUNCTATA*. Oblong-oval, gibbous, hyaline, everywhere covered with flake-white punctæ; mantle smooth, covered with small circular clear spots, slit and folded at the anterior margin, forming a siphon; head flattened, quadrate, projecting a little beyond the margin of the mantle; tentacula linear, very long and slender, having the eyes sessile at their external bases; foot somewhat longer than the mantle, truncate and bi-marginate in front, pointed behind. Length  $\frac{3}{4}$  inch.

*Hab.* Ousima.

31. *CORIOCELLA TUBEROSA*. Orbicular; mantle thick, cartilaginous, with numerous irregular protuberances, four of which are large and prominent; siphon oblong, conical, projecting forward; head small; tentacula stout, of moderate length; foot much shorter than the mantle. Color pale brownish, spotted beneath with sulphur-yellow. Length 2 inches.

*Hab.* China.

32. *APLYSIA LÆVIGATA*. Smooth, convex, oblong, somewhat produced anteriorly; lobes of the mantle rather short; siphon conical, foot with a blunt posterior termination; dorsal tentacula cylindrical, orals dilated at their extremities; color brownish above, sides with small dark grey spots and a few patches of white punctæ; head and foot green. Shell suboblong, very thin, membranaceous, of a pale horn-color; arcuated incision short but deep; summit triangular, small, thick and callous. Length 2 inches.

*Hab.* Ousima.

33. *NOTARCHUS CIRROSUS*. Oblong, back rounded; foot short and pointed behind, somewhat acuminate; body covered with numerous rather long appendages, much ramified on the back, but mostly simple on the head and tentacula; dorsal tentacula short, tapering, with the upper half slit; orals large. Color bluish-grey, sprinkled with black dots; the appendages edged with sulphur-yellow; a few clear green circular spots in different parts of the body. Length 3 inches.

*Hab.* China.

34. *NOTARCHUS LINEOLATUS*. Oblong-ovate, rather produced before, short and pointed behind; a few small, scattered, ramosè appendages on the back and sides; color greenish, with minute, crowded, longitudinal black lines; a few small round nucleated spots on the sides; tentacles slender, the dorsal ones very long; eyes conspicuous, situated at a considerable distance in front of the dorsal tentacles. Length 2 inches.

*Hab.* Loo Choo.

35. *PLACOBRANCHUS GUTTATUS*. Depressed, ovate; head and tentacula very large; eyes small, placed together on a mamilla between and behind the tentacula; color dark olive, front brownish, mantle covered with circular greenish spots, and blotched with flake-white along the edges. Within, branchial striae prominent, of a dark green color. Length 1 inch.

*Hab.* Loo Choo.

36. *EOLIS HUMILIS*. Rather slender, wine-yellow; branchiæ dark brownish-grey, with pale yellowish tips, arranged in six clusters, the first two of which are

biserial; dorsal tentacula serrated, orals long; anterior angles of the foot greatly produced. Length 1 inch.

Hab. China.

37. *GYMNODORIS*, n. g. *Limaciformis*, *lævis*. *Polyceræ affinis*, sed appendicibus branchiarum veloque carens, diversa. *Branchiæ etiam simplices*.

38. *GYMNODORIS MACULATA*. Elongated, obtusely rounded before, tapering posteriorly to a slender pointed extremity; body smooth, translucent, of a pale brownish color, spotted with bright yellow; a ring of flake-white around the base of the branchiæ. Tentacula short, with eight oblique, dark brown laminæ; branchiæ consisting of nine slender, transparent, unbranched leaflets, with blunt, rounded, bright yellow extremities. Length  $\frac{3}{4}$  inch.

Hab. Loo Choo.

39. *POLYCERA ? RAMULOSA*. Large, higher than broad, swollen at the middle; back with a row of small branching processes along each side, those opposite the branchiæ bulbous; head large, rounded above, subtruncate; veil separated as far as the tentacula, with a pectinated margin; tentacula clavate, finely 25-laminate; branchiæ small, ramosæ, with five principal trunks; color greenish with blackish patches; a few orange dots on the sides. Length 2 inches.

Hab. China.

40. *IDALIA TENTACULATA*. Very small, suboblong, pointed behind; having two large frontal cirri, and sixteen lateral ones, eight on each side, the posterior ones bifurcate; head produced at the sides; tentacula very large, clavate; branchiæ consisting of four thick tentaculiform processes, dentated along the inner sides, in front of which on the middle of the back arises a single, very long cirriform appendage; color pale wine-yellow, with brownish spots along each side of the flake-white median line; tentacula and branchiæ chestnut-brown. Length  $\frac{1}{3}$  inch.

Hab. China.

41. *HEMIDORIS*, n. g. *Pallium postice adnatum*. Reliqua ut in Doridibus.

42. *HEMIDORIS CÆRULEATA*. Elongated-ovate, broad in front, convex along the middle and depressed at the sides; foot concealed by the mantle except posteriorly where they coalesce, the foot being produced for some distance beyond and tapering to a point; mantle smooth, light-blue, margined with yellow; dorsal tentacula 10-laminate, dark reddish-brown; orals oblong; branchiæ consisting of nine slender, simply pinnate leaflets of a reddish color. Length  $\frac{1}{2}$  inch.

Hab. China.

43. *DORIS INDURATA*. Ovate, broadest posteriorly; mantle covered with small hard tubercles, somewhat distantly arranged in quincunx; tentacula thick, pedunculate, 12-laminate; branchiæ with five well-branched plumes; head very small, foot narrow in front and broadly rounded behind; color lemon-yellow with flake-white spots; branchiæ dark orange. Length 1 inch.

Hab. China.

44. *DORIS GIBBEROSA*. Thick, slightly broadest before; tubercles of the mantle hard, rugose, very large along the middle of the back; foot produced beyond the mantle behind; tentacula somewhat elongated, finely laminate, issuing from a pair of the larger tubercles; branchiæ large, frondose, of five plumes; color dark yellowish, tubercles purplish-brown, tentacula brownish-grey with white tips; branchiæ lemon-yellow. Length  $1\frac{1}{2}$  inch.

Hab. China.

45. *DORIS OLIVACEA*. Large, thick and strong, rugose, half as broad as long, dark olivaceous; mantle with large greenish tubercles, largest about the middle; dorsal tentacula smoothish, with conical 20-laminate extremities; orals oblong; branchial plumes largest. Length 3 inches.

Hab. Loo Choo.

46. *DORIS ROGERSII*. Convex, oval, of a pale-brown color with darker clouds

mantle covered with minute crowded, slender papillæ, like short hairs; foot not reaching the edge of the mantle; tentacula short, blunt, broadly laminate, of a purplish-brown color; branchiaæ formed of nine small colorless leaflets projecting but little beyond the margin of the cavity in which they are expanded; anal papilla large, black. Length  $\frac{3}{4}$  inch.

*Hab.* Kikaisima.

47. *DORIS ARECLATA*. Small, convex, mantle tuberculated; branchiaæ consisting of eight short leaflets, the superior one much the largest. Colors: mantle bright green, with a rectangle defined in purple between the tentacula and the branchiaæ, from the corners of which yellow lines extend to the margin; foot, branchiaæ and tentacula of a pale lemon color. Length  $\frac{3}{4}$  inch.

*Hab.* Boninsima.

48. *DORIS NIGRA*. Small, subelliptic, somewhat elongated, depressed; mantle smooth, the foot produced beyond it; tentacula obliquely 9-laminated; branchial cluster small but produced and nearly erect, with eight simple pinnate leaflets. Color variable, usually black, always very dark; mantle often dotted with white and margined with red; tentacula always tipped with white. Length  $\frac{1}{2}$  inch.

*Hab.* Loo Choo and Kikaisima.

49. *DORIS LATENS*. Oval, mantle covered with minute tubercles; foot produced a little beyond the mantle; dorsal tentacula finely 20-laminate; orals slender; branchiaæ with six slender pinnate plumes, contractile into a large cavity, the lateral ones longest but not reaching the margin of the body; anal tube with a white star-like extremity. Colors: body everywhere variegated with black, brown and white, and punctate above with flake white. Length 1 inch.

*Hab.* Loo Choo.

50. *ONCHIS FRUTICOSA*. Oval, thick, of a dark greenish color mottled with yellowish; mantle covered with small papillæ of different sizes, the larger ones with 1-3 oculiform black dots at their summits, those on the posterior half of the body elongated and covered with styliform branches; the mouth-disc large, bilobate; tentacula oblong, with the retractile eyes at their summit; foot much shorter than the mantle, of a pale yellowish color. Length 1 inch.

*Hab.* Kikaisima.

#### TURBELLARIA.

51. *EURYLEPTA INTEKRÜPTA*. Oval, of a pale brown color, with a median line of black blotches; margin ornamented with brown, orange, black and white, concentrically arranged, and interrupted at short intervals all around, except in front; tentacula prominent, marginal; ocelli cervical, in two lunate patches, convex forward, one behind the other. Length  $\frac{3}{4}$  inch.

*Hab.* Loo Choo.

52. *EURYLEPTA GÜTTATO-MARGINATA*. Oblong-ovate, slightly broadest behind, white, with a series of purple spots along the margin; tentacula short; ocelli few in number, in a single cluster on the neck behind the tentacula. Length  $\frac{1}{2}$  inch.

*Hab.* Loo Choo.

53. *EURYLEPTA FÜLMINATA*. Oblong-oval, dark greenish, with oblique streaks of bright red on each side of the back, at the middle of which they form acute angles; tentacula broad, close together at the anterior extremity; ocelli in a single cluster on a minute oval papilla at the neck. Length  $1\frac{1}{2}$  inches.

*Hab.* Loo Choo.

54. *STYLOCHUS CORNICULATUS*. Oblong, with broadly rounded extremities, sub-translucent, mottled with yellowish-brown; tentacula prominent, pyramidal, triangular, with the minute ocelli crowded along the whole length of their exterior faces; no spot on the body; a clear, pellucid, circular spot between the tentacula. Length 2 inches.

*Hab.* China.

55. *STYLOCHUS RETICULATUS*. Broad, ovate, of a pale brown color, with darker

clouds; surface reticulated with strings of black punctæ; tentacula situated in a clear space at the anterior fourth of the length of the body; ocelli in four clusters, two on the tentacula at their bases in front, and two oblique ones anterior to and between the tentacula. Length 2 inches.

*Hab.* Loo Choo.

56. *LEPTOPLANA SPARSA*. Oblong, subtruncate before, of a pale brown color; ocelli very minute, scattered along the margin of the anterior half of the body, and forming three clusters on the head, one large central and two very small lateral ones. Length 1 inch.

*Hab.* Kikaisima.

57. *LEPTOPLANA ACUTA*. Oblong, pointed at both extremities, pale grey, mottled with brownish; ocelli few, minute, in two lunate clusters convex outwards. Length  $\frac{1}{2}$  inch.

*Hab.* China.

58. *LEPTOPLANA OBSCURA*. Elongated oval, dark-brownish with a tint of lilac, often maculate, paler along the middle of the back; ocelli few, minute and inconspicuous, in the two parallel linear clusters at the middle of the head, and scattered along the anterior margin. Length  $\frac{1}{2}$  inch.

*Hab.* China.

59. *LEPTOPLANA TRULLÆFORMIS*. Elongated, trowel-shaped, broadest at the head, of a pale brown color; ocelli situated in a clear space anteriorly, forming two conspicuous diverging clusters, and four small nebular ones, placed before and behind these, and confluent with them. Length  $\frac{3}{4}$  inch.

*Hab.* China.

60. *LEPTOPLANA COLLARIS*. Elongated, truncate in front, tapering and rounded behind; ocelli in two elongated clusters, confluent anteriorly and diverging from each other posteriorly; color pale greyish with two dark-brown longitudinal lines; a transverse white band just behind the eye clusters. Length  $\frac{1}{2}$  inch.

*Hab.* Loo Choo.

61. *NAREDA SERPENTINA*. Elongated, somewhat flattened, brownish; head broader than the body, emarginate in front; neck well contracted; eyes two, rather large, bilobate, placed one on each side at the middle of the head. Length  $2\frac{1}{2}$  inches.

*Hab.* Loo Choo.

62. *MECKELIA PIPERATA*. Greatly elongated, depressed and broadest at the middle; color light yellowish, sprinkled with black in transverse clouds; margin white; head narrower than the body, white in front of two large black spots near the middle; lateral fissures extending obliquely upward to the back, and separated anteriorly from the wide transverse mouth by a bright crimson partition; genital aperture placed anteriorly, before the middle of the head. Length 8 inches.

*Hab.* Kikaisima.

63. *MECKELIA CINGULATA*. Slender, reddish-brown, with distant white annulations regularly arranged, the first girding the middle of the head, which is also margined with white; head oblong, truncate and emarginate in front; neck distinct; genital aperture just before neck below. Length 4 inches.

*Hab.* China.

64. *MECKELIA ALBO-VITTATA*. Slender, grass-green; head truncated, a little narrower than the body, margined with white and crossed by a white band at a point about the middle of the lateral fissures. Length 3 inches.

*Hab.* Loo Choo.

65. *MECKELIA SINENSIS*. Subcylindrical, head elongated, narrowing to a small truncate extremity; neck well defined; color of body dark reddish-brown, head sprinkled with minute patches of the same. Length  $1\frac{1}{2}$  inches.

*Hab.* China.

66. MECKELIA RUBELLA. Short, broad posteriorly, of a pale salmon color; head very small, pointed; neck slightly contracted; lateral slits of great length, extending far behind the neck. Length 2 inches.

*Hab.* China.

67. MECKELIA NIGRA. Thick, narrowed and truncate anteriorly, flattened behind; color black; head comparatively large, elongated, with the lateral slits extending as far as the slightly contracted neck; mouth white. Length 3 inches.

*Hab.* China.

#### AMPHIPODA.

68. PHOXUS GENICULATUS. Rostrum very long, pointed; eyes white; superior antennæ biflagellate, flagellæ equal, 10-articulate; members with simple hairs; third and fourth articles of the third and fourth pairs of legs dilated; rami of the posterior caudal styles unequal, the outer ones long, three-jointed; color white. Length  $\frac{1}{4}$  inch.

*Hab.* Japan.

69. PHOXUS OBTUSUS. Rostrum short concave, its extremity rounded; appendicula of the superior antennæ very short; legs of the first four pairs slender; third and fourth pairs with unexpanded joints, and spinose extremities; hairs simple, except on the fifth pair of legs, where they are long and plumose; last pair of caudal styles with flattened, lanceolate rami, the external ones longest; caudal extremity with two lamelliform processes, emarginate at the extremities. Length  $\frac{1}{4}$  inch.

*Hab.* Japan.

70. DERCOTHOE? PRODUCTUS. Ophthalmamic lobes of head much produced, bearing the eyes at their rounded extremities; antennæ of equal length, one-half that of the body, with few long hairs: flagella with ten much elongated articulations; hands four, subequal, oblong; posterior caudal stylets with short rami, the outer ones uniform, the inner minute, spine-like; caudal scale subcordiform, pointed behind. Length  $\frac{2}{3}$  inch.

*Hab.* Tanegasima.

71. AMPHITHOE FILIGERA. Body thick about the middle, compressed towards the extremities; a few setiferous points on the posterior abdominal segments; epimerals large; eyes rounded, bright vermillion; antennæ very slender, the superior ones nearly as long as the body, their hair-like, 40-articulate flagella constituting four-fifths of their length; hands in the male subequal, of moderate size, very hairy, deeply notched below for the reception of the closed finger; caudal stylets of the last pair short, ovate or heart-shaped, with small papilliform rami. Color, olive punctate; epimerals greenish. Length  $\frac{1}{2}$  inch.

*Hab.* Loo Choo.

72. GAMMARUS FLABELLIFER. Slender, smooth posteriorly; superior antennæ half as long as the body, flagella 20-articulate, appendicula 5-articulate; hands oblong-elliptic; with a fusiform area below surrounded by short setæ; eyes small, round, black; rami of posterior pair of caudal stylets long, lamelliform, elliptical, equal spreading like a fan. Length  $\frac{1}{2}$  inch.

*Hab.* Loo Choo.

73. GAMMARUS TENUICORNIS. Compressed, posterior segments of the abdomen with two or three short setæ on the back; superior antennæ as long as the body, with 22-articulate flagella, appendicula triarticulate; eyes small, circular; hands hairy, second pair largest; caudal stylets of the first and second pairs with very slender, smooth rami; posterior pair with the external ramus long, thick, styliform, setose, the internal one extremely minute; terminal processes of considerable length, curved, each surmounted by a long spinule. Color blackish-olive. Length  $\frac{1}{3}$  inch.

*Hab.* Loo Choo.

74. LEUCOTHOE STYLIFERA. Antennæ of equal length, one fifth that of the body; flagella of the very slender inferior ones triarticulate; eyes small, subre-

niform, broadest above, dark-red; epimerals rather large; especially the fourth pair; hands as in *L. furina*, *grandimanus*, etc.; coxae with wide expansions, somewhat produced inferiorly; caudal stylets nearly smooth, sharp, much elongated, last pair much exceeding the first, and with large peduncles. Color pale orange. Length  $\frac{1}{2}$  inch.

*Hab.* Japan.

75. *ALLORCHESTES RUBRICORNIS*. Smooth, compressed; eyes suboval, black, widening below; inferior antennæ two-thirds the length of the body, with 25-articulate flagella, articulations nearly as broad as long, with few short hairs; superior antennæ two thirds as long as the inferior ones, flagella 13-articulate; large hands of male nearly smooth below; hands of female slender, with fingers of one-fourth their length; posterior pair of caudal stylets conical. Color pale olive; antennæ always red. Length  $\frac{2}{3}$  inch.

*Hab.* Ousima, Boninsima.

76. *ALLORCHESTES PENICILLATA*. - Penultimate article and first four segments of the inferior antennæ furnished with spreading pencils or plumes of long setæ; first pair of caudal stylets with a long curved spine, arising near the bases of the rami and nearly equalling them in length; epimerals, legs, etc., of medium size, as in the preceding species. Color greenish. Length  $\frac{1}{2}$  inch.

*Hab.* Ousima.

77. *ALLORCHESTES JAPONICA*. Smooth posteriorly; inferior antennæ stout, one-fourth as long as the body, and twice as long as the superior ones; flagella of both with twelve oblong articulations, with extremely short, numerous setæ. Head rather small; eyes large, black, very broad oval, closely approaching each other above; large hands of male notched below; posterior pair of caudal stylets very minute; a prominent contraction at the fourth abdominal segment above. Color olive; epimerals and legs shaded with red. Length  $\frac{1}{2}$  inch.

*Hab.* Japan.

78. *ORCHESTIA POLLICIFERA*. *Male* with stout inferior antennæ, the flagella of which form one third their length; first pair of legs small, chelate, with the penult and antepenult articles produced below into thumb-like processes; 2nd pair with ovate hands of moderate size. *Female* with slender inferior antennæ, flagella 12-articulate; superior ones as long as the first two joints of the others; legs of the first pair simple; second pair with small hands, having a minute lateral finger. Color pale brownish; eyes rather small, round, black. Caudal stylets short, rami sub-conical. Length three-fifths of an inch.

*Hab.* Loo Choo.

79. *COROPHUM CONTRACTUM*. Antennæ equal in length, which is one-fourth that of the body; superior ones with 4-articulate flagella; inferior ones very thick, with minute terminal articles; posterior pair of legs rather long, with long plumose setæ along the edges of the coxae. Color yellowish, eyes black. Length  $\frac{1}{4}$  inch.

*Hab.* Japan.

80. *CAPRELLA LUCTATOR*. Smooth, rather slender; first article of superior antennæ thickened, one-third as long as the second, which equals the third; flagellum 16-articulate; hands of the second pair large, tridentate below, teeth unequal; posterior legs robust, with large unidentate hands. Length 1 inch.

*Hab.* Janegasima.

81. *CAPRELLA GRACILIS*. Slender, smooth, with a slender curved rostrum; second article of superior antennæ as long as the first and third together; posterior legs very slender, the seventh pair twice as long as the fifth. Length  $\frac{3}{4}$  inch.

*Hab.* Japan.













SMITHSONIAN INSTITUTION LIBRARIES



3 9088 00074 3724