

DESCRIPTIONS OF NEW SPECIES OF NUDIBRANCHIATE
MOLLUSCA INHABITING POLYNESIA. No. 2.

BY W. HARPER PEASE.

DORIS VILLOSA, Pease. Pl. 3, fig. 1.

Animal coriaceous, oblong oval, rounded at either end, convex above, covered with crowded, erect, elongate, conical papillæ, which to the touch resemble the pile on velvet.

Dorsal tentacles small, elongate oval, peduncles long, and retractile into tubular cavities. Labial tentacles small, cylindrically tapering.

Branchial star large, wider than the mantle, encircling the vent, except on its posterior side; plumules six, quadripinnate, retractile into a minute cavity. Foot elongate, rounded behind, truncate rounded in front, which part has a marginal transverse fissure.

Color pale grey, darker centrally, and obscurely maculated with rather close, irregular, dusky brown spots. Tentacles and margins of plumules pale olivaceous. Under surface pale, and closely dotted with brown.

Length, two and seven-tenths inches.

Habitat, Island of Huaheine.

Station, (lurking among sea-weed, in the upper region of the laminarian zone. Like most of the coriaceous species, it is very sluggish in its movements. A. G.)

DORIS DEBILIS, Pease. Plate 5, fig. 2.

Animal smooth, subpellucid, oblong, slender, the anterior half slightly the narrowest, rounded at either end, margins broadly undulated.

Branchial star inserted far back, a short distance from the posterior end of the mantle; very large, extending over the sides of the mantle; consisting of six plumules, the four anterior simply quadripinnate, the posterior pair composed of three quadripinnate plumules, attached to one base, all retractile into

a simple cavity. Dorsal tentacles ovate, very obliquely lamellate, and retractile into simple cavities. Labial tentacles, none.

Foot elongate oblong, transversely fissured and truncate rounded in front, somewhat pointed behind, and during locomotion projects behind the mantle.

Color varies from a brownish red to an olivaceous, or deep black, more or less dotted with white; on some the dots are grouped together, forming nebulous spots; margins blueish. Dorsal tentacles pale, with deep brown lamellæ, and tipped with white. Branchiæ dusky olivaceous. Lower surface paler than above and immaculate.

Length, three and a half inches.

Habitat, Island of Huaheine.

Station, (in sheltered locations, on sea-weed, at low water mark. Active in their motions. A. G.)

DORIS COMPTA, Pease. Plate 4, fig. 1.

Animal oval, smooth, soft, subpellucid. Mantle widest at the middle, rounded equally at both ends, depressly convex; margins thin, narrowly undulated, projecting equally on all sides beyond the foot. Branchial plumes of moderate size, ten in number, rudely arborescent, subpellucid, and retractile into a common simple cavity. Anal tube prominent. Tentacles abbreviately ovate, obliquely and closely laminate, and retractile into simple cavities. Labial tentacles simple, small, diverging lobes. Foot thin, subpellucid, narrow elongate, acutely rounded in front and rounded behind. Color blueish white, dotted with brown, the dots decreasing in size toward the margin of the mantle, and remotely freckled with opaque white. Foot sparingly specked with dusky spots. Branchial plumes blueish white. Tentacles fawn yellow.

Length, one inch.

Habitat, Island of Apaiang.

DORIS RUBRILINEATA, Pease. Plate 3, fig. 2.

Animal smooth, flaccid, subpellucid, oblong oval, depressly convex, rounded at either end, widest at the middle, and very thin along the margins. Dorsal tentacles very large, on stout peduncles, oblique, with eight or nine very oblique, coarse laminae, tipped with a small truncate mucronation, and retractile into a simple cavity. Branchial star small, consisting of six bipinnate plumules, retractile into a large simple cavity. Vent very pro-

minent. Head without labial appendages. Foot oblong elongate, much narrower than the mantle, and during locomotion projecting but little behind the body.

Color pale dusky brown, and a few scattering remote round pale dots; the mantle is edged with blackish brown, and an intramarginal carmine band. Tentacles pale, tipped with opaque white—the laminae brown. Branchiae pale, tinged with brown. Beneath paler than above, the hinder portion of the foot stained with carmine.

Length, one half of an inch.

Habitat, Tahiti.

Station, (under stones at low water mark. A. G.)

DORIS CINEROSA, Pease. Plate 5, fig. 1.

Animal subpellucid, oblong oval, coriaceous, similarly rounded at either end. Mantle entirely covering the foot, convex above and covered with closely set asperities like the pile on velvet.

Dorsal tentacles remote, erect, short and stout, on short, very stout peduncles; laminae very oblique, rather coarse, and retractile into simple cavities. Labial tentacles stout, tapering and recurved. Branchial star pale, small, and retractile into a common simple cavity; plumules six, arborescent, tripinnate. Foot elongate oval, rounded behind, truncately rounded and fissured in front. Color pale grey, dotted with black. Dorsal tentacles pale olivaceous, tips white. Under surface same as the upper, the spots being visible through the substance, as is also the viscera.

Length, three-fourths of an inch.

Habitat, Island of Huaheine.

Station, (under stones at low water mark. A. G.)

DORIS NUBILOSA, Pease. Plate 6.

Animal flaccid, oblong oval; mantle convexly rounded above, widest on the posterior half, rounded at either end, covering the foot; margins thin and irregularly minutely gashed. Upper surface covered with closely set unequal sized soft papillae, among which are interspersed small tentacular processes.

Dorsal tentacles small, ovate, very finely and obliquely laminate, retractile into tubular papillose cavities. Labial tentacles small and finger-shaped. Branchial star large, not as wide as the mantle, plumules six, quadripinnate, recumbent, broad, and retractile into a common cavity. Vent, a prominent slender

tapering tube, with a crenulate orifice. Foot oblong oval, rounded behind, truncate rounded in front, much smaller than the mantle.

The upper surface is beautifully mottled with different shades of brown and grey, the former color assuming two dorsal longitudinal rows of large cloud-like spots.

Dorsal tentacles pale, tipped with white. The under surface of the mantle and foot is pale cinereous, the former with crowded small whitish yellow spots, which become more scattered towards the body, and maculated with irregular chocolate spots, those along the margin running into one another.

Locomotive disk mottled with whitish yellow and closely spotted with pale chocolate brown. Upper surface of the foot mottled with pale brown.

Length, six and a half inches.

Habitat, Island of Huaheine.

Remarks. (While in confinement the animal cast off large portions of its mantle, in the same manner as species of *Harpa* cast off their foot. A. G.)

DORIS SORDIDA, Pease. Plate 4, fig. 2.

Animal smooth, subpellucid, elongate oblong, convex above, rounded at either end, margins thin, rather widest on its anterior half. Dorsal tentacles well developed, elongate, conical, slightly swollen, erect on stout peduncles, laminae very oblique, not deeply cut, retractile into simple cavities. Labial tentacles, none; head subquadrate.

Branchial star inserted far back, projecting a short distance beyond the margin of the mantle; plumules six, arborescent, retractile into a simple cavity. Vent prominent. Foot narrow, elongate, fissured and truncate rounded in front, rounded behind, and projecting beyond the mantle.

Color blackish slate, with a few scattering opaque white spots. Tentacles with brown laminae and tipped with white; beneath paler. Foot pale brownish.

Length, one and a half inch.

Habitat, Tahiti.

Station, (among sea-weed and under stones at low water mark. Motions rather lively. A. G.)

DORIS FUSCESCENS, Pease. Plate 4, fig. 3.

Animal oblong oval, somewhat flaccid, subpellucid; dorsal region convex, rounded on either end, widest at the middle,

studded with somewhat distant, unequal, small hemispherical papillæ. Dorsal tentacles small, oblong ovate, slightly oblique, on stout peduncles, coarsely and very obliquely laminated, and retractile into tubular cavities.

Branchial star small, one-third the width of the body, composed of sixteen incurved lanceolate plumules, forming a beautiful rosette around the vent. Mouth notched beneath; no distinct head or labial tentacles.

Genital papillæ on the anterior third of the right side. Foot oblong, much narrower than the mantle, truncately rounded in front, rounded behind, and not projecting beyond the mantle posteriorly.

Color along the dorsal region wood brown, most minutely punctured with white; marginal region pale brownish grey, papillæ much darker. Dorsal tentacles and branchiæ wood brown, the former tipped with white; peduncles colorless.

Length, one inch.

Habitat, Maiao Island.

Genus CHROMODORIS, Alder and Hancock.

I have remarked heretofore that the arrangement of colors on Nudibranchia may be considered a generic character. The upper surface of the body and mantle of the species of this genus are invariably lineated with bright colors and, with exceptions, spotted. They excel those of any other genus in the gaudy, variegated colors with which they adorn themselves, as the following species will prove.

The nidamental ribbon is coiled up in two or three remote whorls. While depositing it the animal remains motionless, or nearly so, the body curved to one side. The coil is formed by the foot, which folds up at its extremity, forming a groove, through which the ribbon passes. The process is slow, occupying about two hours.

CHROMODORIS VARIEGATA, Pease. Plate 7, fig. 1.

Animal smooth, elongate, convexly rounded above. Mantle narrow, sides nearly parallel. Anterior portion dilated and rounded in front; posterior end rounded and slightly emarginate.

Branchial star as wide as the mantle, inserted far back; plumules ten, sub-erect, lanceolate, pinnate, and retractile into a common slightly tubular cavity. Vent prominent.

Head furnished with short, stout, divergent, conical tentacles. Dorsal tentacles large, clavate, erect, coarsely lamellate

obliquely, and retractile into tubular cavities. Foot nearly as wide as the mantle, much elongated, rounded in front, tapering posteriorly to an acutely rounded tip, which projects some distance behind the mantle.

Color subpellucid, colorless, with a median longitudinal cream yellow stripe, extending from the inter-tentacular space to the branchial star; on each side of the dorsal stripe is a bright buff colored one, which does not extend anteriorly quite as far, and passes around the branchial star posteriorly; the stripes are separated by a dark purple line, and the lateral stripes are margined by a narrower and paler line of same color. Mantle margined with cream yellow, with the addition on the front end of an intra-marginal violaceous band. Upper fourths of the branchial plumes violaceous. Tentacles on their basal third orange red, the middle third purple, and the upper violaceous. The under surface of the animal colorless except the mantle, which is margined with cream yellow.

Foot tipped with violet on its upper posterior end.

Length, one and a half inch.

Habitat, Tahiti.

CHROMODORIS MACULOSA, Pease. Plate 7, fig. 2.

Animal subcylindrical, elongate, narrow, smooth, flaccid, subpellucid. Mantle dilated in front and rounded, rounded behind, sides nearly parallel. Cervical tentacles large, sub-erect on stout bases, elongate oval, laminae deeply incised, retractile into simple cavities. Branchial star moderately developed, consisting of eight sub-erect, lanceolate, narrow pinnate plumules, connate at their bases, and retractile into a common simple cavity. Vent, a simple orifice. Labial tentacles small, finger-shaped. Foot elongate, narrow, truncately rounded and fissured in front; acutely rounded and projecting far beyond the body posteriorly.

Color cream yellow, margined with fulvous, on which there is a series of abbreviate reddish lines, three irregular radiating, fulvous lines, extending from the front margin of the mantle toward the tentacles; lineated longitudinally with opaque white, lines four, the two median encircle the branchiae and pass between the dorsal tentacles, which they partly encircle, the two lateral lines extend from the tentacles to the posterior end of the body; the spaces between the lines dotted with purple. Cervical tentacles pale, a broad brownish red zone on their basal half, and one narrower red zone just below the apex. Branchial plumules pale slate color tipped with red. Upper surface of the foot and

under sides of the mantle lineated same as above, and dotted with violet, the former shaded with violet beneath and along the upper margin, and the latter margined with dingy red.

Length, one and a half inch.

Habitat, Tahiti.

Station, (under stones at low water. A. G.)

CHROMODORIS RUFOMACULATA, Pease. Plate 8, fig. 1.

Animal oblong, flaccid, smooth, pellucid, rounded above, slightly dilated anteriorly, obtusely rounded in front, slightly undulated along the margin, and rounded behind. Cervical tentacles well developed, erect, oblong ovate, mucronate, finely lamellate, peduncles stout and retractile in tubular cavities. Labial tentacles small, finger-shaped. Branchial star small, rather remote from the hinder end of the body, composed of nine lanceolate, pinnate plumules, which are incurved and retractile into a common cavity. Vent prominent.

Foot elongate, fissured and truncate rounded in front, tapering behind to an acutely rounded point, which projects considerably posterior to the body.

Color cream white, passing into cream yellow toward the margins, which are ornamented with a series of oblong violet spots. The central portion of the mantle is studded with numerous slightly elevated orange dots. Branchiæ colorless. Tentacles chocolate brown, laminae white.

Under surface colorless, with the exception of a slight tinge of the dorsal colors, which are transmitted through the pellucid mantle.

Length, one inch.

Habitat, Island of Huaheine.

Station, (under stones at low water mark. A. G.)

CHROMODORIS SIMPLEX, Pease. Plate 8, fig. 2.

Animal smooth, oblong, convexly rounded above, sides nearly parallel and rounded at either end. Cervical tentacles well developed, subclavate, slightly compressed laterally, peduncles stout, laminae deeply cut, very oblique, and retractile into tubular cavities. Branchial star small, half the width of the body: plumules eight, sub-erect, lanceolate, pinnate, retractile into a simple cavity. Labial tentacles reduced to small lobes.

Foot elongate, narrow, slightly dilated and rounded in front, tapering behind to an acute point, projecting beyond the mantle some distance.

Color pale pinkish flesh, passing into white toward the margins, which are edged with a more or less broken bright red line. All the specimens observed were marked with a single red spot on the dorsal region, a short distance posterior to the middle. Cervical tentacles and plumules on their upper half bright red.

Under surface same as the upper, but somewhat paler.

Length, three quarters of an inch.

Habitat, Island Maiao.

CHROMÓDORIS INORNATA, Pease. Plate 8, fig. 3.

Animal flaccid, subpellucid, elongate oblong, convexly rounded, smooth, rounded and dilated in front, rounded behind. Cervical tentacles large, oblique, on stout peduncles, coarsely lamellated, obtusely mucronate, and retractile into simple cavities.

Branchial star small, inserted far posteriorly, composed of seven arborescent, lanceolate, pinnate plumules, which are retractile into a simple cavity. Vent prominent. Labial tentacles stout, conical. Foot much elongated, narrow, tapering posteriorly, and extending some distance beyond the mantle.

Color cream white, margined with orange and dotted with purple. Branchiæ colorless. Cervical tentacles orange. On the under surface the dorsal markings may be seen through the pellucid body.

Length, one and a half inches.

Habitat, Island of Huaheine.

CHROMODORIS LENTIGINOSA, Pease. Plate 9, fig. 1.

Animal flaccid, pellucid, smooth, depressly convex, oblong, somewhat dilated and rounded in front, and rather acutely rounded behind. Cervical tentacles well developed, sub-erect, oblong ovate, finely and closely lamellate, peduncles stout, retractile into tubular cavities. Labial tentacles short, stout and finger-shaped. Branchial star small, not as wide as the body, composed of six narrow, lanceolate, pinnate plumules, which decrease in size posteriorly, projecting obliquely upward and backwards, and retractile into a common cavity. Foot elongate, narrow, slightly dilated anteriorly, obtusely rounded and fissured in front, tapering posteriorly to an acute tip, and projecting far behind the body.

Color. The mantle has a widely diffused pale orange red margin, marked with a regular series of purple dots; a cream colored line traverses each side of the back, passing around the

front of each tentacle, and meeting round the branchial cavity; the space between these lines and the marginal band is marked with purple dots. The back is marked with a median interrupted cream colored stripe, in which are also disposed purple dots. Along each side of the median stripe are several cream colored spots, with central purple dots. Branchiæ colorless. Tentacles brown. The under surface of the mantle is same color as above, but paler, the color being transmitted through the pellucid mantle.

Length, three quarters of an inch.

Habitat, Island of Huaheine.

CHROMODORIS VARIANS, Pease. Plate 9, fig. 2.

Animal subpellucid, flaccid, oblong, smooth, convex above, slightly dilated anteriorly, and rounded at both extremities. Branchial star small, only about one-half the width of the body, and recurved; plumules five, narrow lanceolate, pinnate, and retractile into a simple cavity. Cervical tentacles large, suberect, clavate, elongate, issuing from tubular cavities, closely lamellated; lamellæ not very oblique, but close and deeply cut. Labial appendages small and conical. Foot elongate, narrow, slightly dilated in front, tapering posteriorly to a point, which projects considerably behind the mantle.

Color rose red, with a median dorsal white line extending from the intertentacular space to the branchial star. Margin of the mantle with yellow. Cervical tentacles rose red. Upper portion of the branchiæ purple violet. Under surface of mantle same as above, paler. Foot pale purple violet.

A variety occurs, on which the rose red of the upper surface is replaced by purple violet, and branchial star with one more plumule.

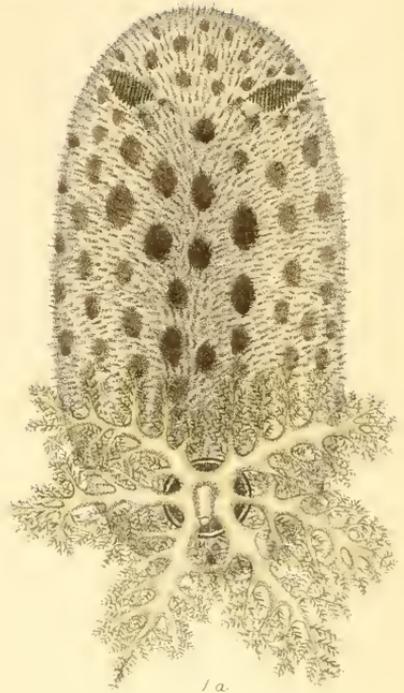
Length, one inch.

Habitat, Islands of Huaheine and Maiao.

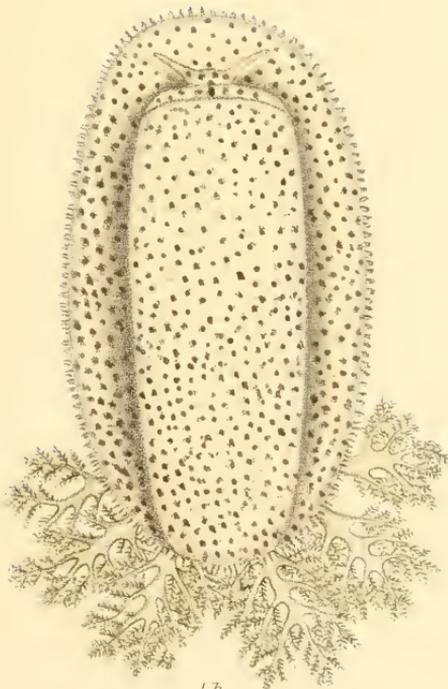
Station, (under stones in the upper region of the laminarian zone. Motions lively. When in motion the anterior portion of the mantle is kept flapping up and down continually. A. G.)



2 a



1 a



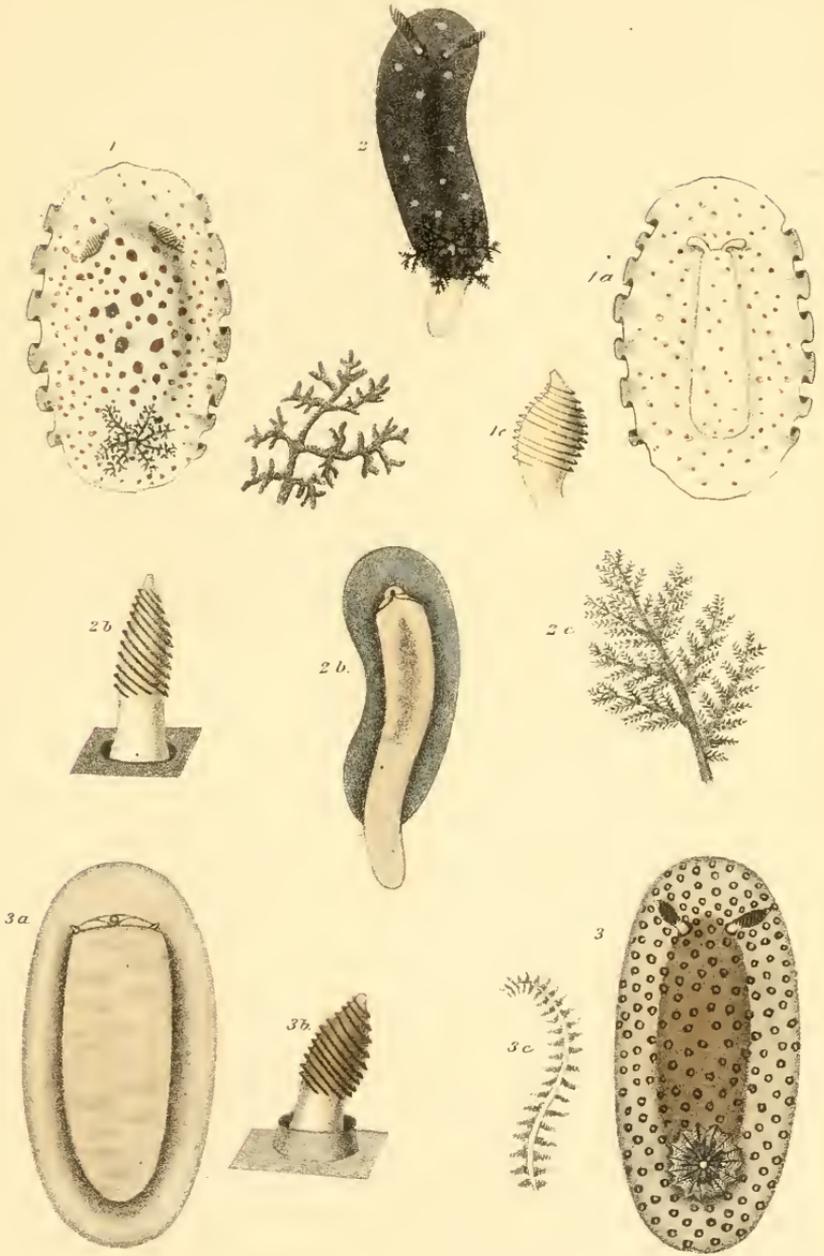
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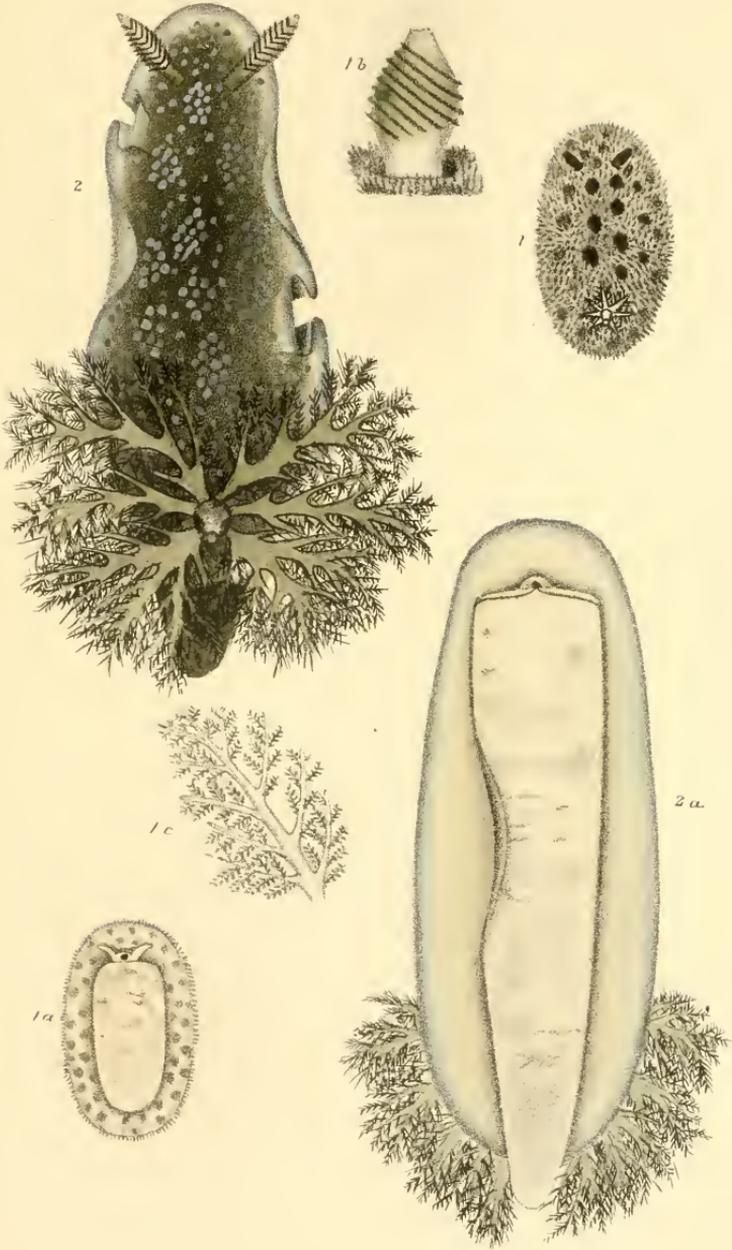


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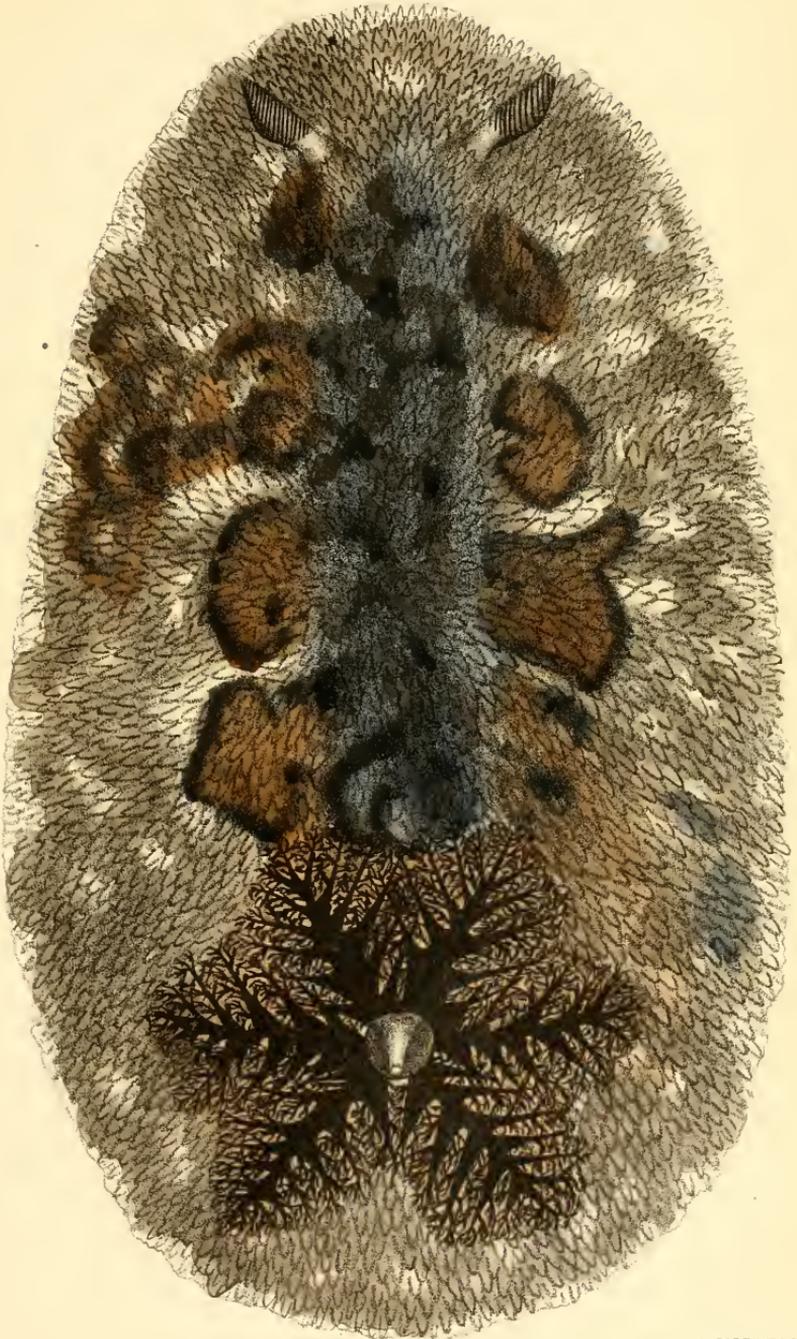
A. GARRETT DEL.

Pease Descriptions of Nudibranchiate
Mollusca inhabiting Polynesia.

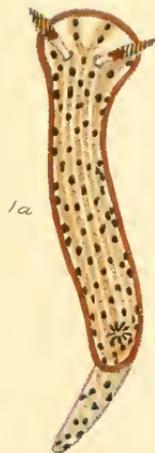
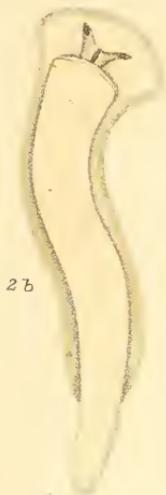


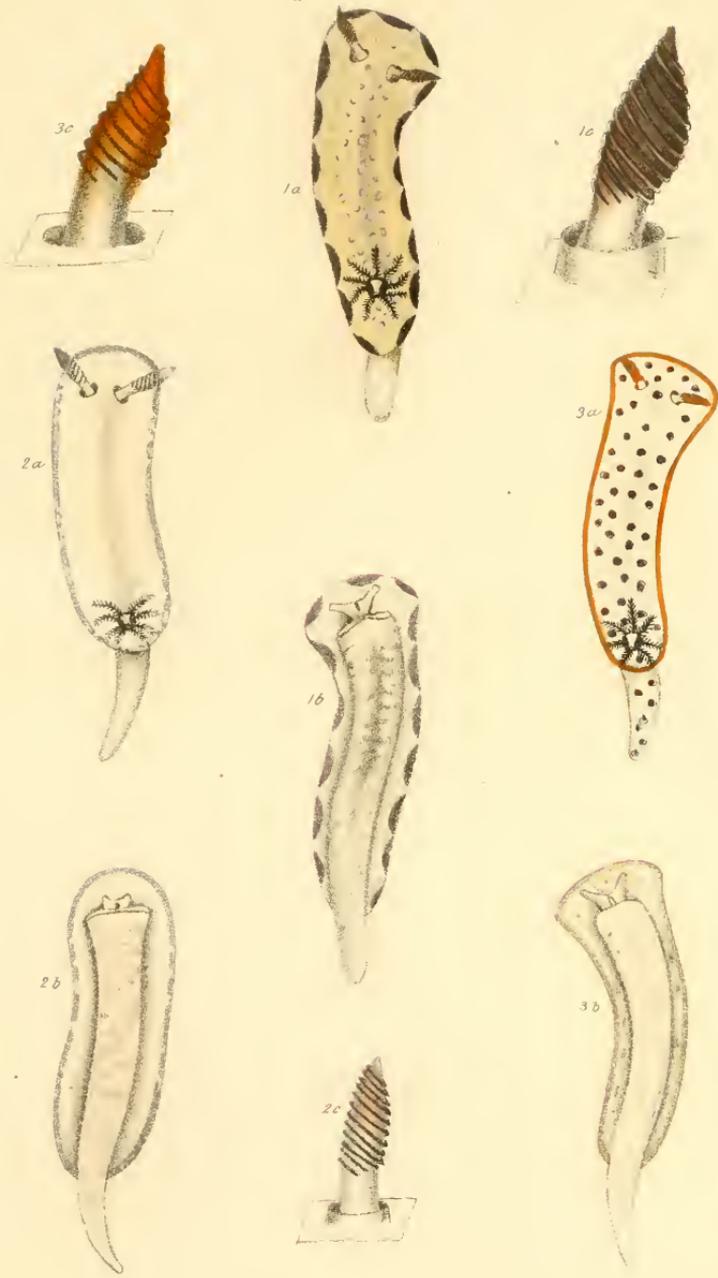


Pease, on new Polynesian Nudibranchiate Mollusca.



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Pease. New Polynesian Nudibranchiate Mollusca.

