

NOTES ON THE TAXONOMY OF NUDIBRANCHIATE MOLLUSCA FROM  
THE PACIFIC COAST OF NORTH AMERICA.

I. ON THE IDENTIFICATION OF *Cavolina* (i. e. *Hermisenda*)  
*crassicornis* OF ESCHSCHOLTZ.

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In 1831 Eschscholtz described three nudibranchs collected by Captain von Kotzebue in Alaska in 1824,—the first to be recorded from the Pacific Coast of North America. The second of these (7, p. 15) is named *Cavolina crassicornis*, and in view of the rarity and consequent inaccessibility of this work, it may be permissible to quote from it in some detail:

“Corpore pallido; capite tentaculisque anticis crassis flavis; collo lineis tribus rubris; appendiculis dorsalibus atris apice rubris.

“An der Nordwestküste Afrika's (sic) an der Insel Sitcha, wo diese Art auf breitem Seetange und Ulven lebt.

“Länge drei Zolle. Der Leib hell hornfarben, der Rücken blass grau. Kopf und vordere Fühler gelb; letzere sind an ihrer Wurzel sehr dick und übertreffen die hintere stark geringelten braunen Fühler, welche eine gelbe Spitze haben, an Länge betrachlich. Auf der obern Fläche der vordern Fühler beginnt von der Spitze ein gelber Streifen und setzt sich auf dem Nacken fort, wo er sich sehr breit wird und allmähig eine perlblaue Farbe annimmt; auf der Mitte des Nackens ein brennend oranger Streifen, ein gleicher an jeder Seite; jeder orange Streifen ist von einer weissen Linie eingefasst. Auf der Mitte des hell hornfarbenen Rückens bemerkt man eine Stelle, unter welcher das Herz pulsirt; über dem ganzen Rücken bis zur Schwanzspitze estreckt sich ein perlmutterfarbener Streifen. Der kiemenartiger Fortsätze an den Seiten des Leibes unterscheidet man vier bis fünf Bündel; jeder einzelne Fortsatz is 2–4 Linien lang, an der ganzen untern Seite hornfarben, oben schwarz mit einem breiten weissen Langestreifen und breiter oranger Spitze. Auf dem platten weissen Schwanze bemerkt man ausser der mittlern Linie noch zwei weisse Längestreifen. Auch der hornfarbige Fuss hat eine weisse Randlinie.”

From the itinerary and the context it is obvious that “Nordwestküste Afrika's” is a misprint for “Nordwestküste Amerika's,” and the island referred to is Sitka, Alaska.



In 1862, Cooper (5, p. 205) described a species *Aeolis* (*Flabellina*?) *opalescens* with an opaline color on the dorsal tentacles and an orange stripe between them. Again in 1863 (6, p. 60) the same author also records this species as *Flabellina opalescens*, mentioning a pale variety with white-tipped branchiæ (i. e. papillæ).

Bergh in 1878 (1, p. 573) and again in 1879 (2, p. 81) formed a new genus *Hermisenda* for this species. It is closely allied to *Phidiana* but differs in the produced angles of the foot, the form of the teeth, but especially in the absence of a hook on the penis; and in these papers he identifies the *Aeolis* or *Flabellina opalescens* of Cooper as *Hermisenda opalescens*, the only member of the genus. The rhinophores are stated to be yellow with an orange stripe between (cf. Eschscholtz). The papillæ are yellow with the purple-red liver diverticula shining through.

Cockerell in 1901 (3, p. 122) also described the same form, calling attention to the two "opal-blue" lines forming practically one, but dividing on the head and just behind it to admit "a bright orange streak". He also mentions the "broad orange stripe on each side of the head", the fact that the papillæ possess an "orange subterminal ring" and that they are "easily deciduous."

The same author describes this species in conjunction with Eliot in 1905 (4, p. 50) but strangely enough gives no reference to his previous paper. This paper also mentions the "opalescent stripe down the back, bifurcating anteriorly so as to include an oblong area of bright orange."

The first full account of the coloration of this species was furnished by O'Donoghue in 1921 (8, pp. 201 and 202) but at the time this paper was written the author has overlooked Cockerell's paper of 1901 for the reason given above and had not access to Eschscholtz's Atlas. A second paper by the same author (9, —) deals with the range of color variation met with in the same species and also its spawn (11, —). In these two papers practically every point in regard to color mentioned in Eschscholtz is also described; the opalescent line along the back bifurcating at the front to include a bright orange area and then passing on to the oral tentacles; the orange area on each side of



the head and neck; the light-colored opalescent line below this area; the interior of the cerata may be almost black and they have a white line on their outer border; the cerata in the dark varieties have an orange tip; the two lateral light lines in the tail region; and the light opalescent line along the margin of the foot.

These points are taken from O'Donoghue and arranged in the order in which they are dealt with in Eschscholtz and I think it will be obvious at once that such a closeness of description makes it certain that the same species is under consideration in both cases. If only the intervening observers had given a closer account of the color of the living specimen, I think the identity of *Hermisenda opalescens* with *Cavolina crassicornis* would have been established earlier. Examination of the radula shows that Bergh, Cockerell and Eliot and O'Donoghue were all dealing with the same species. The name *opalescens*, therefore, must be discarded in spite of its familiarity and of the fact that it describes the characteristic opalescent appearance of the lines of this beautiful species so well, and the older name *crassicornis* substituted for it.

The classification and synonymy of this form is, therefore, as follows:

Family: *Æolidiæ* Eliot, 1910.

Genus: *Hermisenda* Bergh, 1878.

Species: *HERMISSENDA CRASSICORNIS* (Eschscholtz, 1831).

*Aeolis* (*Flabellina*?) *opalescens* Cooper, 1862.

*Flabellina opalescens* Cooper, 1863.

*Hermisenda opalescens* Bergh, 1879; Cockerell, 1901; Cockerell and Eliot, 1905; O'Donoghue, 1921; O'Donoghue and O'Donoghue (in press).

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#### OBSERVATIONS UPON THE NOMENCLATURE OF SLUGS.

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BY H. A. PILSBRY.

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In preparing a faunal work the writer had occasion to mention the types of *Limax*, *Agriolimax* and *Arion*. The attempt disclosed various irregularities in the current use of these names.

Before incorporating radical changes into a formal work, it has seemed well to give the data here, in order that others interested may criticize the inferences drawn, and possibly suggest some mitigation of the unpleasant situation. While the facts bearing on the names discussed have been carefully collected, it is always possible that some name or publication has been overlooked.



O'Donoghue, Charles H. 1922. "Notes on the taxonomy of nudibranchiate Mollusca from the Pacific Coast of North America. I. On the identification of Cavolina (i.e. *Hermisenda crassicornis* of Eschscholtz." *The Nautilus* 35, 74-77.

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