

Opisthobranch Newsletter

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EDITOR'S NOTES

With any luck seaslug.com has been moved successfully from Oz.net to Hgs.net (miranda@oz.net is now seaslug@hgs.net). Please send e-mail me at SteveLong@seaslug.com and change your internet settings to <http://www.seaslug.com>. This issue of the Opisthobranch Newsletter will go on the web in PDF format and also in HTML format. Thanks to all of you who have been sending information for the ON.

READER FORUM

Northern and southern range extensions of the aeolid nudibranch *Cuthona albocrusta*.

by Jeff Goddard

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On 13 August 1999, while participating in a Smithsonian Environmental Research Center survey of non-indigenous species in Prince William Sound, Alaska, I found a single specimen, 3 mm long preserved, of *Cuthona albocrusta* (MacFarland, 1966) on a floating dock in the Cordova marina (60°32'30"N, 145°46'28"W). The range of this distinctive species is extended northward from White Rock, southern British Columbia (Millen, 1983). This specimen is currently in my collection, but will be transferred to the University of Alaska Museum in Fairbanks, Alaska.

On 20 January 2000, I found a single specimen, 4 mm long alive, of *Cuthona albocrusta* on the underside of a cobble in the low intertidal zone at Bird Rock, La Jolla, California. Small hydroids, the presumed prey of this species, were present on the cobble but not identified. This specimen was mature and laid in the laboratory a small bean shaped egg mass typical of the species (Hurst, 1967). Uncleaved eggs from this mass measured 96 µm in diameter, a value virtually identical to the one reported for this species from the southern Oregon coast by Goddard (1991). The aeolid had an unusual growth of small, unbranched, stalked ciliate protozoans on its anterior cerata and the anterior part of its body. This specimen is in my personal collection and represents a southern range extension from the Palos Verdes peninsula, California (Sphon, 1972:69).

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Sponge Prey of *Chromodoris macfarlandi*.

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Mahan (2000) reported *Chromodoris macfarlandi* feeding on the pink keratose sponge *Aplysilla glacialis*. On January 20 and 21, 2000 I found six *C. macfarlandi*, 9 to 25 mm long, in the low intertidal at Bird Rock in La Jolla, California. Two of these were on a patch of the deep violet keratose sponge *Aplysilla polyraphis* and appeared to have been feeding on the sponge; the other four were not on discernible sponge prey. In two days of searching under ledges and cobbles at this site, this was the only patch of *A. polyraphis* I found. In contrast, *A. glacialis* was abundant and being preyed on by large numbers of *Cadlina flavomaculata*, *Cadlina modesta* and *Cadlina sparsa*.

To confirm feeding by *Chromodoris macfarlandi* on *Aplysilla polyraphis* and test whether it would feed on *A. glacialis*, I offered in the laboratory a single piece each of both species of *Aplysilla* to all 6 specimens of *C. macfarlandi*. Within a day, all of the *C. macfarlandi* were clustered together, feeding on *A. polyraphis*. After two more days, most of the *A. polyraphis* had been consumed, and 1 individual of *C. macfarlandi* had started feeding on the *A. glacialis*, which until then had not been grazed by the nudibranchs.

These observations confirm Mahan's report and also suggest that *Chromodoris macfarlandi* prefers *Aplysilla polyraphis* over *A. glacialis*. Both species are new food records for this dorid. As suggested by Mahan, the brilliant violet and yellow colors of *C. macfarlandi* may have a dietary origin, as has been shown for the pigments in other nudibranchs like *Hopkinsia rosacea* and *Flabellina iodinea* (McBeth, 1971, 1972).

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[see note next page]

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Note added in press: Based on the ratios of secondary metabolites isolated from different individuals of *Chromodoris macfarlandi*, as well as the structural similarity of these compounds to ones isolated from an Australian species of *Aplysilla*, Molinski & Faulkner (1986. J. Org. Chem. 51:4564-4567) suggested that *C. macfarlandi* "consumes at least two different aplysillid sponges." The results reported here confirm their insightful inference, but more work may be needed to rule out other species of *Aplysilla* as the ultimate source of the compounds they isolated from the nudibranchs. To my knowledge, no other aplysillids exist on the California coast, save the gray tan colored form of *A. glacialis*.

PERSONAL NOTES

From Jeff Goddard: As time and collections permit, I am continuing my studies on the developmental mode and prey of northeast Pacific opisthobranchs. I am particularly interested in biogeographic differences in the proportions of the different modes of development among nudibranchs, and the selective advantages of the different modes (this is a continuation of research I did for my dissertation). As for the prey species, I just have a long standing interest in the trophic roles of opisthobranchs, and to what degree they compete among themselves. With their diversity of diets and relative conspicuousness, nudibranchs should make great indicator species of the underlying biodiversity of different areas.

I was lucky to recently participate in a Smithsonian survey of Prince William Sound, Alaska, where Nora Foster and I found 28 species of opisthobranchs, including 12 range extensions (we are currently writing up our results). Living in Santa Barbara, my wife Lise (who is a biologist/naturalist with a very sharp eye in the intertidal) and I are enjoying getting to know habitats and species from the Californian and, soon, we hope, Panamic biogeographic provinces (actually, seeing these chromodorids, I feel like a kid in candy shop!), and I look forward to reporting some of our finds. We are heading down to Baja this March.

From Wayne Ellis: The last few weeks of December were busy preparing for the launch of the new Nudibranch section at <http://www.diveoz.com.au> January seems to have been just as busy, preparing the next issue of nudibranch NEWS and adding more images to the diveoz. Nudibranch gallery site. We now have over 100 images, not all first class quality but serviceable enough for identification. - glaskin@ozemail.com.au

From Jussi Evertsen: Finishing MSc thesis on the "Nudibranchiate fauna of the Trondheim fjord (central Norway) and Isfjorden, Spitsbergen". Working on the project "The nudibranchiate fauna of middle Norway" withco-worker and doctoral student Torkild Bakken (ref:

<http://www.ntnu.no/~vmzotbak/nudibranchia>). - jussie@stud.ntnu.no

From Kathe Jensen: I just saw the January issue of ON on the internet. You asked about publication of Menfi abstracts. I do not believe they have been published formally; there was a booklet of abstracts for all participants. You may contact the organizer Ms. Vanna Rotolo for further information (e-mail: vannarotolo@futuralink.it).

On 14 February this year I will move to Thailand to take up a 2-year teaching position at Asian Institute of Technology, which is located just 40 km north of Bangkok. I will be teaching in a program of Integrated Tropical Coastal Zone Management, and I expect to develop a course in marine biodiversity and possibly also in marine conservation. So I am very busy trying to finish off a few manuscripts and sorting out what needs to be sent to Thailand and what should be packed away for storage in Denmark.

In October-November 1999 I participated in the 10th Conference/Workshop of the Tropical Marine Molluscs Programme in Vietnam and team taught a mollusc biodiversity course in Nha Trang, Vietnam and in Sihanoukville, Cambodia. Unfortunately it was in the rainy season (very rainy, indeed - flooding is some places!), so we could not do much collecting, but this is something I hope to make up for when I am in Thailand.

- KRJensen@zmuc.ku.dk

From Erwin Köhler: I am still working on the [illustrat.html](#), today I finished letter G.... This year's diving schedule: Spain, Cyprus, Lebanon and Seychelles/Mauritius - Medslugs.Koehler@t-online.de

From Cynthia Trowbridge: I have been continuing my work on extracting and amplifying mtDNA from *Placida dendritica*. So far, I have had success with 2 genes: COI (cytochrome oxidase I) and 16S. Detailed technical information from M. Tholleson was extremely helpful - thank you! In terms of field work, after 3 fall trips down to Puerto Penasco, Sonora, Mexico, I have yet to see any ascoglossans, even *Elysia diomedea*. For those of you who go down regularly, what is the best time (month? spring vs. neap tides? day vs. night?) to see ascoglossans? Is the Baja side a better locale for finding slugs? I have been looking almost exclusively intertidally on both day and night tides. Thanks in advance for any assistance! - trowbric@ava.bcc.orst.edu

Terry Gosliner: has been promoted to the new position of Prevost at the California Academy of Sciences - Congratulations Terry!

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