

# Opisthobranch Newsletter

August, 1998, 24(8):33

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## EDITOR'S NOTES

The Opisthobranch Newsletter will be able to print larger works now as well as color on a fairly regular basis. Checklists and collection reports are welcome along with field accounts and natural history notes. Personal notes on your current and recent past travels have always been popular.



At this point there are no plans to charge for downloading the ON from the Internet and the paper edition will continue at \$20.00 U.S., per year. It looks as though I will be mailing the printed copies of the ON quarterly.

This issue completes the memorial to Dick Roller which has been very nicely set up on Mike Miller's Slug Site.

<http://slugsite.tierranet.com/> Thanks, to Jennie Roller, Debra Zeigler, Gary McDonald, Terry Gosliner, Hans Bertsch, Dave Behrens, Mike Miller and everyone who contributed to this collection.

## IN MEMORIAM Richard A. Roller



Carl Roller, Dick Roller & Debra Zeigler. Photo courtesy Debra Zeigler

**From Gary McDonald:** I first met Dick Roller in 1967. I was a sophomore at Cal Poly, and after reading Between Pacific Tides, and discovering the tidepools and their wealth of marine life (especially nudibranchs) I changed majors from Mechanical Engineering to Biology. I was absolutely fascinated by the dazzling colors and wide variety of nudibranchs that I could find in the local tidepools. In those days nudibranch identification guides with color photos didn't yet exist, and identifying my finds was very frustrating for a novice marine biologist who knew little about the scientific literature. Professor Dave Montgomery was very aware of my enthusiasm for nudibranchs and told me there was a graduate student at Cal Poly who was interested in nudibranchs and would like to meet me. Needless to say, I couldn't wait to meet someone else who was interested in nudibranchs, and could help me identify the species I had seen. Dick and I met in his grad student office (a small prep lab between two biology teaching labs) and immediately realized that we were kindred spirits, sharing interests in the same aspects of nudibranchs. Shortly thereafter we were often collecting in the intertidal whenever a low tide permitted; or if we wanted to go collecting and there was no low tide, we would go to the boat docks at Morro Bay.

I am fortunate to have just received two boxes of Dick's nudibranch materials from his wife Jennie, including a few 'branch books which he still had, a few preserved specimens and dissected radulae, the original manuscripts of his 'branch publications, some of his correspondence with other 'branchers (e.g. Marcus & Baba); but most importantly, a bound volume entitled Field notes of Opisthobranchia collected by Richard A. Roller on California coast 1966-1971. Thumbing through this latter volume brings back many happy memories of collecting trips and sitting around Dick's home afterward, writing up collection notes for the day's trip and examining the specimens we brought back. (It was Dick who taught me the importance of keeping collecting records). The first collecting trip in his notes that lists the names of the collectors is 12 Dec 1967 at Sunset Palisades, with Long, McDonald, & Roller. I find other collecting records which are almost a who's who of 'branch workers in those days: 30 July 1969, at Point Loma, with Farmer, Lance, Long, McBeth, Marcus, Roller, & Sphon.

I remember Dick's enthusiasm when I returned from a dive at Shell Beach and called to tell him I had finally found *Chromodoris macfarlandi*, a strikingly beautiful species which we had been hoping for years to find in San Luis Obispo County. I took the specimens to his house and he took notes and measurements and photographed all three specimens. The one slide I have that he took of those specimens shows the incredible bright purple better than any photo I have seen since. Dick started photographing nudibranchs when photomacrography was almost an arcane art. In those days marco lenses were not well known to most people and TTL flash was unheard of, so photographing

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nudibranchs was often a laborious and frustrating experience. He tried several systems before he found a system that would give him results which would meet his standards. It was Dick who showed me the ropes of photographing nudibranchs.

When returning from a collecting trip to Spooner's Cove and stopping at Dick's to show him my meager finds (5 *Precuthona divae* and 1 *Cadlina luteomarginata*). Dick's sharp eye immediately noticed something odd about the *Cadlina*, it was *Acanthodoris hudsoni*, a species which neither of us had seen before. Again, it was Dick who showed me that you must look at each specimen carefully. In 1971 I collected several very small specimens of *Hermisenda crassicornis* from the boat docks at Morro Bay. Once again, Dick's keen eye immediately noticed that they were different. He said, "I'm not sure what they are, but they're not *Hermisenda*". He later named them *Emarcusia morroensis*. If it weren't for Dick's keen eye and knowledge, this species may have gone unnoticed and undescribed for many more years.

In his collection records for 16 August, 1970 at Morro Bay mudflats are listed two specimens of Aeolid A, a species that intrigued Dick because of its rarity and because it was found on the mud, an unusual place for aeolids; this was the first collection of what would later appropriately be named *Cuthona rolleri*.

It was Dick who took me to my first scientific meeting (WSM at Stanford University), where I first met many of the 'branchers: Gale Sphon, Larry Harris, Terry Gosliner, Gary Williams, & Hans Bertsch; as well as others who were interested in 'branches (e.g. William Emerson & Jim McLean).

It was Dick who encouraged me to obtain the scientific literature. He introduced me to requesting reprints from authors (What?, you can get them for free? I was amazed). He told me about interlibrary loan (which was a new thing to me), which I immediately starting using to obtain copies of papers for Dick and me. Dick also allowed me to photocopy major portions of his extensive library, which saved me many hours of work in the library.

Dick's family (Jennie, Debra, Cathy, & Carl), was always his first priority. In his last email to me he said, "We hardly knew what wonderful meant until our 2 grandchildren came along (Melanie - 9, Logan - 6). Now we are expecting another (a little girl) about May 1st."

Dick will be missed not only by his family but by the many 'branchers who were enriched by having known and worked with him. - Santa Cruz, California, July, 1998.

**From Dave Behrens:** *Cuthona rolleri* Behrens and Gosliner, 1988 [see photo last month's issue or the Slug Site]. When Terry and I described this unique tergipedit

nudibranch we thought it only fitting to name it after Dick Roller, who had spent so many hours mucking around Morro Bay, the type locality for the species, in search of other branch species. This species while clearly belonging to the genus *Cuthona*, is distinctive in its external morphology, having the oral tentacles joined to form a wide shovel-like frontal veil, and having the cerata widely separated dorsally and set on prominent arches. Its color is white, the ceratal core being salmon pink.

Individual specimens are about 15 mm in length and dorsally flattened, making them well suited for the behavior we observed upon collection, of crawling over the wet mudflat surface at low tide. The flat oral veil may also have a strategic function here, also. Nothing is known of its prey preferences, but the species is found in areas abundant with mudflat worm colonies, and the tubes of the inn keeper worm, *Urechis caupo* and the mud shrimp, *Callinassa* and *Upogebia*.

Observed and collected only a few times to date, this species' range is known to be restricted to central California.

This remarkable little legacy we leave to Dick, who sadly passed away in June.

I of course remember Richard Roller because of his contributions to Branching, that's why Terry and I named *Cuthona rolleri* after him. But I also remember him because of his generosity and the unique interest he and I shared with the study and collection of antique fruit and canning jars.

Dick and I never met face to face, never shook hands, but we communicated regularly whether concerning Branches or jars. Coincidentally as I found myself relocating to San Luis Obispo, where Dick taught school, he moved to Paris, Illinois to open his Fruit Jar business. My interest in Fruit Jars was fueled by my dad who enjoyed excavating old bottles from 19th Century ruins and digs. I came across a huge collection while working as a curatorial assistant at Cal Academy. Dick's catalogue became my reference book and later after several moves, I shipped those bottles I still lugged around, off to Dick.

Dick never lost his interest in Branches, writing often to request recent reprints. Most recently Dick gave me, not only all his copies of reprints making nomenclatural changes to MacFarland's Memoirs (to give away with copies of the Memoirs sold to Sea Challenger customers), but he included his files containing "original" MacFarland notes, drawings and sketches. It is this unsolicited generosity that I will always remember. I'll miss you Dick. - [seachalleng@earthlink.com](mailto:seachalleng@earthlink.com)

**From Terry Gosliner:** Dick Roller had a consummate zest for the finer things in life. He was happiest when he could share those things with others around him who had the same passions. One of my earliest memories of Dick dates back to an early Western Society of Malacologists meeting at Stanford. During the mandatory informal

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nudibranch slide show, Larry Harris was showing photos of Indo-Pacific opisthobranchs. It was my first exposure to the exotic vivid colors that dominate the reefs of the Indian and Pacific oceans. As Larry showed each additional slide, Dick groaned with ecstasy at how beautiful each one was. Pretty soon, Dick was rolling on the floor. Gary Williams leaned over to me and said "now I know why they call him Roller". Dick loved the beauty of nudibranchs and was one of the first to tell me as a young student, that if you want to be serious about studying them you need to dissect their reproductive organs. He taught himself to dissect his beloved aeolids when he described *Babakina festiva*, *Emarcusia morroensis* and *Eubranchus sanjuanensis*.

Dick understood the importance of having good literature and notes to back up one's observations. One of his greatest contributions was the rescue of Frank Mace MacFarland's research notes. Following the completion of the manuscript of the 1966 Memoir, published by the California Academy of Sciences, MacFarland's notes were going to be discarded. Dick realized the importance of the notes as a historical record and salvaged them from being tossed into a dumpster. He also made sure that they were safely returned to the Academy, where they are currently part of the institution's archives. It was only because Dick saved these notes that we know that MacFarland had collected *Runcina MacFarland* 80 years before Cynthia Trowbridge found specimens in Oregon which became the type material for this species. We also know he collected *Hallaxa chani* forty years before Gary Williams and I first found it in Bolinas.

When Dick moved to Paris, Illinois in 1973, he became land-locked, but certainly did not give up his interest in opisthobranchs. He always kept in touch and we had a great visit when he and Jennie were in Washington, D.C. when I was a post-doc at the Smithsonian. Once I found myself driving across the middle of the U.S. alone and saw a freeway exit sign that read: Paris, next exit. I pulled off the road, stopped at the nearest pay phone and called Dick. It was after nine at night and he and Jennie insisted that I come to their house and spend the night. Dick was always like that. He was a great human being and I will certainly miss him. - San Francisco, California, July 1998

**From Mike Miller:** Although I never met Dick Roller, his enthusiasm for branching never waned during his time in Illinois as evidenced by correspondence received during the formative days of the Slug Site. Dick was always there to applaud the work of contributors to the Site. Quite frequently, I would get e-mail from folks contributing pictures to the Site asking "who is this guy, Dick Roller?", after receiving laudatory e-mail from Dick!

I want to thank all of the people who made this tribute possible. In the weeks to follow, Dick's contributions to branching will be featured in additional Branch of the Week selections. - San Diego, California, July 1998

## Notes on Opisthobranch Community Structures at Bahía de los Angeles, Baja California, Mexico (June 1998).

**Hans Bertsch**, National University, 192 Imperial Beach Blvd., Unit A, Imperial Beach, CA 91932

**Michael D. Miller**, 4777 Ladner St., San Diego, CA 92113

**Alan Grant**, 592 High Dr., Laguna Beach, CA 92651

As part of a long-term study on the population dynamics and community structure of subtidal opisthobranch molluscs (Bertsch, 1991, 1993, 1995a, 1995b, and 1997), we recently surveyed several locations at Bahía de los Angeles (=BLA), Baja California, Mexico. Following the methodology previously established, we conducted timed searches, identifying and measuring organisms in the field, documenting their habitat or behavior, and photographically recording the species. To maintain consistency with Bertsch's ongoing project, this report includes only his timed data. This in-progress report examines data from a recent expedition, in the interest of stimulating the publication and dissemination of other such seasonal and geographic data.

During 25-28 June 1998, we dove at 4 sites within Bahía de los Angeles (see map): Cuevitas, Punta la Gringa, Reef between Islas Ventana and Cabeza de Caballo, and the entrance point of Puerto Don Juan. Although all are rocky areas with surrounding sand flats or rocks and shell rubble, we have found them to comprise 2 distinct faunal communities: Region 1: Cuevitas and La Gringa (rocky shore northwest side of BLA). Region 2: The islands and the southeastern outer side of BLA.

June is the last month of the spring benthic algal bloom. Significant growths of *Sargassum*, *Padina*, and a dense mat of dead *Colpomania* and other algal species were found at the first region, but not to the same extent at the second region. Bryozoans are far more abundant on the permanent substrates of Region 2. This is reflected in the opisthobranch composition. At Region, 1, 2 out of 97 specimens (2.1%) are bryozoan feeders, whereas at Region, 2, 21 out of 25 specimens (84%) are bryozoan feeders.

June also begins the period when many species reach the end of their annual life cycle. Hence larger sizes and frequent egg masses are evident for these species. We found identifiable egg masses of *Phidiana lasrucensis*, *Berthellina engeli*, *Doriopsisilla albopunctata*, *Aeolidiella chromosoma*, and *Tambja eliora*. We also observed egg masses of *Polycerella glandulosa* on *Zoobotryon*, but did not find any individuals of the cryptic slugs. We saw a pair of *T. fusca* copulating, but no identifiable egg masses.

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Based on the small size of organisms we encountered, *Chelidonura polyalphos* seems to have already begun their next annual generation. This timing may give these opisthobranch predators a size advantage over their prey's new generation.

Table 1 details the total species observed, numbers, average and range of sizes, egg masses and occurrences at either Region 1 or 2. At Cuevitas/La Gringa (Region 1), we observed 97 specimens of 15 different species. At the Reef/Puerto Don Juan (Region 2), we observed 25 specimens of 7 species. By a number of simple measurements, the species diversity is higher at Region 1 (see Table 2).

In part, these differences reflect the above mentioned different dietary preferences between the opisthobranch species at the two locations (i.e., greater number of bryozoan feeders).

The higher diversity is also mirrored by a higher density. Region 1 had a density of 18.7 specimens (and 2.9 species) per search hour, whereas Region 2 has a density of 8 specimens (and 2.2 species) per search hour.

We also observed a bathymetric difference in the occurrence of *Tambja eliora* and *Tambja fusca*. *Tambja eliora* tends to be more common on the shallow, upper surface of the reef, but *T. fusca* predominates in deeper water, and on vertical cliff or boulder faces. Animals of *T. eliora* were observed between 8-10 feet (average 8.3 feet) depth, and *T. fusca* animals were recorded between 11-35 feet (average 21.9 feet) depth.

## Acknowledgements

We thank Cecilia and Robert Williamson, José Lucía Galván, and Juan. Map courtesy of Museo de Historia y Cultura, Bahía de los Angeles.

**Table 1: Species and Numbers of Specimens Collected**

Species	Range of lengths (mm)	Mean length (mm)	Number collected all Sites	Number collected Region 1	Number collected Region 2	Egg masses noted
<i>Chelidonura polyalphos</i>	4-22	11.4	20	20	--	--
<i>Tridachia diomedea</i>	32-70	40.1	31	31	--	--
<i>Berthellina engeli</i>	35-76	63.5	8	6	2	yes
<i>Polycera alabe</i>	8-12	10	2	1	1	--
<i>Polycera hedgpethi</i>	7	--	1	--	1	--
<i>Tambja eliora</i>	43-62	52.6	7	--	7	yes
<i>Tambja fusca</i>	48-103	80.3	12	--	12	--
<i>Tyrinna evelinae</i>	10-34	16	9	8	1	--
<i>Chromodoris norrisi</i>	28	--	1	1	--	--
<i>Hypselodoris ghiselini</i>	42	--	1	--	1	--
<i>Taringa</i>	18	18	2	2	--	--
<i>Doris pickensi</i>	9	--	1	1	--	--
gray dorid	27	--	1	1	--	--
<i>Dendrodoris krebsii</i>	37-48	42.5	2	2	--	--
<i>Doriopsis albopunctata</i>	32-38	34.3	3	3	--	yes
Tritoniid	8	--	1	1	--	--
<i>Dirona picta</i>	40	--	1	1	--	--
<i>Phidiana lasrucensis</i>	18-23	20.5	4	4	--	yes
<i>Aeolidiella chromosoma</i>	7-13	9.1	15	15	--	yes

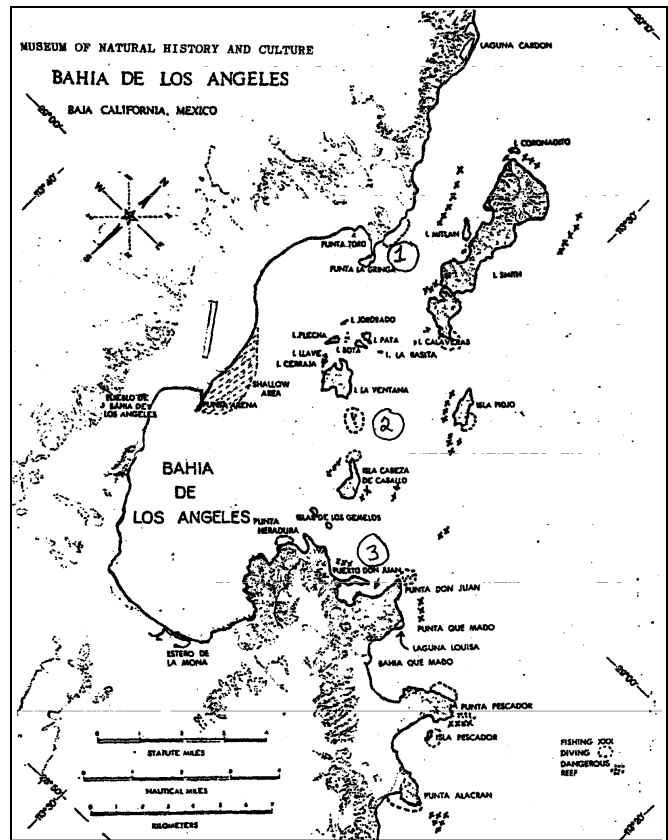


Figure 1. Map of Bahía de los Angeles, showing locations of Punta La Gringa and Cuevitas (Site # 1), Reef between Islas Ventana and Cabeza de Caballo (Site # 2), and Puerto Don Juan (Site # 3) (Site numbers circled)

**Table 2: Species Diversity Contrast between Cuevitas/La Gringa (Region 1) and Reef/Puerto Don Juan (Region 2)**

	Number of Species Region 1	Number of Species Region 2
Total number of species	15	7
Equitability (average number of specimens/species)	6.7	3.6
Taxonomic diversity (species within each taxon)		
Cephalaspidea	1	--
Sacoglossa	1	--
Anaspidea	--	--
Notaspidea	1	1
Nudibranchia	12	6
Doridacea	8	6
Dendronotoacea	1	--
Arminacea	1	--
Aeolidacea	1	--

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## PERSONAL NOTES

From Cory Pittman: "I'm continuing to work on a new Hawaiian book with Terry Gosliner and Pauline

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Fiene-Severns. I'll be returning to Hawaii for several weeks of additional collecting this fall." - [cory@cet.cet.com](mailto:cory@cet.cet.com)

**From Jennie A. Roller:** Would you please thank everyone for their kind words about Dick Roller. Just a note to tell everyone how pleased we were that he was remembered - [roller@tigerpaw.com](mailto:roller@tigerpaw.com)

**From Jussi Evertsen:** I thought I might give a little information about my MSc working on nudibranchs in Norwegian and Spitsbergen waters. I am a MSc student in marine biology at Trondheim Biological Station with a thesis on nudibranchs from the Trondheim Fjord (Trøndelag, Norway) and Isfjorden (Spitsbergen, Norway). My supervisors are assistant professor Jon-Arne Snøli and professor Bjørn Gulliksen.

I have been collecting nudibranchs from the sublittoral in the Trondheim Fjord by scuba since 1997, both photographing them in situ and in the lab. I have also been collecting and photographing nudibranchs from Spitsbergen since 1996, with extensive fieldwork in the summer of 1997 and this year. Fieldwork is still continuing.

The main scope of the study is on the ecology of common species, but I have also been more and more entangled in the sometimes very confusing systematics. I have also started a separate project on the nudibranch fauna of the Trondheim Fjord with a colleague of mine, MSc Torkild Bakken, because of the enormous amount of material. It will primarily describe the nudibranch species found and present them with in situ photographs. All material will be deposited at the Museum of Natural History in Trondheim (further information: <http://www.stud.ntnu.no/~torkildb>, since I have not constructed a web-page of my own yet).

## Some results:

From the Trondheim Fjord, there are recorded about 50 species of nudibranchs (included material at the Museum of Natural history in Trondheim). So far I have some 200 recordings on about 30 species, many of them extending the northern/southern range of species occurring in Norwegian waters.

From Spitsbergen waters I still have lots of work to do with the identification of several specimens, but from the literary 12 recorded species, I have found maybe 6 species. I have also found species new to the region, but further conclusions cannot be made until closer examination has been conducted.

I would appreciate receiving all kinds of information regarding systematics, occurrence and distribution on nudibranchs from the North Atlantic and Barents Sea.

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- [jussie@stud.ntnu.no](mailto:jussie@stud.ntnu.no)

## INFORMATION EXCHANGE

**From Martin S. Kohl:** Just a note, to our Mediterranean contributors in particular. In the most recent issue of Science News, (July 4, 1998, Vol. 154, No.1) there is an article about what appears to be a new variety of the seaweed *Caulerpa taxifolia*. It is invading the northern parts of the Mediterranean, and researchers are considering the introduction of two Caribbean slug species, *Oxynoe azuropunctata* and *Elysia subornata* in an attempt to control it. - [CONCH-L@UGA.CC.UGA.EDU](mailto:CONCH-L@UGA.CC.UGA.EDU)

**From Thomas E. Yancey:** A comprehensive list of names used for turbonillid gastropods in the Indo-Pacific province, prepared by Dr. Helmer Ode, has appeared in the last issue of the Texas Conchologist (Vol. 34, no. 2).

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This list is another contribution on turbonillid study, following a listing of the western Atlantic species which appeared during 1996 in the Texas Conchologist. Dr. Ode indicates that another list covering Europe, Mediterranean, and west Africa has also been prepared, presumably to appear in a future issue of Texas Conchologist.

The Indo-Pacific list is massive, containing about 700 names, gleaned from about 300 references. Dr. Ode believes that many names on this list will fall to synonymy. Although some synonymies are suggested, no revisions are attempted, because of the clear need to establish proper generic concepts based on soft tissue characters plus shell characters and to see how reliable soft tissue characters are in taxonomy of this group. Currently, generic diagnoses are set on shell characters. The huge list prepared here is an indication of the magnitude of task involved in taxonomic revision work, after proper generic diagnoses are formulated.

I hope that Dr. Ode's observations and tabulations will stimulate progress in pyramidellid taxonomy. This group of shelled molluscs is very common, but too often ignored as people focus attention on descendents of more ancient stocks of gastropods.

The Texas Conchologist is sent to members of the Houston Conchology Society, which costs \$10/year for single membership in the society. A subscription for the Texas Conchologist is \$12/year in the United States (add \$5 seairmail or \$8 airmail for overseas delivery). - Dept. Geology & Geophysics, Texas A&M University College Station, Texas, 77843-3115

**From Carmel Sammut:** I have noted the recent exchanges on the invasion in the Mediterranean of *Caulerpa taxifolia*. To date I have not seen this species in Malta, even though this *Caulerpa* has been recorded in Sicily. Apparently the water around this area do not good conditions for its diffusion.

I did find another invading *Caulerpa* last year. It has reached both the south and northern parts of the Maltese islands. I have been informed that this species is *Caulerpa racemosa*, a lessepsian immigrant.

Has anyone else seen this infiltration? To date I have not seen any opisthobranchs feeding on it, even though members of the Sacoglossa are very common around these islands. - [csamm@cis.um.edu.mt](mailto:csamm@cis.um.edu.mt)

**From Peter Wirtz:** From October on, I have a one-year guest professorship at the Departamento de Oceanografia, Universidade dos Acores, Cais de S. Cruz, P - 9900 Horta, Faial, Portugal, Azores. Departmental fax is (Portugal)-92-292659. My email during this time is [peter@dop.uac.pt](mailto:peter@dop.uac.pt).

My paper on the opisthobranchs of the Azores just appeared in *Vita Marina* 45(1-2), 1-16. There are 5 colour plates with more than 40 photos in colour. Please do NOT write me for reprints. I do not have any. However, it is possible to buy a copy of this paper directly from Vita Marina for US\$ 6 plus postage by writing to [vita\\_marina@wxs.nl](mailto:vita_marina@wxs.nl).

Since writing this paper, I already found one more Doto, one more Elysia and a Cuthona at the Azores. The corresponding paper on opisthobranchs from Madeira island, with about 40 colour photos, should go to press end of August. - [peter@dop.uac.pt](mailto:peter@dop.uac.pt)

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