

# Opisthobranch Newsletter

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## EDITOR'S NOTES



Last month's **Editor's Notes** should be clarified: **Personal Notes** and **Information Exchange** material may be presented as received via e-mail, verbally or otherwise. **Reader Forum** and any technical or scientific article material is proofed by the author and the editor and usually sent out to two or more reviewers. Field notes,

range extensions, collection reports, checklists and similar are perfect for the Opisthobranch Newsletter.

All attempts to find a good HTML converter have failed but I have been able to set up for the Adobe Portable Document Format on the website

[<http://www.seaslug.com>]. This will allow the ON to include color photos, tables and as much material as comes to me each month.

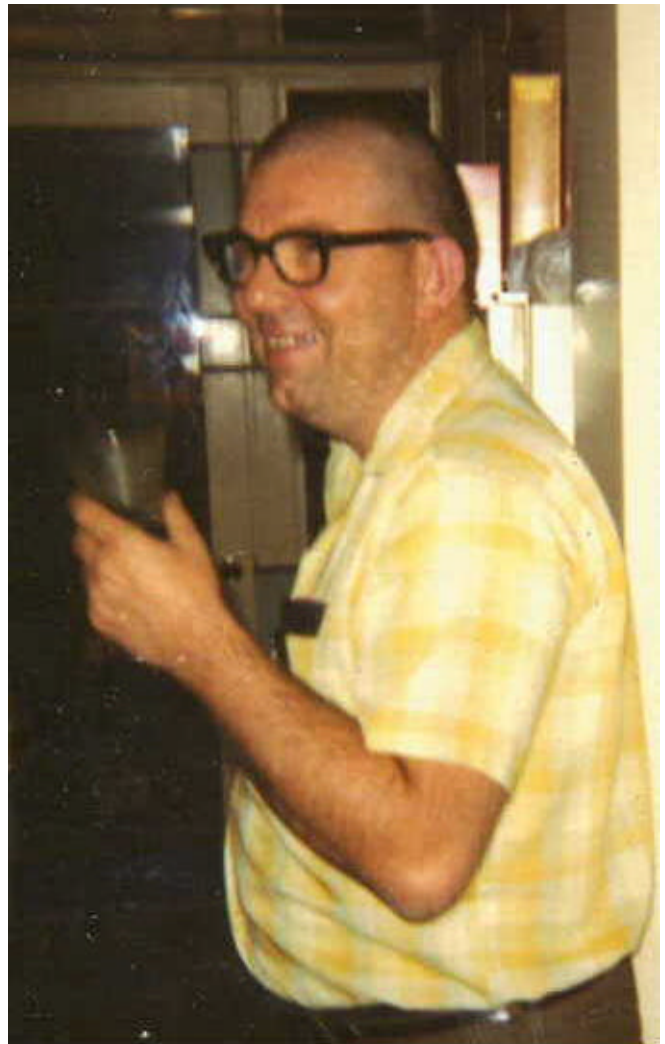
## IN MEMORIAM



Richard A. Roller (Steve Long in background) photo by Hans Bertsch

### Thoughts in honor of Richard Roller

This morning Mike Miller sent me a fax message regarding the recent passing of Richard A. Roller. I immediately searched my slide collection, remembering that I had a photograph of Dick from long ago. Sure enough, on 15 March 1969, he, Steve Long, myself and shell collectors from the Conchological Club of Southern California went on a boat trip to Fraser Point, Santa Cruz Island. Some of us snorkeled, and a few were scuba



Dick Roller at Steve's house June 20, 1969 (party for Dwight W. Taylor) photo by Steve Long

diving. We found 24 species of opisthobranchs, including 13 species previously unreported from that island (Long, 1969). I don't really remember too much about that trip, except it has stayed symbolic for me of the curiosity and kindness of a high school science teacher who eventually moved on to fruit jars and Arkansas!



*Cuthona rolleri* Behrens & Gosliner, 1988 photo by J. Cooper

With the sad news of Dick's death, I spent some memory moments about his contributions to opisthobranch studies. [continued next page]

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In 1966, California Academy of Sciences posthumously published MacFarland's major tome, "Studies of opisthobranchiate mollusks of the Pacific coast of North America." At the time of its publication, it was known that the volume included various synonyms and generic misplacements. With the encouragement of both Dusty Chivers and Allyn G. Smith (of the CAS Invertebrate Zoology department), Dick Roller (1969 and 1970) published two articles in The Veliger with nomenclatural changes for MacFarland's work.

I rummaged through my reprint filing cabinet, and found the first issue of Opisthobranch Newsletter, published 1 July 1969, with the staple holes and fold marks from its mailing. Steve Long and Dick Roller were the co-editors, alternating priority of name placement each issue (until Vol. II, no. 8, when Steve Long became the sole editor). I was even mentioned on page 2: "Mr. Hans Bertsch, of Berkeley, California, will be at the Immaculate Heart College, Las Cruces Biological Station, Las Cruces, Baja California, Mexico, for several weeks, starting June 25th." I collected several unnamed species on that research trip, watched the first moon walk on a Mexican TV station, and read the Steinbeck & Ricketts marvelous homage to science, "The Sea of Cortez." Dick played a key role in some of my scientific discoveries from that trip, dissecting for me one of the first radulae from an eolid that I later named *Phidiana lascrucensis*. That 2-page first issue also announced that copies of R. Bergh's "Die Opisthobranchiata der Siboga-Expedition" were available for approximately \$8.27 including postage. Many years ago I wrote in the margin of that issue, "Sent for August 29."

The original subscription rate was \$.50 for the 6 numbers of volume I. It was printed with a ditto machine -- remember those typed purple monsters that every school used? Their technology barreled forward with a xeroxed edition, then a change to the mimeo process with the first number of vol. II. So today, this remembrance of Dick is being sent out on the Internet, and access to information about his slugs is being disseminated to more people and faster than ever before. In my 1980 forward to Dave Behrens' "Pacific Coast Nudibranchs," I wrote about the 1960-1980 period of American Pacific coast nudibranch research: "A large group of associates in central and southern California have studied the taxonomy, evolution, ecology, reproduction, and zoogeography of opisthobranchs; they include Richard Roller, Terrence Gosliner, Michael Ghiselin, Robert Beeman, Gary McDonald, Gordon Robilliard, Gary Williams, Steve Long, Gale Sphon, James Nybakken, and David Mulliner." Over the years, Dick surely enjoyed hearing about the growing popularity of nudibranchs; the goals of his original Opisthobranch Newsletter are being continued on a worldwide basis.

There is a short note at the end of the February 1970 ON, which today is most poignant: "Mr. Terry Gosliner and Mr. Gary Williams made a trip to the Gulf of California over the Christmas holidays and came back with several interesting animals from San Carlos Bay. They stopped at Steve Long's home along with Messrs. Roller, Bertsch, Katzman, and McDonald, for several hours of talk and slide showing." Thank you, Dick, for many hours of encouragement, discussions, and discoveries. In many ways we are still together at home (yours, Steve's, Terry's, mine, or anywhere there is an ocean or lover of the sea's beautiful creatures), looking and sharing. Such moments of friendship endure nomenclatural changes, and the many passings of time.

#### References

**Long, Steven J. 1969.** A note on the opisthobranchs of Santa Cruz Island, California. *Veliger* 12 (2): 232.

**Roller, Richard A. 1969.** Nomenclatural changes for the new species assigned to *Cratena* by MacFarland, 1966. *Veliger* 11 (4): 421-423.

**Roller, Richard A. 1970.** A list of recommended nomenclatural changes for MacFarland's "Studies of opisthobranchiate mollusks of the Pacific coast of North America." *Veliger* 12 (3): 371-374.

Hans Bertsch, Imperial Beach, Calif., July, 1998

#### More thoughts on Dick Roller

Richard A. Roller passed away the morning of June 11, 1998. I find it hard to believe even though I know he had not been healthy for some time. I met Dick in San Luis Obispo County, California around the beginning of 1968 and we co-founded the Opisthobranch Newsletter in June of 1969 when six of us got together at the WSM annual meeting (2<sup>nd</sup> or 3<sup>rd</sup>) and agreed they would pay the fare (fifty cents) for the first six monthly issues.

Dick and I (and often, Gary McDonald) collected around San Luis Obispo County, California, on many trips. He started me collecting information and basically taught me everything about indexing and retrieval of the literature. I remember a huge amount of time spent in his tiny office at home -- can't imagine how his wife, Jennie, put up with us. Every piece of literature we collected had to be duplicated so that we each had a copy -- and most of it was cut to size and punched to fit in blue 3-ring binders (I know there are still a couple of hundred of those floating around).

One memory is Dick returning from a quick trip to the Cal Academy (300 miles to San Francisco) with six boxes of MacFarland's notes. I believe it was Allyn Smith who called and said they were available. Most of that material is also still around and available. Another is turning up at his door in full wetsuit and mask to go tidepooling in the pouring rain.

Richard A. Roller, born Dec. 9th 1930 in Baltimore MD. Attended Cal. Poly in San Luis Obispo California. Did most of nudibranch work in Morro Bay, California. Moved to Paris, Illinois in 1973. Died suddenly on June 11th 1998. Dick is survived by his wife, Jennie A. Roller, a son and two daughters.

[continued next page]

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## Literature Published by Richard A. Roller

**Roller, R.A. 1969-01-01.** A color variation of *Aldisa sanguinea*. *Veliger* 11(3):280-281.[N]

**Roller, R.A. 1969-04-01.** Nomenclatural changes for the new species assigned to *Cratena* by MacFarland, 1966. *Veliger* 11(4):421-423.[N]

**Roller, R.A. 1970-01-01.** A list of recommended nomenclatural changes for MacFarland's "Studies of opisthobranchiate mollusks of the Pacific coast of North America". *Veliger* 12(3):371-374.[N]

**Roller, R.A. 1970-04-01.** A supplement to the annotated list of opisthobranchs from San Luis Obispo county, California. *Veliger* 12(4):482-483.[N]

**Roller, R.A. 1972-04-01.** Three new species of eolid nudibranchs from the west coast of North America. *Veliger* 14(4):416-423.[N]

**Roller, R.A. 1973.** *Babakina*, new name for *Babaina* Roller, 1972, preoccupied. *Veliger* 16(1):117-118.[N]

**Roller, R.A.; Long, S.J. 1969-04-01.** An annotated list of opisthobranchs from San Luis Obispo county, California. *Veliger* 11(4):424-430.[N]

Steve Long, Seattle, Washington, July, 1998.

[Thanks to Dave Behrens, Mike Miller and Hans Bertsch for help with this. *Cuthona rolleri* photo from Dave's "Pacific Coast Nudibranchs", 2<sup>nd</sup> edition. Roller/Long photo scanned by Mike Miller. Sally Long scanned the other two photos and showed me how to place them. Mike Miller will have more material on his Slug Site as it comes in. - Ed.]

## PERSONAL NOTES

**Dave Behrens** is very busy with work and with book sales for his Sea Challengers Books. -

[seachalleng@earthlink.net](mailto:seachalleng@earthlink.net)

**From Hans Bertsch:** I head for Mexico this Monday, returning around the first. Have intended to write an article for you regarding slugs at Bahia Tortugas. Will do so in July, and also send you a "research profile" as you requested. - [hbertsch@nunic.nu.edu](mailto:hbertsch@nunic.nu.edu)

**From Brian K. Penney:** "I spent two weeks this May at the California Academy of Sciences working with Ángel Valdes to coordinate our efforts on cryptobranch dorid phylogeny, and enjoying CAS's incredible hospitality. I will be investigating the Pacific Northwest cryptobranch species, using the same characters as Ángel, to ensure that our species are properly placed into genera and families in his scheme. I am also finishing work on the chemical and physical defenses of *Cadlina luteomarginata* against a variety of co-occurring predators. I will present part of this work at the International Society for Chemical Ecology meeting in Ithaca this month." -

[penney@odum.biology.ualberta.ca](mailto:penney@odum.biology.ualberta.ca)

**From Sandra Millen:** Currently I am producing visuals for my talk at the WCM on the genus *Cumanotus*. I would still love to have *Cumanotus cuenoti* from France if anyone should find it. I am also trying to finish off a number of papers - one with Jeff Hamann on *Flabellina* from the Caribbean, one with Michael Schrödl on *Eubranthus* from Chile, with Hans Bertsch on dorids from Baja Mexico. I also have a lot of local animals to finish writing up - not to mention... anyway more than I can finish in the short time I am not teaching. -

[millen@zoology.ubc.ca](mailto:millen@zoology.ubc.ca)

**From Bob Bolland:** Still in the "collecting phase" of my Okinawan opisthobranchs, doing a great deal of diving, collecting, and of course photographing the 'branches that I'm finding. I'm adding to my list quite a few unknowns from 60+ meters. I'm also, quite slowly, trying to get a paper together listing the Okinawan 'branches for inclusion into a new forthcoming journal of the U Ryukyus Sesoko Marine Lab here on Okinawa (*Subtropica*, which will replace the old journal *Galaxea*). - <http://www.imicom.or.jp/~bolland/>

**From Sue Williams:** I'm doing a PhD focussing on sacoglossan sea slugs in southwestern Australia. We have an unusual marine environment here with a mixture of tropical and temperate species. Although Perth isn't tropical (latitude 35 degrees), we get some tropical-subtropical marine flora and fauna due to the warm southward flowing Leeuwin Current. We have a high diversity of the green algal genus *Caulerpa* (with which many sacoglossans are found in association) and a potentially high diversity of sacoglossans (many not yet described).

I'm looking at the feeding ecology of *Elysia expansa*, *Berthelinia rotnesti* and *Oxynoe viridis*. All three of these species are found in association with the green alga *Caulerpa racemosa*. One of the aims of my project is to see if this is what they eat. I'm doing lab-based food choice experiments and isotopic work to help answer this. Many species of *Elysia* in other parts of the world are known to photosynthesize, using chloroplasts they steal from their food algae. Another aim of my project is to see whether *Elysia expansa* carries out this process. - [suew@cyllene.uwa.edu.au](mailto:suew@cyllene.uwa.edu.au)

**From Heike Wägele:** In my small group Evi Wollscheid (PhD student) is working on the molecular phylogeny of Nudibranchia (18SrDNA and 16SrDNA) with some very good results. We have a paper in work which is already accepted for press, but we have to change several minor things before it can go off again to the editor. Also, Evi will present the results in Washington. Another PhD student, Annette Klussmann-Kolb, is working on the nidamental glands and egg clutches of Opisthobranchs. She tries to homologize the different parts of the nidamental glands within the Opisthobranchia and has very nice results. She also will present her findings in Washington. I am finishing a paper together with Richard Willan on the phylogeny of Nudibranchia. I hope it can go to the editor soon. We had lots of delays due to my move to Bochum, my new home and the courses I have to prepare for students. I will present the major results in Washington too. Having concentrated on histology of Nudibranchia, with other opisthobranchs as outgroups, I have detected so many new things, that I will be occupied for the next years to roll up everything properly. - [Heike.Waegel@ruhr-uni-bochum.de](mailto:Heike.Waegel@ruhr-uni-bochum.de)

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**From Erwin Köhler:** Actually I'm working with the PC: 1. merging your Opisthobranch illustrations list at <http://www.oz.net/~miranda/illustrat.html> and mine at <http://www.medslugs.de/linkpic.htm> combined with a check of all URLs - are they still working? 2. adding Opistho-photos from other divers to the Mediterranean Slug Site. 3. adding my new photos (32 species from Spain, 3 weeks diving) [ed., Erwin has cleaned out the non-working URLs and sent me hundreds of new ones so that the list for the search engine is now over 1700 photos] - [E.Koehler@deutschepost.de](mailto:E.Koehler@deutschepost.de)

**From Annette Klussmann-Kolb:** Currently I am working on the nidamental glands and egg masses of opisthobranch with aspects of functional morphology and phylogeny. - [Annette.D.Klussmann-Kolb@ruhr-uni-bochum.de](mailto:Annette.D.Klussmann-Kolb@ruhr-uni-bochum.de)

**From Roberto Cipriani:** Starting next week (June 22-28), my new home address will be: 5316 S. Dorchester Ave. Apt. 204. Same phone number, same building, different apartment. - [rciprian@midway.uchicago.edu](mailto:rciprian@midway.uchicago.edu)

**From Albert Koulman:** At moment I'm working as a PhD-student at the department of Pharmaceutical Biology (University of Groningen, The Netherlands). I'm working on marine natural products. I do a lot of diving in the Dutch (and other European) waters and nudibranchs are my main point of interest. - [A.Koulman@farm.rug.nl](mailto:A.Koulman@farm.rug.nl)

**From Orso Angulo:** I'm currently working in the area of bahia Tortugas (B.C.S.) and Isla Cedros (B.C.), with Dr. Hans Bertsch. This is a study of the nudibranch fauna in that part of the Pacific, a project that is sponsored by the Mexican government. The agency that has the grant is CONABIO (Comision Nacional para el uso y Conocimiento de la Biodiversidad). Study has developed a lot of interesting data, that will be posted soon. I'm also working in the islands of the south part of the Gulf of California as part of my thesis project. - [mol@lapaz.cromwell.com.mx](mailto:mol@lapaz.cromwell.com.mx)

## READER FORUM

**Locality data; *Berthella strongi* (MacFarland, 1966)**

**David W. Behrens**

The range of this species is extended northward from Moss Beach, California to Nanaimo, British Columbia (Mike Miller, pers. comm.).

## INFORMATION EXCHANGE

**From Rachel Collin:** Isopropyl alcohol also seems to cause pretty bad DNA degradation. In Calyptraeids I

found that 3 month old tissue from Isopropyl alcohol and 10 year old tissue from 70% EtOH were both virtually useless for DNA work. At least in this group 70% EtOH works well for the short term (1-3 years) but it may not be a good idea to rely on it for long-term tissue storage. - University of Chicago [rcollin@midway.uchicago.edu](mailto:rcollin@midway.uchicago.edu)

**From Paula Mikkelsen:** Preservation directly into alcohol, without prior treatment in fixative (formalin, Bouins, glutaraldehyde), while preserving DNA, makes tissues generally unusable for histological sectioning. Bottom line is, unfortunately, there is no "general purpose" preservative. We should encourage collectors (and remember ourselves) to record their preservation method on specimen labels, if only as something like "Formalin - EtOH", so we don't waste our time PCRing formalin, or sectioning mush. - [mikkel@amnh.org](mailto:mikkel@amnh.org)

**From Bernhard Ruthensteiner:** I disagree as I saw very good histological sections from alcohol-fixed/preserved material on many occasions. We even had sections of good histological quality from museum material preserved/fixed and stored in alcohol for many decades. Histological quality is not solely dependent on the fixative used, as for example the quality of formalin fixed material varies a lot, too. I, therefore, regard alcohol fixation/preservation as a well suited compromise that allows application of a wide range of investigations. - [ruthenst@zi.biologie.uni-muenchen.de](mailto:ruthenst@zi.biologie.uni-muenchen.de)

**From Kerry B Clark:** I think that may depend on the level of histological examination, the type of tissue, and the type of organism. Alcohol may not fully and rapidly denature enzymes and these may cause cellular and higher-level damage. For non-critical work, alcohol preservation alone may be suitable, but I think it would be dangerous to adopt the idea that alcohol is the fixative of choice. That contradicts a century of histological experience. Dual preservation is a wiser path. - [kclark@iu.net](mailto:kclark@iu.net)

**From Paul Monfils:** How do you "properly buffer" ethanol? Good question Anne. The purpose of buffering is to maintain a constant pH. Non-aqueous liquids like alcohols have no pH, so there is nothing to buffer. In contrast, aqueous fixatives like formalin can have substantially different effects on various tissue components, dependent on pH. - [PMonfils@RIHOSP.EDU](mailto:PMonfils@RIHOSP.EDU)

**From Aydin Orstan:** Ethanol is a very weak acid; weaker than water. So ethanol itself would probably not dissolve CaCO<sub>3</sub> any more than water would. However, the water used to make 70% or 80% ethanol may have become acidic by absorbing CO<sub>2</sub> from the air & thus may slowly dissolve a shell stored in it. So instead of water an aqueous buffer may be used to prepare 70% alcohol. I suppose this is what Gary meant. - [AOrstan@bangate.fda.gov](mailto:AOrstan@bangate.fda.gov)

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**From Paul Monfils:** As several have reminded me, the C-O bond and the O-H bond of the ethanol molecule are polar in nature, even though the rest of the molecule is not, so that the ethanol molecule does in fact have a polar portion, which is probably responsible for its ability to dissolve both some polar compounds and some non-polar compounds. And, more to the point, which does enable ethanol, in aqueous solution, to act as a weak acid! - [PMonfils@RIHOSP.EDU](mailto:PMonfils@RIHOSP.EDU)

**From Wayne Ellis:** Going through your site I noticed a request for species lists. I have a list of nudis from the Sunshine Coast Qld Australia posted at <http://www.austmus.gov.au/science/division/invert/mal/forum/sunsintr.htm> Is this what your looking for? I'm also working on a list for Port Stephens NSW Australia at the moment. [ed., I'm looking for large lists of species which I can merge in with my taxon list to be more complete but even small lists can help] - [glaskin@ozemail.com.au](mailto:glaskin@ozemail.com.au)

**From Jay Shrake:** Thanks for adding our link [Southern California Association of Marine Invertebrate Taxonomists <http://www.scamit.org>] to your related links webpage. - [jshrake@san.rr.com](mailto:jshrake@san.rr.com)

**From Ross Gundersen:** I was dredging Turtle Grass beds in St. Ann's Bay Jamaica for micromollusks and also ended up with several opisthobranchs. I took videos of them ( which look great ) and captured frames for a web site. The pictures aren't up to my normal standards, but should be good enough for a first approximation identification. Since I work on micromollusks I don't know what they are. Could you please take a look at the following web page?  
<http://www.uwp.edu/academic/biology/opisto/opisto.htm> - [ross.gundersen@uwp.edu](mailto:ross.gundersen@uwp.edu)

**From Kerry Clark:** From top left, as best as I can tell:  
*Phyll. engeli*, *Dolabella dolabrifera* juvenile, ?, ? (unable to load 1st, 3rd, and 4th zoom-ups in the top row)  
*Cost. ocellifera*, *Dolabella dolabrifera* juvenile, *E. tuca*, *E. tuca*  
*Stylocheilus* juvenile, *Elysia subornata* juvenile, *Elysia* sp., Aeolid nudibranch (not Doto)  
Aeolid nudibranch, *Apl. parvula*, *Chelidonura?*/*Elysia papillosa*, *Pleurobranchia areolata*. Not a bad haul. - [kclark@iu.net](mailto:kclark@iu.net)

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## MEETINGS

**MOLLUSCS 2000** - Understanding Molluscan Biodiversity in our Region into the 21st Century. 4th - 8th December, 2000 at The University of Sydney, Sydney, NSW, Australia, Malacological Society of Australasia Ltd, ACN 067 894 848. CONVENORS: Dr Winston Ponder, Department of Malacology, Australian Museum, 6 College Street, Sydney 2000 (phone (02) 9320 6120, fax (02) 9320 6050, [winstonp@msg.austmus.gov.au](mailto:winstonp@msg.austmus.gov.au)), Dr Gee Chapman, Institute of Marine Ecology, University of Sydney, Sydney, NSW 2006 (phone (02) 9351 4778, fax (02) 9351 6713, [gee@bio.usyd.edu.au](mailto:gee@bio.usyd.edu.au))

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