

indexing the Nautilus, for example.

EDITOR'S NOTE

The next necessary index is a cross reference between ON citation number and the volume and page numbers where the most complete citation appears in the ON.

Examples are given here.

10000 13:25
10001 13:25
10002 13:25-26
10003 13:26

I should be able to print this listing at least 4 columns across the page by 80 lines down. This will yield 320 references per page. Since there are about 6000 citation numbers it will take almost 20 pages to print them all, but, the list should allow people to find things quickly and easily. Deleted references would simply not appear in the next edition of the index.

I would appreciate reader comments on the need for such an index and I would especially like to have a volunteer to do the job. All you need is a complete set of the **Opisthobranch Newsletter**.

I doubt that many people even notice and most probably do not care but the amount of information in each page of the **Opisthobranch Newsletter** has more than doubled since the early issues.

FOR SALE:

The following papers and books are for sale at the prices listed. Please send requests to Steven Long. Almost all are single copies of originals (O). Xerox or photocopies are identified by (C). Microfiche copies are normally 24x reduction with either 70 or 98 pages per fiche (M). Postage and insurance is extra on all materials and will be billed at my cost. Photocopies of articles are \$.20 per page unless otherwise noted. I will buy libraries of opisthobranch literature. Please send lists and prices to Steven Long.

09970 BEHRENS, DAVID W., 1980. Pacific Coast Nudibranchs. 112 pp., 177 color photos. O \$14.95. paperback.

09986 FARMER, W.M., 1980. Sea-Slug Gastropods. 177 pp., 157 illus. \$10.00 paperback.

09964 GOTTSALL, D.W. & L.L. LAURENCE, 1979. Pacific Coast Subtidal Marine Invertebrates. 112 pp., 160 color photos. O \$11.50. paperback

GOTTSALL, D.W. 1981. Pacific Coast Inshore Fishes. 96 pp., 126 color photos. O \$11.50 paperback.

Opisthobranch Newsletter Volumes 1-12 are available at \$10.00/vol. O, \$5.00/vol. M.

I will start adding the microfiche papers and other materials as time and space permits. It has only been in the past few weeks that I have finally found a place to work and begin to set up my library. It has certainly been a difficult five years for me and I appreciate all of your concern and support. My greatest hope is that it will all have been worth while.

This is the end of this issue. I hope to print at least one more edition of the **Opisthobranch Newsletter** during 1981 but that depends on you.

1898]
Tyrinna Bergh, 1898*
Umbraculacea, 4(2):65
Umbraculum Schumacher, 1817*
Umbrella Lamarck, 1819*
Unela Ernst Marcus, 1953 [type *U. remanei* n. sp. OD]
Utrriculastra Thiele, 1925*
Utriculopsis M. Sars, 1870*
Utriculus Brown, 1844 [not Schumacher, 1817]*
[junior homonym; junior objective synonym of *Retusa* Brown, 1827; ICZN 568/1959]
Vaginella Daudin, 1800*
Varrisa Eales, 1960 (subgenus)* 5(4):146, 8(1):16
Vayssièrea Risbec, 1928*
Vayssièridae, 10(2):171
Venilia Alder & Hancock, 1844 (not Stephens, 1835)*
Verconia Pruvot-Fol, 1931*
Verrilliopsyche Cossman, 1910*
Vertumnus Otto, 1823*
Vesica Swainson, 1840*
 gouldiana, 2(2):33, 3(1):24-25, 27-28
Villiersia Oken, 1842 [error for *Villiersia* d'Orbigny, 1837]*
Villiersia d'Orbigny, 1837*
Vitrella Swainson, 1840* [junior objective synonym of *Akera* Müller, 1776; ICZN 539/1959]
Vitrella Clessin, 1877* [junior homonym of *Vitrella* Swainson, 1840; ICZN 539/1959]
Vitreochaminoea Kuroda & Habe, 1952*
Volvaria? [synonym of *Retusa umbilicata* per ON9766]
Volvatella Pease, 1860*
Volvula A. Adams, 1850 [not Gistel, 1848]*
Volvula A. Adams, 1862 [not Gistel, 1848]* [per Abbott, 1974]
Volvulella Newton, 1891*
Volvulopsis Schepman, 1913*
Weinkauffia A. Adams, 1858*
Westernia Blainville, 1827*
Woodbridgea Berry, 1953*
Xanthonella M.E. Gray, 1850*
Xenocratena Odhner, 1940*
Xenodoris Odhner*
Xokoyamaia Habe, 1950*
Zatteria Eliot, 1902 (type *Z. browni* n. sp. monotype)
Zephyrina Quatrefages, 1844* 12(3):279



Please send comments and additions to this list to the editor. I feel this will develop into a very powerful tool if people will just add to it as they work on various species and papers. I would recommend that everyone write the ON citation number on papers in their working library to facilitate indexing.

One section of this job which could easily be done would be to compare the species names found in and after ON citations already printed and add them to a copy of the list above. Anyone willing to add to the index above will receive a free copy of the updated list to work from including updates done by myself and other people.

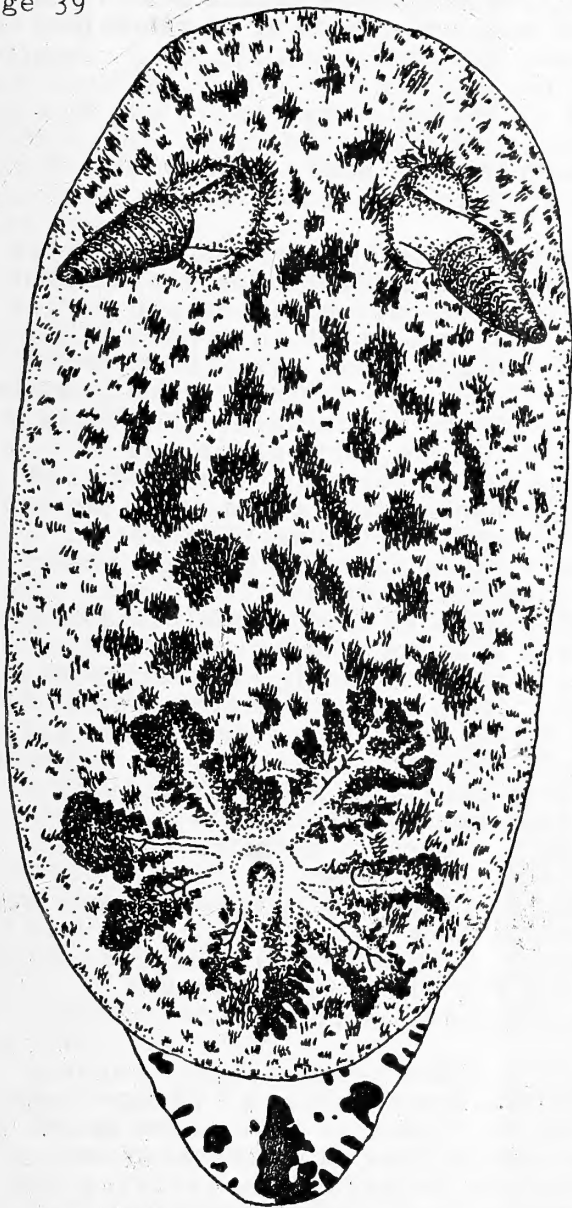
The next listing for this index will definitely not come before 1982 and may be in 1983 so the best way to get one is by adding to the list yourself. In addition to the bribe, this will prevent too much duplication of effort.

Please send deletions for any names which are not opisthobranchs as defined in the March, 1981 issue of the **Opisthobranch Newsletter** on page 11. The same information will be useful for any previously cited papers which do not include opisthobranchs.

If anyone is interested in adding another journal series to the list here, please drop me a note so that we do not have three people



December, 1981
Volume 13,
Number 8
Page 39



Jorunna pardus Behrens & Henderson, 1981
Drawing from Dave Behrens

* * * * *

The **Opisthobranch Newsletter** is published by Steven J. Long, 359 Roycroft Ave, Long Beach, California 90814, USA. Telephone 213-433-7148 (439-2028 will be back in service soon. Subscription rates are \$15.00 per calendar year for individuals and \$17.50 per calendar year for institutions. The **Opisthobranch Newsletter** is issued in parts at irregular intervals as material becomes available.

* * * * *

EDITOR'S NOTE

Subscriptions for 1982 are now due.

Please send them before December 31, 1981, so that I can prepare for next year. Note the subscription rates listed above. I will not invoice unless requested and those requesting invoicing will be billed at the institutional rate.

This is my Christmas newsletter. 1981 has been a real growth year for me and, I think, for the ON. Merry Christmas to all of you and thank you for your continued support and friendship. It has kept me going for a lot of years. Anyone travelling through Los Angeles is welcome to call or drop by.

Much of the time there will not be anyone at my house so please do use the answering machine (433-7148). I will definitely get back to you as soon as possible. I work very close to Los Angeles International Airport and would be happy to come over and see any of you even if for a stopover on a longer flight. I sell microfilm equipment and supplies for Datacorp (213/679-0473) and am in the office most of the daytime. Please feel free to call if you can't catch me anywhere else. I may not be able to talk for a long time but I will be pleased to hear from you.

My daughter, Kristin, is now 13 and will be with me for the Christmas holidays. She is doing well in school and growing into a very pretty young lady. My mother, Ruth, has recovered almost completely from her strokes last year and is living in the house at 361 Roycroft.

Thank you all for the Christmas cards and letters. I hope that this Christmas is as nice for you as it is for me.

Thanks to Dr. P.L. Phung for proof reading the Poizat paper below. Thanks to Jim Lance, Don Cadien, Ron Velarde, Dave Behrens, Dr. Baba, Eveline Marcus, and others who have provided material for this issue.

I have a volunteer to cross-index the back volumes of the ON. Are there any volunteers for specific journal runs? I really do not want to print an index before it is reasonably complete so let's get several journals into the next species index. If anyone notices non-opisthobranch names creeping in please notify me at once.

The suggestion has been made to rearrange some of the names by taxonomic placement. I do not want to list names except as actually cited. Any taxonomic placement changes may be noted in brackets after the original name. They will also show up as the new combination in alphabetical order within the list.

PERSONAL NOTES

From Dave Behrens: "I spent a week, October 3-9, 1981 collecting in Bahia de los Angeles, Baja California, Mexico. This is of course the infamous collecting spot of James Lance who on numerous occasions has collected several dozen species on a single trip (see previous ON issues). Jim's collections have always been during spring and summer months, so we were anxious to see what was present during this time of year. The findings are noteworthy. After 5 days of heavy sampling only two opisthobranch species were collected, **Berthellinia citrena** and **Tridachiella diomedea**. No nudibranchs were observed. Several additional observations were made which may later assist in explaining this dramatic seasonal shift: 1) surface water temperature was 78°F, below 15 feet - 76°F, and 2) the usual dense benthic algal crop (primarily **Ulva** & **Sargassum**) was entirely absent."

From Dr. Kikutaro Baba: "During the last part of this year I had been working on the Dendrodorididae and part of the Dorididae, and obtained a number of subjects not hitherto defined well. In the next year I hope I will be able to prepare MS of some papers for future publication."

Dr. Eveline Marcus, Caixa Postal 6994, Sao Paulo, Brazil, 01000, has sent some additions to the generic name list.

I had an enjoyable evening with Don & Kathy Cadien a week or so ago. They are doing well. I also ran into Ron Miracle at a gathering on the 18th of December. It is good to be living in Southern California again although I miss the great collecting around Pismo Beach, California.

From Dave Behrens: "**Platydorid macfarlandi** Hanna, 1951 lives. Two large specimens recently collected in Southern California. Behrens and Bob Henderson to publish redescription and eco notes, soon."

From Bob Henderson (Pacific Bio-Marine Labs, Inc., P.O. Box 536, Venice, CA 90291) in reference to **Platydorid macfarlandi**: "We got photos of the living animals as well as the actual sponge substrate they were living on. Dave and I are putting the final touches on a redescription complete with photos." "I'm interested in finding out whether anyone else has run across incidences of color attenuation or loss as a function of increasing depth. I've collected a few specimens of deep water **Archidorid** which seem to point to this trend but not anywhere near enough to make any claims. I'd be interested in any input on **Archidorid** or other dorid species."

PAPER

Modifications morphologiques et fonctionnelles d'un mollusque marin **Microhedyle milaschewitschii** Kow. 1903, au cours d'une contamination *in vitro* par le mercure.

by

C. Poizat, M. Henry & G. Cristiani

Nos études écologiques des Gastéropodes mésopsammiques montrent que ces animaux prospèrent dans des biotopes peu ou pas pollués. Il nous est donc apparu utile d'effectuer sur l'une des ces espèces, des expériences de contamination *in vitro* par le chlorure mercurique. Ce dérivé a été choisi, d'une part, parce que la pollution mercurielle de la mer est des plus préoccupantes, d'autre part, parce que les caractéristiques physico-chimiques de Hg Cl₂ sont bien connues. Nous avons suivi les modifications morphologiques et fonctionnelles des animaux à la suite d'une contamination unique, à des taux de Hg respectifs de 0,00012 (témoin) ; 0.008 ; 0.02 ; 0.08 ; 0.1 ; 0.5 ; 1 et 2 mg/l. Pour des valeurs < 0.08 mg/l (doses sublétales), les animaux présentent une série de modifications physiologiques et structurales:

- stade 1 : perte d'activité et d'adhérence au support ;
- stade 2 : lyse des organes sensoriels et contorsions ;
- stade 3 : rupture de la paroi du corps et hernie des viscères. Ce stade irréversible est le critère de létalité retenu.
- stade 4 : les animaux ayant survécu (168 heures à des taux) < 0.08 mg/l sont capables de régénérer totalement leurs organes sensoriels et reprennent un comportement normal. Dans certains cas, les régénérations sont anarchiques, avec formation de tumeurs. a des taux > 0.1 mg/l (dose létale) les stades 1 et 2 sont très fugaces et même inexistantes aux plus fortes doses, les spécimens pouvant atteindre directement le stade 3 en une heure. A ce stade, l'étude par microscopie photonique et électronique montre la lyse de l'épithélium tégumentaire de l'animal, dont nous savons qu'il est son organe de respiration cellulaire ou de l'osmorégulation et ce, à des taux relativement faibles (DL 50 = 0.08 mg Hg/l, à 20 h.), ce qui nous conduit à considérer **Microhedyle milaschewitschii** comme une espèce très sensible à la pollution mercurielle et à l'utiliser comme indicateur biologique.

READER FORUM

From Sandra Millen: "I was thrilled with the genera list in the latest O.N. I noticed there were a few species included but not even all of those found in **The Veliger**. I would like to see species listed with their most recently recognized genera and with the author and publication date after each. They then could be cross listed to journals. People could then make additions and deletions and synonymies as they saw them.

CHANGE OF ADDRESS/NEW SUBSCRIBERS

Mark McMahan
1793 Crestmont
Costa Mesa, CA 92627
714/631-4844

Dr. Hans Bertsch
Universidade Autonoma de Baja California
Apdo. Postal No. 453
Ensenada, Baja California
Mexico
Phone: Mexico Int'l. 8-3018 or 8-1970

Doug Mason
6849 Fountaine Ave.
Newark, CA 94560

J. Carlos Garcia Gómez
Departamento de Zoología
Facultad de Biología
Apartado 1.095
Reina Mercedes, 6
SEVILLA - 13, Spain

Wesley M. Farmer
5319 Hewlett Dr.
San Diego, CA 92115

Joyce Fleming
212 Santa Ana
Long Beach, CA 90803

Dr. Marc Chamberlain
52 - 9th St.
Hermosa Beach, CA 90254

V. Urgorri
Departamento de Zoología
Facultad de Biología
Universidad de Santiago de Compostela
Spain

CURRENT EVENTS

The sixty-second annual meeting of The Western Society of Naturalists will be held from December 27th through December 30th, 1981. Dr. Fred Hochberg is the local chairman (Santa Barbara Museum of Natural History, 2559 Puesta del Sol, Santa Barbara, California 93105, 805/682-4592). Major sections on: Marine Invertebrate Ecology, Marine Vertebrates, The Ecology

of Marine Neogastropods, Marine Fishes, The Importance & Use of Parasites in the Marine Environment, Invertebrate Physiology, Marine Algae - Physiology, Symbiosis, New Approaches to Algal Aqualculture, Invertebrate Reproduction, and Marine Algae. No papers specifically mentioning opisthobranchs are included in the advance program. The meetings are open to the general public as well as WSN members.

BIBLIOGRAPHY OF OPISTHBRANCHIA

Oceanography and Marine Biology, Volume 19, includes a chapter entitled "The Ecology of Nudibranchs Molluscs." by Christopher D. Todd. Available at 39 British pounds from: Aberdeen University Press, Farmers Hall Aberdeen Scotland AB9 2XT. [volume 655 pp., 154 figs., 6 pls.; please send me a complete citation.]

10044 BALLESTEROS, M. & J.A. ORTEA, 1981. Nota sobre dos Opisthobranquios del litoral catalán. [Notes on two Opisthobranchs from the Catalanian Coast.] **Publicaciones del Departamento de Zoología**, Universidad de Barcelona, 6:33-38, figs. 1-2. [Spanish, English summary; **Runcina capreensis**, **Carminodoris boucheti**]

10045 BERTSCH, HANS, November 21, 1980. A new species of Tyloidinidae (Mollusca: Opisthobranchia) from the northeastern Pacific. **Sarsia**, 65:233-237, figs. 1-3. [**Roya spongotheras** sp. nov.]

10046 BICKELL, L.R., F.S. CHIA & B.J. CRAWFORD, 1981. Morphogenesis of the Digestive System During Metamorphosis of the Nudibranch **Doridella steinbergae** (Gastropoda): Conversion from Phytoplanktivore to Carnivore. **Marine Biology**, 62(1):1-16.

10047 BRUSCA, RICHARD C., 1981. **Common Intertidal Invertebrates of the Gulf of California**. Second Edition, University of Arizona Press, 513 pp., 14 pp. color photos + black & white photos + line drawings.

10048 COYER, P.E., J.H. HALSEY Jr. & E.R. STRONG, 1981. Reversible and irreversible effects of Po₂ alterations on two groups of **Aplysia** neurons. **Comparative Biochemistry and Physiology**, A, 68A(4):579-588.

10049 FEZ, SIRO DE, 1974. **Ascoglossos y Nudibranchios de España y Portugal**. C.S.I.C. Valencia.

10050 GASCOIGNE, T. & M. SORDI, April, 1980. A redescription of **Placida viridis** Trinchese, 1873 (Gastropoda: Ascoglossa). **The Journal of Conchology**, 30(3):167-180.



10051 FLOR, GERMAN, EVA MARIA LLERA GONZALEZ, JOSE ANTONIO MARTINEZ AZPIREZ, & JESUS ANGEL ORTEA RATO, 1981. Cuadernos del Crinas. 1. Contribucion al estudio de la playa del San Lorenzo (Gijon). **CUADERNOS DEL CRINAS**, Centro de Investigaciones Acuáticas de Asturias, (1):1-47, figs. 1-5, tpls. 1-5. [Spanish; *Retusa subtruncata*, *Acteon tornatilis*, *Ringicula conformis*, *Cylichna cylindracea*, *Rhizorus acuminatus*, *Philine quadripartita*]

10052 HAMATANI, IWAO, November, 1980. On the Species of the Genus *Oxynoe* Rafinesque, 1819 from Japan, Inclusive of a New Species (Opisthobranchia: Ascoglossa). **Publications of the Seto Marine Biological Laboratory**, 25(5/6):349-360, pls. I-IV, text figs. 1-6. [*O. kabirensis* sp. nov.]

10053 HUGHES, ROY L., Jr., December, 1979. Ultrastructure of the buccal mass in juvenile *Coryphella salmonacea* (Gastropoda: Nudibranchia). **The Journal of Molluscan Studies**, 45(3):289-295.

10054 HUNNAM, P. & G. BROWN, 1975. Sublitoral Nudibranch Mollusca (sea slugs) in Pembrokeshire Waters. **Fld. Stud.**, 4:131-159.

10055 JAECKLE, WILLIAM, October, 1981. Range Extensions of Several Opisthobranchs from Humboldt County, California. **Opisthobranch Newsletter**, 13(7):23-24, fig. 1.

10056 KAMIYA, H. & Y. SHIMIZU, February, 1981. A Natural Agglutinin Inhabitable by D-galacturonic Acid in the Sea Hare *Aplysia* eggs: characterization and purification. **Bulletin of the Japanese Society of Scientific Fisheries**, 47(2):255-260.

10057 LLERA GONZALEZ, EVA MARIA & JESUS ANGEL ORTEA RATO, March-April, 1981. Marine Molluscs from Isabel Island Mexico. **La Conchiglia**, 13(144-145):3 pp., 10 photos. [*Bulla gouldiana*, *Chromodoris sedna*, *C. sponhi*, *Dendrodoris* sp.]

10058 LUKOWIAK, KEN & CHRISTIE SAHLEY, June 26, 1981. The in vitro classical conditioning of the gill withdrawal reflex of *Aplysia californica*. **Science**, 212(4502):1516-1518, 4 text figs.

10059 ORTEA, J.A., 1977. Moluscos marinos Gasterópodos y Bivalvos del litoral asturiano entre Ribadesella y Ribadeo, con especial atención a la subclase Opisthobranquios. Doctor Thesis (unpublished), Departamento de Zoología, Universidad de Oviedo, pp. 536. [Spanish]

10060 ORTEA RATO, JESÚS ANGEL, 1980. Inventario provisional de Ascoglossos y Nudibranchios de las islas Canarias. **Resum. IInd. Congr. Nac. Malac.**, Barcelona, 1 pp. [Spanish]

10061 ORTEA RATO, JESÚS ANGEL & EVA MARÍA LLERA GONZÁLEZ, 1980. Moluscos marinos de la isla Isabel, Nayarit, Mexico. **Resum. IInd. Congr. Nac. Malac.** Barcelona, 1 pp. [Spanish]

10062 ORTEA, J.A. & V. URGORRI, 1981. Opisthobranquios nuevos para el litoral ibérico colectados en Galicia. I. **Bol. Inst. Espa. Oceano.**, 6(288):49-60, figs. 1-9. [Spanish; English summary; *Calliopoecia bellula*, *Trapania pallida*, *Polycera faeroensis*, *Palio dubia*, *Cadlina laevis*, *Duvaucelia odhneri*, *Tergipes tergipes*]

10063 POIZAT, C., M. HENRY & G. CRISTIANI, 1981. Modifications morphologiques et fonctionnelles d'un mollusque marin *Microhedyle milaschewitschii* Kow. 1903, au cours d'une contamination *in vitro* par le mercure. **Biology of the Cell**, 42:10a.

10064 POIZAT, C., M. HENRY & G. CRISTIANI, December, 1981. Modifications morphologiques et fonctionnelles d'un mollusque marin *Microhedyle milaschewitschii* Kow. 1903, au cours d'une contamination *in vitro* par le mercure. **Opisthobranch Newsletter**, 13(8):40.

10065 PRINCE, STEPHANIE, Winter, 1981. Comparative Study of Some Bubble Shells. **Of Sea and Shore**, 12(2):79-80, [10 figs.]. [*Bulla peasiana*, *B. gouldiana*, *B. striata*, *Haminoea crocata*, *H. vesicula*, *H. virescens*, *H. solitaria*, *Hydatina albacinata*, *H. amplustre*, *H. physis*, *Micromelo guamensis*]

10066 PERRON, F.E. & R.D. TURNER, 1977. Development, metamorphosis, and natural history of the nudibranch *Doridella obscura* Verrill (Corambidae: Opisthobranchia). **J. Exp. Mar. Biol. Ecol.**, 27:171-185.

10067 RASMUSSEN, E., 1973. Systematics and Ecology of the Isefjord Marine Fauna (Denmark). **Ophelia**, 11:1-495.

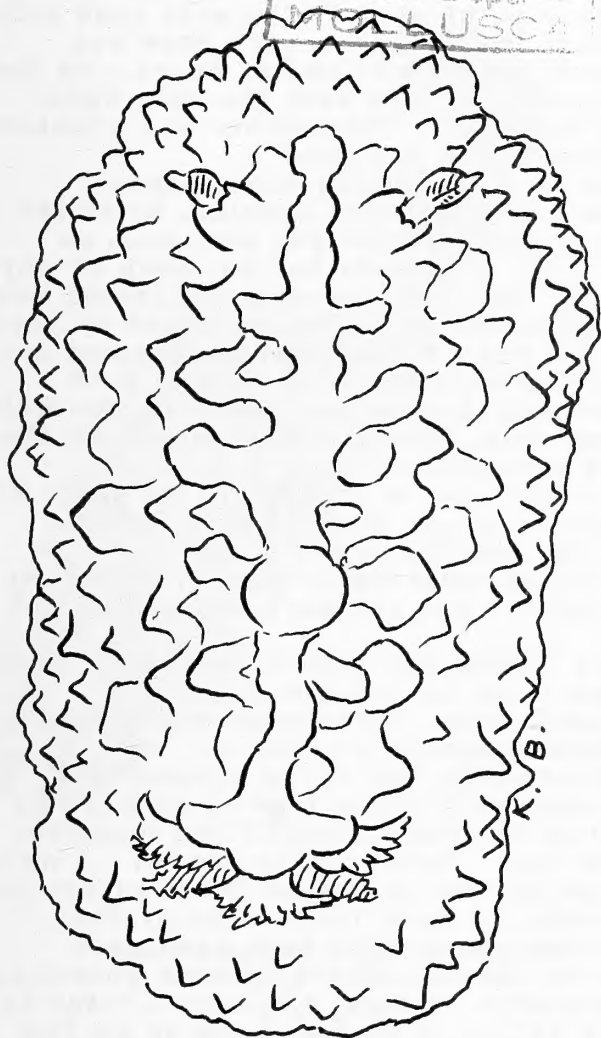
10068 USUKI, ITARU, January, 1981. Growth Characteristics of the Early Juvenile of *Aplysia juliana* collected in Winter. **Venus**, The Japanese Journal of Malacology, 39(4):212-223, figs. 1-2, pls. 1-3. [Title has *Aplysia*; English & Japanese]

This is the end of Volume 13. Have a Merry Christmas and a Happy New Year!





Zool. Dept.
 UCSC



Petelodoris triphylla Bergh, 1881

Drawing by Kikutarô Baba

Based on a 7-8 cm animal; taken alive from Seto, Kii, Japan, May 6, 1958, by Mr. Torao Yamamoto. Type locality, Eno-shima, Sagami Bay, Japan.

* * * * *

The **Opisthobranch Newsletter** is published by Steven J. Long, 359 Roycroft Ave, Long Beach, California 90814, USA. Telephone 213-433-7148 (message recorder) or 439-2028. Subscription rates are \$15.00 per calendar year for individuals and \$17.50 per calendar year for institutions. The **Opisthobranch Newsletter** is issued in parts at irregular intervals as material becomes available.

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EDITOR'S NOTE

Thanks to Dave Mulliner, Ron Velarde, Don Cadien, Dave Behrens, J.A. Ortea, H.K. Mienis, Gordon Robilliard, Jeff Hamann, Michael Ghiselin, Kathe Jensen, Eveline Marcus, and others who have sent material for this issue of the ON.

PERSONAL NOTES

From Kathe Jensen: "I am presently working as Visiting Assistant Professor in the Division of Science and Mathematics, College of the Virgin Islands. [Charlotte Amalie, St. Thomas, U.S. Virgin Islands 00801] I have only been here for about 5 weeks [as of 25 February, 1982], and haven't had much time to go collecting, because I have been too busy getting everything ready for the courses I teach, finding a place to live, finding a reasonably priced dependable car (if there is such a thing), and having my stuff shipped over (some all the way from Denmark and some from Florida). However, I have done a little collecting from the beach right outside the College and have found **Elysia tuca**, **Elysia serca** (= **E. clena**), **Cyerce antillensis**, and **Calliphylla mediterranea**. I hope to be able to do more extensive collecting when all practical obstacles have been dealt with."

From Jeff Hamann: "I spent two weeks collecting opisthobranchs with my family in Australia this Christmas. We went to Lizard Island on the Great Barrier Reef. It's really a neat place. We had near perfect weather and an ideal set-up. Making sometimes 3 dives a day we burned 65 tanks of air, hit about 25 spots including 4 on the main reef and never got cold!

Collecting was the best I've ever seen. We found 75 different species of opisthobranchs. I got passable photos of 72 and brought home some preserved material. Unlike Heron Island (we spent Christmas 1978 there), where large Chromodorids were out and about all over during the day, collecting was hard work. Most specimens were under subtidal rocks and few were encountered more than once. At Heron Island there were 20 or so large dorids that were fairly common but only one **Elysia**, 1 **Aglaja** & **Chromodoris decora** could be called common at Lizard Island. Diver depths seemed to range from intertidal to 30' at Lizard Island and 40' to 60' at Heron Island. In spite of these differences and over 1,000 miles I found 23 species common to both places."

From Steve Long: "Talked with Sandra Millen on 2-23-82. It snowed in Vancouver yesterday. I am heading up to Eureka to see the Oringers on the 27th of February and then on to see Sandra around the 3rd of March for a few days. Plan to look at Vancouver Island while there. I will be back in Long Beach by March 14th.

