



**Southern California Association of  
Marine Invertebrate Taxonomists**

3720 Stephen White Drive  
San Pedro, California 90731

April 1986

Vol. 5, No. 1

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Next Meeting: May 12, 1986

Specimen Exchange Group: Pectinidae and Cardiidae

Taxonomic Topic: Use of Open Nomenclature and Provisional Species. A document for discussion at this month's meeting is included in this issue.

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MINUTES FROM: April 14, 1986

Papers that are to be presented in May at the SCAS meeting were previewed by SCAMIT members. The actual papers will be heard on May 2nd during the contributed paper session being sponsored by SCAMIT. Cathy Crouch reviewed some of the data which describes the infauna in beds of intertidal surfgrass. Descriptions of several new Syllidae were presented by Leslie Harris. Tony Phillips discussed the status of Leptognathidae collected along the local coast, and Sue Williams explained the use of methyl green stain in differentiating certain polychaete groups.

Changes in SCAMIT Newsletter Vol. 3 No. 8 (by Jim Roney)

James T. Carlton (Oregon Institute of Marine Biology, University of Oregon), in a personal communication, has stressed the synonymization of Crangon alaskensis elongata to Crangon alaskensis (Kuris & Carlton, 1977, Biol. Bull., 153: p. 540, third paragraph). Dr. Carlton explained why a conservative approach should be taken and "--until the subspecies can be shown to be valid, we should not use the name," with which I now agree. The subspecific differences are on a latitudinal cline. Rathbun herself synonymized the subspecies by citing "insensible gradations" (Rathbun 1902) between the differing forms.

The genus Neocrangon Zarenkov, 1986, has been accepted (Squires & Figueira, 1974), partially accepted and slightly revised (Kuris & Carlton, 1977), or considered to be invalid (Butler, 1980).

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Originally my line of thought followed that of Butler, but after additional discussions and research I now consider Kuris and Carlton's application of Zarenkov's name Neocrangon to be correct. Therefore, in Vol. 3 No. 8 Crangon communis, C. resima and C. zacaë should be changed to Neocrangon communis, N. resima, and N. zacaë. Unfortunately, crustacean taxonomy is in a constant state of change; presently two of the above species of Neocrangon are being synonymized along with description of a third. These changes will be noted in a future newsletter as soon as they are published.

I would like to thank Dr. James T. Carlton for his interest in the SCAMIT newsletter for personally responding, and his continued communication on crangonid taxonomy which has been considerably beneficial to myself and others.

### John Dorsey's trip to Wood's Hole

John Dorsey attended a Polychaete workshop at Battelle Northeast Marine Research Laboratories on March 21, 1986. During this workshop the first meeting of the East Coast Association of Marine Invertebrate Taxonomists (ECAMIT) was held. Enthusiasm was great despite logistical problems of frequent meetings. Below are the minutes of this meeting compiled by the organizer, Nancy Mountford.

The first meeting of ECAMIT was held March 21, 1986 at Battelle New England Marine Research Laboratory, Duxbury, MA. Twenty-eight taxonomists attended with a latitudinal range of Maine to Florida.

Jim Blake (Battelle NEMRL) led off with a discussion of the state of cirratulid taxonomy. Specifically, he discussed what differentiates Tharyx from Caulleriella and Chaetozone and some of the problems with the generic descriptions of these species. Also, within Tharyx spp., he believe T. annulosus = T. dorsobranchialis which also = Monticellina heterochaetous in which case T. dorsobranchialis would have priority. He had demonstration slides of several taxa of Tharyx, Chaetozone and Caulliella which he shared with the group. In addition, the participants set up demonstrations of cirratulids from their study locations. It was later agreed to work again on this family at our next meeting, using a specimen exchange ahead of time.

Battelle hosted us all for an excellent buffet lunch. During lunch we got a chance to view a real SCAMIT meeting in progress, Pat Hutchings lecturing on Mediomastus taxonomy. Unfortunately the audio was difficult to hear in a group audience, but the tape was available for loan to die-hard Capitellid lovers.

Ann Frame (NMFS, Sandy Hook, NJ) next led the discussion on Lumbrineridae. Her method of generic differentiation is mainly based on dentition and she handed out a key to genera and a key to species. These keys included erection of a new genus and several species yet to be published. Ann showed examples of the

taxa she discussed, and the participants set up demonstrations of the material from their individual locations.

John Dorsey (Hyperion Treatment Plant, Los Angeles, CA) SCAMIT president, gave a talk on how SCAMIT operates its meetings and how we could benefit from their experience. (To follow.) It was generally acknowledged that since the East Coast group is so spread out geographically, monthly meetings weren't possible. Instead, we decided to try an arrangement of splitting into three geographic subsets along the regional divisions of the Estuarine Research Federation, NEERS, AERS, and SEERS. There will be two to three meetings per year of one to two days duration to be held in conjunction with an ERF regional society in the fall and coast-wide with the Benthic Ecology Meetings in the spring. The third meeting per year will be decided upon by each region, but most likely will result in a two-day meeting either alone eg. in summer or with the spring regional meeting of ERF societies.

By voice proclamation, Sheldon Pratt was selected as the New England (NEERS) regional representative, Nancy Mountford from the mid-Atlantic (AERS) region, and Harvey Rudolf from southern (SEERS) region. These people will be responsible for coordinating the taxonomy workshops in their region. The coast-wide spring meeting will be organized by the person into whose region the Benthic Ecology Meeting meets. (It will be held in North Carolina State, Spring '87.) Contact: Lisa Levin, (919) 737-7840.

It was also decided that (1) voucher specimens generated should be housed at the US National Museum, Washington, DC.; (2) sources of funding from various agencies will be looked into as we demonstrate our usefulness to government agencies and industry; (3) we hold workshops on other invertebrate groups in addition to polychaetes; (4) we should join SCAMIT as individuals. The advantage here is receiving the monthly newsletter and to give us space for an "East Coast Column" without the hassles of starting our own newsletter de novo.

Harvey, Nancy, Sheldon and John met over lunch at the BEM to work out more of the details for the next meeting. They decided to continue work on cirratulids, start capitellids and either paraonids or dorvilleids for the fall regional meetings. They will each announce the formation of ECAMIT at the spring meeting of their respective ERF society. Following the fall ECAMIT regional meetings and prior to the spring meeting, there will be a specimen exchange coast-wide.

#### How to Run an ECAMIT Meeting:

##### BEFORE MEETING:

1. Select the meeting dates.
2. Select groups to work on.
3. Arrange for discussion leader for each group.



4. Decide which species to work on. Round-up enough specimens from a given lab to have enough to send at least one specimen to each participating lab. Specimens should not be labelled with species name, only a reference number.
5. Each participant at a given lab should identify the specimens and come up with what their lab would call it.

AT THE MEETING:

1. Pass out a sheet labelled with the code for each specimen in exchange. Everyone signs in what they identified it as. If there is complete agreement on identity, then no further discussion is needed. If not in agreement, that specimen will be discussed by the person running the afternoon demonstration.
2. AM: guest lecture, business conducted. Decide ahead of time what questions to ask the guest speaker.
3. PM: Lab work - one person is preselected to work on the microscope, which is linked to a video display, and talk about each specimen. Another person assists by setting up slides to avoid delay. If possible, TV screens are set up so everyone can watch at the same time. Come to an agreement on what everyone will call each specimen discussed. Make a voucher specimen out of the best examples of each taxon.
4. Following the meeting, the discussion leader for each group writes up notes to be published in the SCAMIT newsletter.

The difference between a regional meeting and coast-wide meeting will be that each region should come to a conclusion as to what a given specimen is to be called. At the coast-wide meeting, each region signs in on the sheet for each species. If all agree, then there is no further discussion; if not a demonstration is made in the TV/microscope to work out the differences. In order for this to work, all regions should work on the same base group of specimens (they may want to also work on regional problems). The three regional coordinators should remain in close communication for this to work.

Enclosed you will find a copy of our new SCAMIT brochure. Pass it on!

Dominic Gregorio of Texaco USA recently (April 18th) presented SCAMIT a check for \$2,500 representing TEXACO's contribution for 1986. Our sincere thanks to TEXACO for this contribution. Dominic will be giving a presentation of Texaco's marine biological studies on deep-water, hard-bottom communities during our forthcoming July meeting this summer.



Lists of Specimens from April 14, 1986

HYP57	<u>Fabrisabella</u> sp. B	SCAMIT, 1986
LAC073	<u>Chone veleronis</u>	Banse, 1972
LAC074	<u>Melinna heterodonta</u>	Moore, 1923
LAC074 (in part)	<u>Melinna oculata</u>	Hartman, 1969
MBC45	<u>Potamethus</u> sp. A	SCAMIT, 1986
MBC46	<u>Euchone</u> sp. A	SCAMIT, 1986
OC62	<u>Chone</u> sp. B	SCAMIT, 1986
OC63	<u>Fabrisabella</u> sp. B	SCAMIT, 1986
OC64	<u>Chone albocincta</u>	Banse, 1972
OC65	<u>Chone minuta</u>	Hartman, 1944
OC66	<u>Potamilla socialis</u>	(Hartman, 1944)
PL68	<u>Chone albocincta</u>	Banse, 1972

TRAVELS WITH OLGA:

Gustafsson's Pensionat  
Sveagagen 108, 4re  
Stockholm, Sweden  
23 September 1939

Dear Frieda and Chauncey: I have had no word from you for a very long time. I hope all is well with both of you, although I know that Lost Hills must be quite cold by now. Stockholm is also cold. There is talk of expecting snow, but up to now it is still rain and mostly sunshine.

It has been very beautiful here the past month, and warm enough to enjoy the out-of-doors. One find many interesting walks and rides in Stockholm. I have walked much along the water front (easy walking distance from my pension) and seen the activity around the ships. Now boats are largely Scandinavian, but in normal times there are boats from many parts of the world. Also, along these water fronts there are many fishermen at their trade. They operate small row boats (hand-propelled), with a large broom at one end from which is suspended an enormous, bag-like net. This they lower into the water, to the bottom, by means of a winch, and after a certain time draw it up. There is always a large audience to see what might come up. The water here, as also in the Baltic, is far less salt than marine, - in fact, only about 1/3 as much, hence supports a rather limited fauna.

Stockholm is a very modern city, - its accomodations and customs not greatly different from those in America. If it were not for the strange language, one might perhaps note little difference, except for much greater pride and cleanliness here, and for much orderliness (I am still a patriotic American, and prefer California!) But one breathes easily here, and enjoys the best kinds of foods in great profusion. There is now some talk of issuing ration cards, such as Norway is already using, - but everyone is hoping it will not become necessary.

My plans are as little known to me as to you. I hope I may stay here through October and possibly into November, - but after that there is as yet no likelihood that I may go to Germany. If I return to America, it will probably be to Washington, D.C., but no arrangements have yet been made.



PROPOSAL FOR DEVELOPMENT OF SCAMIT PROTOCOLS FOR USE OF  
PROVISIONAL TAXA AND OPEN NOMENCLATURE

The frequent discovery of taxonomically new or problematic species is an inevitable consequence of the many biological surveys of marine invertebrate communities being conducted in Southern California. The taxonomist examining such material is faced with two choices. Either the specimen represents a taxon new to science, therefore worthy of a provisional name and, ultimately, formal status through publication; or its identity is uncertain for reasons not justifying erection of a new taxon, but sufficiently significant to warrant a conditional name. Having made this determination the taxonomist must then select a nomenclatural means of designating an identification as provisional or conditional. The nomenclature used in these cases is not codified by the ICZN and may be referred to as open nomenclature. The various forms of open nomenclature and their uses are governed largely by tradition and personal preference. As a result a number nomenclatural devices are in common use. Examples of some of these and their usual meanings are:

affinis (aff.)	Placed between generic and trivial name or
conferre (cf.)	following the abbreviation 'sp.' to indicate
near (nr.)	similarity of a unidentified specimen to a described species.
fide....	Placed between a binomial and name of an
of.....	author. Indicates a species definition by
sensu...	the listed author rather than the original author's, from which it differs in some manner.
?	Variously placed around or within the binomial to indicate uncertainty of the identification.
" "	Placed around the binomial, generic, or trivial name. Usually indicates uncertainty that species is well defined or has otherwise uncertain status.
sp. A,B,C...	Following a generic name to indicate a unique
sp. 1,2,3...	species of unknown identity. Is applied to
sp. I,II,III..	cases where the species is recognized as, or suspected of being, new to science and in cases where identity is simply unknown.

As a step toward its goal of developing a regionally standardized taxonomy, it is appropriate that SCAMIT adopt protocols for the use of open nomenclature for the erection of provisional taxa and conditional designations. The protocols proposed below are intended to promote discussion of this issue leading to the adoption of some standard practice.

## PROVISIONAL TAXA

The past 20 years of relatively intense surveying of marine communities in Southern California involving many different taxonomists has led to erection of numerous provisional species. Cases of a single species being given different designations by different workers, as well as the identical designations being applied to different species have occurred. While this has led to some confusion among the various taxonomists in the region, the potential for confusion becomes greater when data sets from different sources within the region are compared. A case in point is the effort of the EPA to develop a national data base from data collected through 301(H) monitoring programs. While only very small amounts of data from only three programs in Southern California have been submitted to the EPA to date, the confusion over provisional species has led to a reluctance on the part of EPA to recognize such taxa. As a result the EPA has recently decided, that for Southern California data sets submitted to their data management system, only provisional taxa recognized by SCAMIT will be considered valid. It can be expected that this problem will occur whenever attempts are made to combine or blend taxonomic data from different sources. SCAMIT provides a mechanism, through its taxonomic standardization program, to resolve this confusion by imposing, after review of the material, its own designations for provisional taxa from Southern California. The original designations of provisional taxa subsequently recognized by SCAMIT will be considered synonyms.

### Proposed SCAMIT Protocol for Provisional Taxa

Criterion for use: In cases where a specimen is known or suspected of being new to science, having not appeared in the refereed literature it is to be given a provisional designation in order to distinguish it from other closely related taxa.

Specimens that may be closely referred to published descriptions in the refereed literature do not justify provisional designations but should be given conditional designations (see below)

It should be noted that Webster's defines "provisional" as "provided for a temporary need". Provisional names should not be allowed to stand forever; they are interim steps leading to resolution of the question through publication.

Rule 1: The provisional designation is formed by the word 'species' (or sp.) followed by a capital letter and is combined with the name of the lowest taxon in which the specimen can be placed with certainty.

Ex 1: When the genus is known the genus name

is followed by the construct 'sp. A,B,C,..'

(e.g. Campylaspis sp. B)

Ex 2: When the generic status is uncertain, or when the specimen is suspected of representing a new genus as well as species, the family name is followed by the construct 'sp. A,B,C,....'

(e.g. Dorvilleidae sp. D)

Ex 3: When the specimen can not be placed with certainty in a family or higher taxon the lowest taxon certain is followed by the construct 'sp. A,B,C,....'

(e.g. Cephalaspidea sp. A)

- Rule 2: In forming provisional names using taxa above the generic level the full latinized name of the taxon is to be used (see Ex 2 & 3 above).
- Rule 3: Within a provisional name series the letters are to be assigned in alphabetical order.
- Rule 4: The removal of a species from provisional status does not affect any remaining members of that provisional name series.
- Rule 5: The erection of a provisional species is to be supported by a diagnosis or description as well as appropriate figures.
- Rule 6: The original designations of provisional taxa subsequently recognized and named by SCAMIT will be considered synonyms.

#### COMMENTS:

It is assumed that in practice the recognition of a new species rather than a genus or higher taxon, creates the need for the erection of a provisional taxon. It is also assumed that a primary use of provisional species is to maximize the ecological information resulting from the taxonomic analysis of a community and that systematic information is a different concern. Therefore this protocol does not allow the explicit erection of provisional genera, families, etc. In the cases of provisional binomials that do not contain the genus name the missing taxa may also be new, or merely be indeterminate. In those cases where the material represents not only a new species but a new genus as well, the alternative is to create both a provisional genus and species name. The resulting name (i.e. Genus A sp. C) is more awkward and provides no more ecological information (and less taxonomic info.) than Spionidae sp. C.

## CONDITIONAL DESIGNATIONS

Conditional designations are generally appropriate in situations where the specimen at hand may be closely referred to published descriptions. The following protocol addresses two specific cases requiring different nomenclatural designations. Other cases may be imagined requiring still other designations. SCAMIT should develop protocols applying to each distinct situation. The use of conditional designations such as described below provides much more information than the unnecessary erection of provisional species. For specimens that are not strongly suspected of being new species, these designations clearly relate the material to widely available published descriptions.

### Proposed SCAMIT Protocol for Conditional Designations

#### CASE 1

Criteria for use: If the specimen closely matches a species description in the literature but differs in some minor way(s) that raise questions about its assignment

OR

The description in the literature is too vague or incomplete to be certain

It may be conditionally assigned to that species by means of a designation reflecting its close relationship to (or unity with) that species.

Rule 1                   The conditional designation is formed by interposing the term 'conferre' (cf.) between the genus name and the trivial name.

(e.g.    Spiophanes cf. wigleyi)

Rule 2                   Such a designation should be accompanied by a description of the characters by which it differs from the nominal species.

#### COMMENTS:

Other forms may be used though only one should be adopted. 'Conferre' (to refer), 'affinis' (bordering on), 'near', are all all suitable. There may be others.

#### CASE 2

Criterion for use: If a specimen is compatible with a description in the literature other than the original (particularly if the compatible account is based upon a local pop.

while the type locale is distant) a conditional designation may be used that clearly indicates that the description of the species compatible with the the specimen is other than the original.

Rule                   The conditional name is formed by following the binomial with the term 'fide' and the author of the subsequent description to which the specimen is being referred.

COMMENTS:

Other forms may be used here but only one should be adopted. 'Fide' (faithful), 'sensu' (sense), 'of', are all suitable forms, as is the interposition of a colon (:) between binomial and author. There may be other forms. Whichever form is adopted it should agree with ICZN Chapter XI Article 51(b)(i).

TENTATIVE DESIGNATIONS

Frequently the inability to assign a name with certainty is a result of the specimen missing some diagnostic character as the result of damage, immaturity, senescence, etc. In such cases the identification is considered tentative and should be so indicated.

Criterion for use:   If the inability to assign a name with certainty is a result of the specimen missing some diagnostic character as a result of damage, reproductive state, immaturity, senescence, etc. the identification is considered tentative.

Rule:                   The tentative nature of the identification may be indicated by the placing of ? in front of the questioned taxon.



AMPELISCA OF THE NORTHEASTERN PACIFIC REGION

Oregon - Arctic Ocean:

Ampelisca birulai Bruggen 1909  
Ampelisca eschricti Kroyer 1842  
Ampelisca hessleri Dickinson 1982

Mexico - Alaska

Ampelisca agassizi (Judd 1896)  
Ampelisca amblyopsoides J.L. Barnard 1960  
Ampelisca brevisimulata J.L. Barnard 1954  
Ampelisca careyi Dickinson 1982  
Ampelisca coeca Holmes 1908  
Ampelisca cristata Holmes 1908  
Ampelisca cristata forma microdentata J.L. Barnard 1954  
Ampelisca cristoides J.L. Barnard  
Ampelisca eo Gurjanova 1951  
Ampelisca fageri Dickinson 1982  
Ampelisca furcigera Bulycheva 1936  
Ampelisca hancocki J.L. Barnard 1954  
Ampelisca nr. hancocki MBC  
Ampelisca indentata J.L. Barnard 1954  
Ampelisca lobata J.L. Barnard 1954  
Ampelisca macrocephala Liljeborg 1852  
Ampelisca milleri J.L. Barnard 1954  
Ampelisca pacifica Holmes 1908  
Ampelisca plumosa Holmes 1908  
Ampelisca pugetica Stimpson 1864  
Ampelisca romigi J.L. Barnard 1954  
Ampelisca shellenbergi Shoemaker 1933  
Ampelisca unsocalae J.L. Barnard 1960  
Ampelisca sp. A SCAMIT, 1986

Mexico - Central and South America

Ampelisca cucullata J.L. Barnard 1954  
Ampelisca mexicana J.L. Barnard 1954  
Ampelisca panamensis J.L. Barnard 1954  
Ampelisca shoemakeri J.L. Barnard 1954  
Ampelisca venetiensis Shoemaker 1916

ANNOTATED BIBLIOGRAPHY OF LITERATURE ON NEP AMPELISCID AMPHIPODS

Barnard, J.L. 1954a. Amphipoda of the Family Ampeliscidae collected in The Eastern Pacific Ocean by the Velero III and Velero IV. Allan Hancock Pacific Expeditions; 18(1), pp. 1-137, plts. 1-38.

The major source for description and illustrations of Eastern Pacific ampeliscids, although the key has been superceded, and taxonomy used here has been amended by later publications.

Barnard, J.L. 1954b. Amphipoda of the Family Ampeliscidae collected by the Velero III in the Caribbean Sea. Allan Hancock Atlantic Expeditions; report No. 7, 12 pp., 2 plts.

Illustrates some of the variations in urosome morphology for A. cristoides, and A. agassizi (as A. vera).

Barnard, J.L. 1960a. New bathyal and sublittoral ampeliscid amphipods from California, with an illustrated key to Ampelisca. Pacific Naturalist, 1(16-17), pp. 1-37, 11 figs.

Presentation of a reworked key to both local and world-wide species of Ampelisca using pictorial, tabular, and the usual verbal approaches. Ampelisca amblyopsoides n. sp., A. macrocephala unsocalae n. ssp., and Byblis barbarentis n. sp. described. Additional information and/or illustration provided for A. eoa, A. coeca, A. furcigera, A. plumosa, and Haploops tubicola. New synonyms: A. catalinensis to eo, A. latipes to macrocephala, A. californica and gnathia both to A. pugetica, A. vera to compressa, and A. isocornea to romigi. Most synonymies resulting from recognition of relationships between females and gerontic males.

Barnard, J.L. 1966a. Submarine canyons of Southern California. Part V-Systematics: Amphipoda. Allan Hancock Pacific Expeditions; 27(5), 166 pp., 46 figs., 22 tabs.

Presentation of a key to world-wide Byblis. Description of Ampelisca romigi ciego n. sp., Byblis bathyalis n. sp. and B. tannerensis n. sp. Reintroduction of Haploops spinosa as a valid name based on presence/absence of spine row on periopod 5.

Barnard, J.L. 1967. New species and records of Pacific Ampeliscidae (Crustacea: Amphipoda). Proceedings of the United States National Museum; 121(3576), 20 pp., 4 figs.

Introduction of Ampelisca eschrichti records from Eastern Pacific. Provision of additional illustrations of A. eschrichti and A. schellenbergi from Albatross material.

Barnard, J.L. 1971a. Gammaridean Amphipoda from a deep-sea transect off Oregon. Smithsonian Contributions to Zoology; No. 61, 86 pp., 48 figs.

Provision of additional illustrations of Ampelisca eschrichti. First Eastern Pacific record of Byblis crassicornis (now recorded from the Bight by Rich Klink ex BLM material). Rectification of previous Haploops spinosa/tubicola controversy by recognition of Kanneworff's synonymy of spinosa with tubicola.

Bousfield, E.L. 1973. Shallow-water gammaridean Amphipoda of New England. xii+312 pp., 69 pls. Comstock Publishing Associates/Cornell University Press, Ithaca.

Good illustrations of Ampelisca agassizi and A. macrocephala.

Dickinson, J.J. 1982. Studies on Amphipod Crustaceans of the Northeastern Pacific Region. I. 1. Family Ampeliscidae, Genus Ampelisca. National Museums of Canada, Publications in Biological Oceanography, No. 10, pp. 1-39.

Presents a key to Ampelisca found between the Bering Sea and Northern California, but does not include several species found in southern California (Ampelisca amblyopsoides, A. coeca, A. eoa, A. furcigera, A. indentata, A. pacifica, A. romigi). A bathymetric subspecies A. macrocephala unsocalae Barnard, 1960 is elevated to species rank. Two geographic variants are elevated to separate species: A. fageri from A. schellenbergi Shoemaker 1933; A. careyi from A. macrocephala Liljeborg, 1852. A. hessleri is described from northern British Columbia waters.

Dickenson, J.J. 1983. The Systematics and Distributional Ecology of the Superfamily Ampeliscoidea (Amphipoda: Gammaridea) in the Northeastern Pacific Region. II. The Genera Byblis and Haploops. National Museum of Canada, Publications in Natural Sciences, No. 1, pp. 1-32.

Presents keys to Byblis and Haploops found between northern California and the region of the Bering Sea. A new species of Byblis, B. millsii, is described whose range includes southern California; earlier descriptions of B. veleronis Barnard, 1954 have turned out to be B. millsii. Lists six species of Byblis (veleronis, millsii, barbarensis, bathyalis, tannerensis and teres) and two species of Haploops (tubicola and lodo) whose range includes California.

Hirayama, A. 1983. Taxonomic Studies on the Shallow Water Gammaridean Amphipoda of West Kyushu, Japan. I. Acanthonotozomatidae, Ampeliscidae, Ampithoidae, Amphilochidae, Anamixidae, Argissidae, Atylidae and Colomastigidae. Publ. Seto Mar. Biol. Lab., 28(1/4): 75-150.

Full description with illustrations of Ampelisca furcigera Bulycheva, 1936.

Holmes, S.J. 1908. The Amphipoda collected by the U.S. Bureau of Fisheries Steamer "Albatross" off the West Coast of North America in 1903 and 1904, with descriptions of a new family and several new genera and species. Proc. United States National Museum, 35(1654):489-543, 46. figs.

Original descriptions of Ampelisca cristata, A. plumosa, A. pacifica, A. californica (= pugetica Stimpson), A. coeca, and A. lobata, all very poorly illustrated.

Kanneworff, Ebbe. 1966. On some amphipod species of the Genus Haploops, with special reference to H. tubicola Liljeborg and H. tenuis sp. nov. from the Oresund. Ophelia, 3:183-207, plt. 7, 8 figs.

Very well documented synonymy of Haploops spinosa with H. tubicola, and provision of copious illustrative material.

Lincoln, R.J. 1979. British Marine Amphipoda; Gammaridea. vi-658 pp., 3 plts., 280 figs., British Museum (NH).

Excellent illustrated key separating Ampelisca, Byblis, and Haploops at generic level. Description and illustration of Ampelisca macrocephala and A. eschrichti and Haploops tubicola.

Mills, R.L. 1967. A reexamination of some species of Ampelisca (Crustacea:Amphipoda) from the East Coast of North America. Canadian Journal of Zoology, 45:635-652, 4 figs., 3 tabs.

Useful key to Western Atlantic Ampelisca, a surprising number of which are also present in our fauna. Synonymy of A. compressa (and vera) with A. agassizi. Clear tabular comparison of A. macrocephala and A. eschrichti. Illustrations, though originally fine, were reduced to far for printing and are of limited use.

Shoemaker, C.R. 1931. The stegocephalid and ampeliscid amphipod crustaceans of Newfoundland, Nova Scotia, and New Brunswick in the United States National Museum. Proceedings of the United States National Museum, 79(2888), 18 pp., 6. figs.

Good original description and illustrations of Haploops spinosa now synonymized with H. tubicola.

Ampelisca agassizi (Judd 1896)  
Ampeliscidae

SCAMIT Vol. 5, No. 1

SCAMIT Code: HYP 55, PL 66

Date examined: 3-10-86  
Voucher by C.A. Phillips & J.D. Roney

Literature: Barnard, J.L. 1954  
Dickinson, J.J. 1982

Synonymy: Byblis agassizi Judd 1896  
Ampelisca compressa Holmes 1903  
Ampelisca vera J.L. Barnard 1954  
Ampelisca agassizi Holmes 1905  
Ampelisca agassizi Mills 1967  
Ampelisca agassizi Bousfield 1973

Diagnostic Characters:

1. epimeron 3 without acute tooth on lower posterior corner,
2. urosomite 1 with well developed carina, rounded posteriorly,
3. uropod 1 peduncle short and stout, rami elongated and equal in length, rami reaching end of uropod 2,
4. uropod 3 rami lanceolate,
5. antenna 1 does not reach end of antenna 2 peduncle,
6. urosome compressed,
7. telson lobes apices blunt with 4-5 setules.

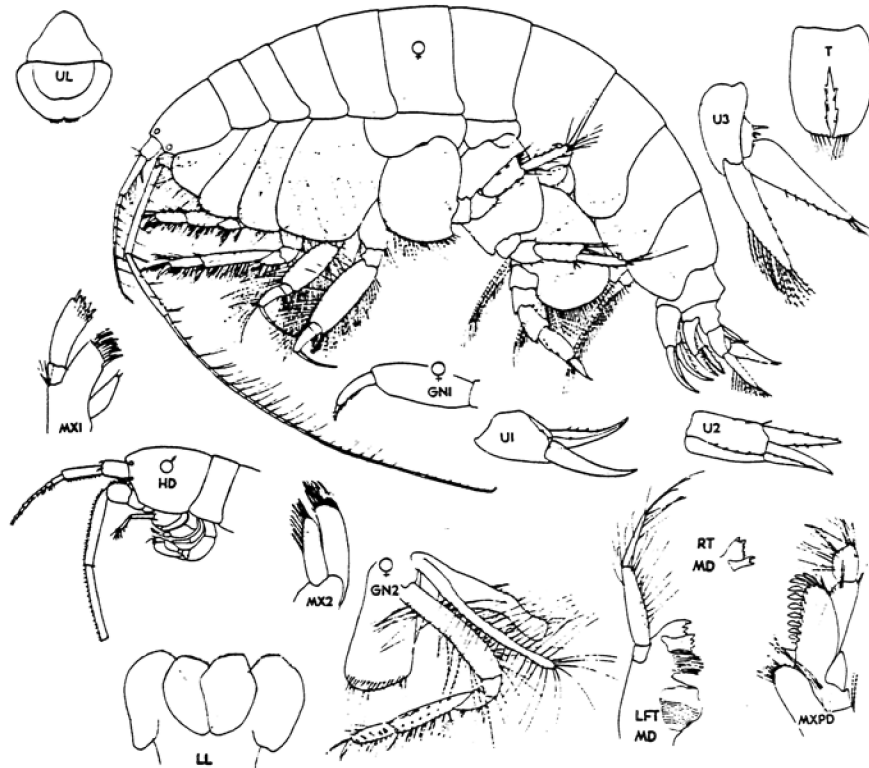
Related Species and Character Differences:

Ampelisca sp. A: uropod 1 outer ramus twice the length of inner ramus, anterior margin segment 5 of P7 with notch.

Ampelisca romigi J.L. Barnard 1954: uropod 3 rami slender (female), uropod 1 peduncle not stout, tip of inner ramus uropod 3 is 'slightly' uncinuate.

Distribution:

In northeastern and eastern Pacific - Queen Charlotte Islands to Cape San Francisco, Ecuador; 0-300 meters.



*Ampelisca agassizi* (Judd). Swanson Bay, B.C., ♀ 9 mm ov. Shoal Bay, B.C., ♂ 10 mm

Figure from Dickinson, 1982; National Museums of Canada



SCAMIT Code: PL 67, SCCWRP 67

Date examined: 3-10-86

Voucher by C.A. Phillips and J.L. Roney

Literature: Holmes, S.J. 1908  
Barnard, J.L. 1954  
Dickinson, J.J. 1982

Diagnostic Characters:

1. epimeron 3 with acute tooth on lower posterior corner,
2. uropod 1 rami nearly reaching end of uropod 2,
3. urosomite 1 dorsal surface elevated into lamellar carina,
4. uropod 2 outer ramus with long subapical spine,
5. lower front margin of head parallel to upper margin.

Related Species and Character Differences:

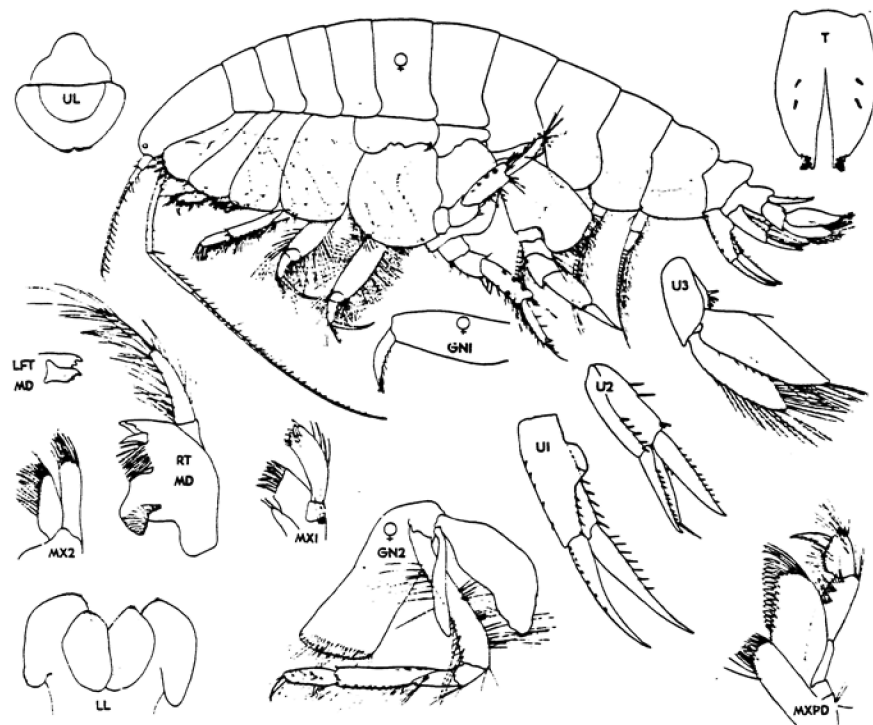
Ampelisca cristoides J.L. Barnard 1954: urosomite 1 dorsal lamellar carina strongly incised.

Comments:

J.L. Barnard noted in his 1954 paper a second form of A. cristata which he separated as A. cristata forma microdentata. This separation was based on the reduction in size of the tooth at the lower posterior angle of epimeron 3. In the material he studied he found no intergrades between the typical A. cristata and the new form. Specimens of A. cristata forma microdentata have been found in depths of 10 meters or less in certain areas of southern California by Doug Diener of MEC.

Distribution:

Alexander Archipelago, Alaska to Port Parker, Costa Rica;  
0-152 meters.



*Ampelisca cristata* Holmes. Swanson Bay, B.C. ♀ 10 mm, br. II

Figure from Dickinson, 1982; National Museums of Canada

SCAMIT Code: MBC 43

Date examined: 3-10-86  
Voucher by C.A. Phillips & J.D. Roney

Literature: Holmes, S.J. 1908  
Barnard, J.L. 1954  
Dickinson, J.J. 1982

Synonymy: Ampelisca articulata Stout 1913

Diagnostic Characters: (Figure 1)

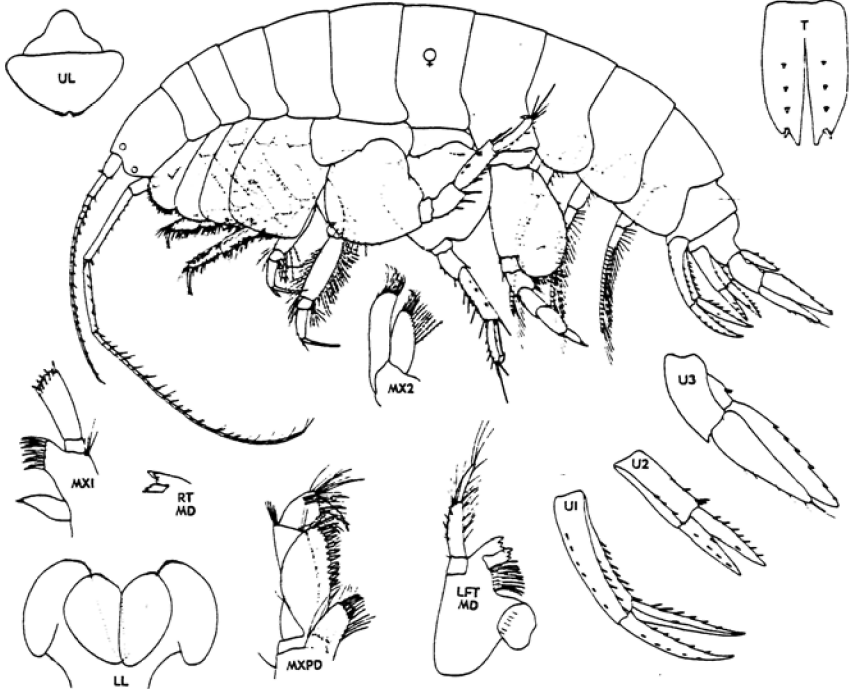
1. epimeron 3 without an acute tooth on lower posterior corner,
2. basal lobe P7 extending beyond segment 3,
3. spines lacking on posterior margin of segment 5 of P5 and P6,
4. segment 3 of P7 subequal in length to segment 4,
5. uropod 1 rami shorter than peduncle,
6. antenna 1 reaching end of antenna peduncle,
7. segment of P7 lacks spine bearing notch on anterior margin,
8. outer ramus uropod 1 spinulose on inner margin,
9. inner ramus uropod 3 with six spine-bearing serrations on inner margin.

Related Species and Character Differences:

Ampelisca fageri Dickinson 1982: segment 5 of P7 with spine-bearing notch on anterior margin; outer ramus uropod 1 unarmed along inner margin; inner ramus uropod 3 lacking spine-bearing serrations along inner margin.

Distribution:

Queen Charlotte Islands to Baja California; 0-183 meters.



*Ampelisca lobata* Holmes. Stn. H21 (1964), North Bank Island, B.C. ♀ 7 mm, ov.

Figure 1. from Dickinson, 1982; National Museums of Canada.

Ampelisca milleri J.L. Barnard 1954  
Ampeliscidae

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SCAMIT Code: LACO 70

Date examined: 3-10-86

Voucher by C.A. Phillips and J.D. Roney

Literature: Barnard, J.L. 1954  
Dickinson, J.J. 1982

Diagnostic Characters:

1. epimeron 3 without acute tooth on lower posterior corner,
2. basal lobe P7 only reaching end of article 3,
3. spines present posterior article 5 of P5 & P6,
4. article 3 longer than article 4 of P7,
5. uropod 2 without subapical spine on outer ramus,
6. no notch on anterior face of article 5 of P7,
7. uropod 1 rami nearly reaches end of uropod 2.

Related Species and Character Differences:

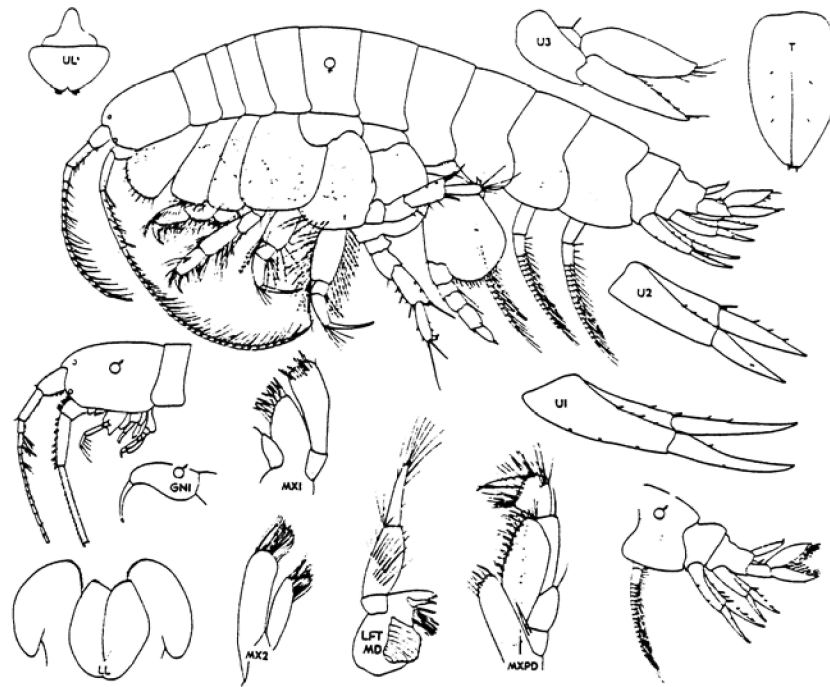
Ampelisca hessleri Dickinson 1982: article 3 and article 4 of P7 subequal, spines not present on posterior margin of segment 5 of P5 & P6.

Ampelisca birulai Bruggen 1909: article 3 and article 4 of P7 subequal, spines not present on posterior margin of segment 5 of P5 & P6, uropod 2 with subapical spine on outer ramus, antenna 1 extends beyond peduncle of antenna 2.

Ampelisca plumosa J.L. Barnard 1960: article 3 and article 4 of P7 subequal, spines not present on posterior margin segment 5 of P5 & P6, uropod 2 with subapical spine on outer ramus, eyes not present.

Distribution:

Dillon Beach, California to Ecuador and the Galapagos Islands; 0-187 meters.



*Ampelisca milleri* J.L. Barnard. Dillon Beach, California. ♀ 6 mm, ov., ♂ 6 mm

Figure from Dickinson, 1982; National Museums of Canada



SCAMIT Code: HYP 56, MBC 44

Date examined: 3-10-86  
Voucher by C.A. Phillips and J.D. Roney

Diagnostic Characters:

1. epimeron 3 without an acute tooth on lower posterior corner,
2. uropod 1 peduncle short and stout, outer ramus elongate and twice the length of inner ramus,
3. anterior margin segment 5 of P7 with notch,
4. uropod 3 rami lanceolate,
5. urosomite 1 produced dorsally into a well developed carina,
6. antenna 1 does not reach end of peduncle antenna 2.

Related Species and Character Differences:

Ampelisca agassizi (Judd 1896): uropod 1 rami of equal length, anterior margin segment 5 of P7 without notch.

Ampelisca romigi J.L. Barnard 1954: uropod 1 peduncle not stout, uropod 1 peduncle and rami subequal, tip of inner ramus of uropod 3 is 'slightly' uncinata.

Distribution:

Goleta, California to Dana Point, California; 10-35 meters.

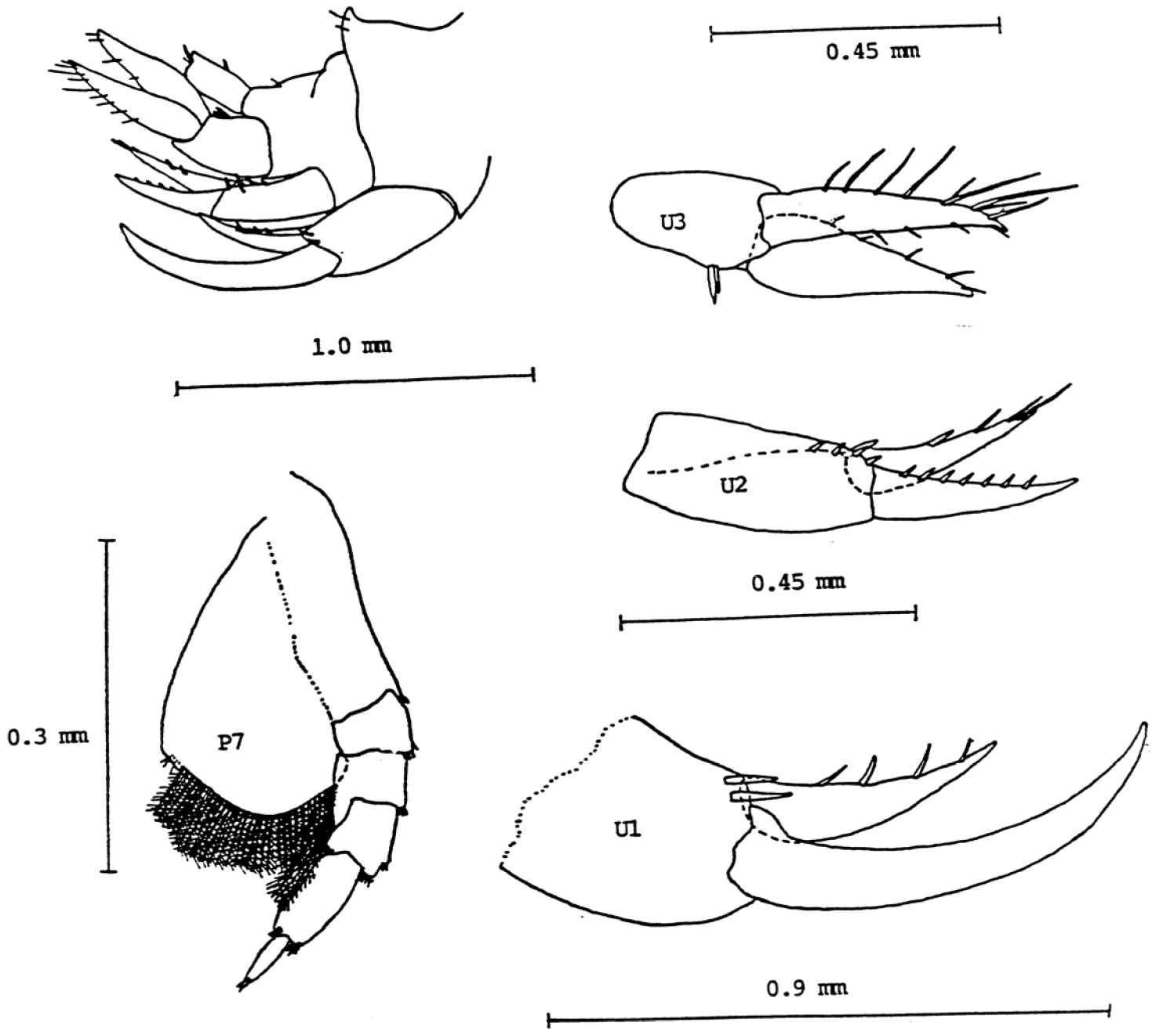


Figure 1. *Ampelisca* sp. A; female 2.9 mm.

SCAMIT Code: LACO 72

Date examined: 3-10-86  
Voucher by C.A. Phillips & J.D. Roney

Literature: Barnard, J.L. 1954  
Barnard, J.L. 1966  
Dickinson, J.J. 1983

Diagnostic Characters:

1. eyes well developed,
2. anterior margin segment 4 of P7 with a single long spine,
3. anterior margin segment 6 of P7 bearing two rows of comb spines,
4. telson cleft 1/3 or more of length,
5. telson apices scalloped,
6. ventral margin coxae 1-3 very weakly serrated
7. coxae 2-3, posterodistal corner strongly oblique,
8. lower eye lens occupying anteroventral corner.

Related Species and Differences:

Byblis barbarentis J.L. Barnard 1966 & B. tannerensis J.L. Barnard 1966: eyes not present.

Byblis bathyalis J.L. Barnard 1966: lower eye lens not occupying anteroventral corner; the shape of the head, the ventrolateral corner being pointed (\*Dickinson 1983 drawing of B. veleronis shows the lower eye lens as described by Barnard 1966 for B. bathyalis).

Byblis millsii Dickinson 1983: smaller species (8-10 mm) compared to B. veleronis (14-16 mm); ventral margin of coxae 1-3 strongly serrated, antenna 1 flagellum extending to peduncle of antenna 2; length of inner ramus uropod 1 less than outer ramus uropod 1. In looking at drawing of female B. millsii and B. veleronis in Dickinson 1983 three other characters appeared to differ substantially - upper lip, second article mandibular palp and length of peduncle uropod 1 in relation to uropod rami (fig. 1 and 2). Since we have not seen any specimens of B. millsii we can not assume these characters as being key differences. Dickinson noted that several lots of B. veleronis sent to him from the Allan Hancock Foundation were identified as B. millsii after he looked at them.

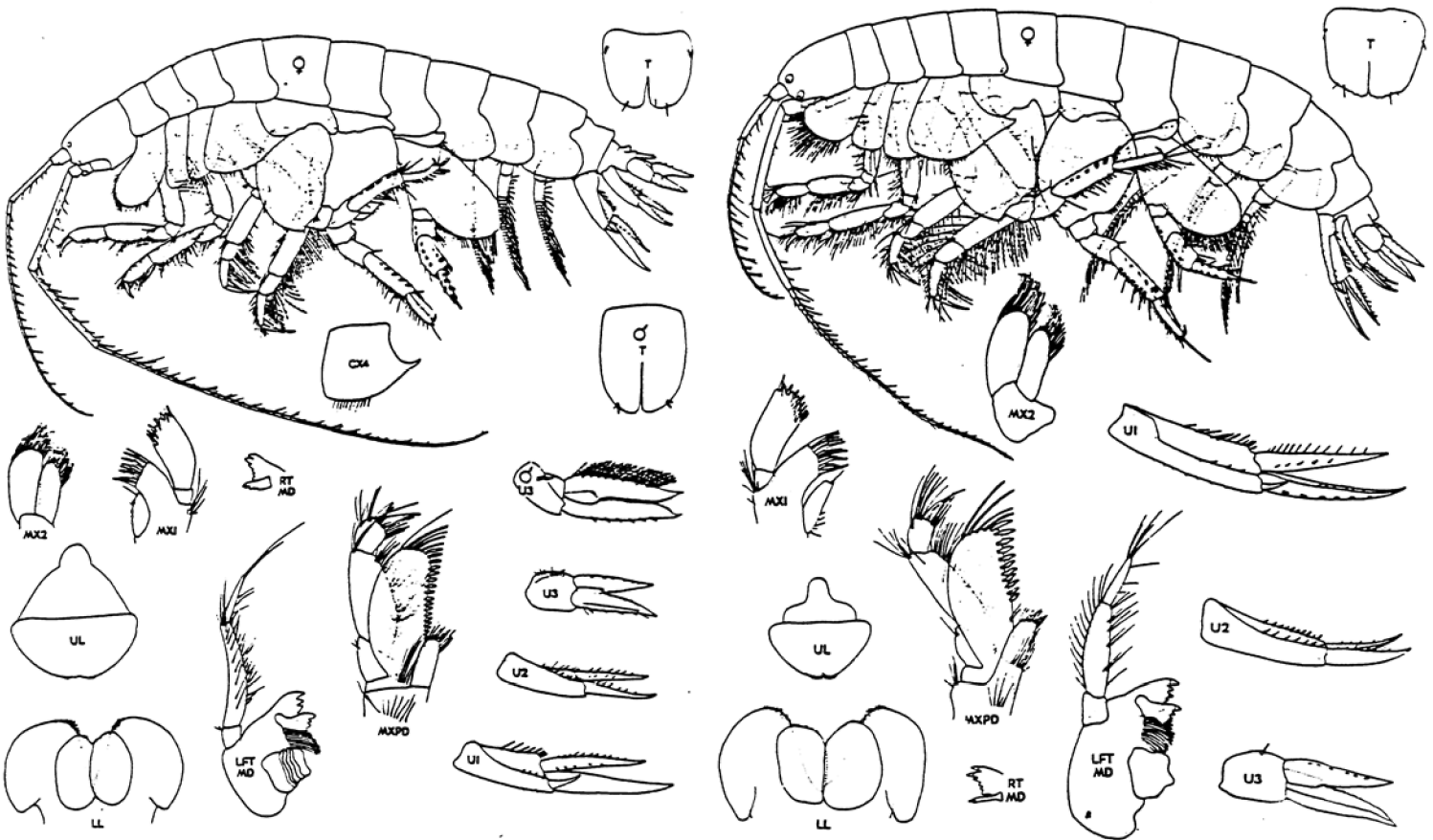
Comments:

The key in Dickinson 1983 uses the shape of coxae 2-3 (couplet 5) to separate B. veleronis from B. millsii, B.

*thyablis*, *B. bathyalis* and *B. barbarentis*. For *B. veleronis* the key says coxae 2-3 posterodistal corner obliquely truncated. However, when you read the species description, the posterodistal corner of coxae 2-3 are described as being strongly oblique. The drawing of *B. veleronis* (fig. 1) also shows coxae 2-3 as being oblique. The second part of couplet 5 states that 'posterodistal corner of coxae 2-3 not truncated'; included in this group is *B. millsii*. However, when reading the species description of coxae 2-3 for *B. millsii* it says 'posterodistal corner not oblique' and when the drawing of *B. millsii* (Fig. 2) is viewed the coxae are what we would term obliquely truncated. Until we are able to look at some specimens of *B. millsii* we can not clear up this impasse.

**Distribution:**

Queen Charlotte Islands to Mexico; 5-300 meters.



*Byblis veleronis* J.L. Barnard. Swanson Bay, B.C. ♀ 15 mm. br. II. Clarion Island, Mexico. paratype ♂ 14 mm, pelagic stage adult.

*Byblis millsii* n. sp. Neah Bay, Washington. Bousfield 1966 stn. W39. holotype ♀ 10 mm. ov.

from Dickinson, 1983; National  
 Museums of Canada.

from Dickinson, 1983; National  
 Museums of Canada