



Southern California Association of
Marine Invertebrate Taxonomists

3720 Stephen White Drive
San Pedro, California 90731

May 1989

Vol. 8, No. 2

NEXT MEETING: Amphipod Workshop

GUEST SPEAKER: Dr. J.L. Barnard, National Museum of Natural
History, Smithsonian Institution

DATE: Monday-Wednesday, June 5-7, 1989, 9:30 AM

LOCATION: L.A. County Museum of Natural History
900 Exposition Blvd.
Los Angeles CA 90007

MINUTES FROM MEETING ON MAY 8, 1989

SCAMIT Executive Meeting: An executive meeting of the past and new SCAMIT officers was held on April 28, 1989 at the Biology Lab of the Los Angeles County Sanitation Districts. Three major items were discussed:

- 1) the Infaunal Trophic Index and the formation of an ad hoc committee to address various issues of this index;
- 2) the Third International Polychaete Conference; and
- 3) discussions of the duties and responsibilities of the new SCAMIT officers, especially the detailed duties of the secretary.

Infaunal Trophic Index: The initial ad hoc committee meeting concerning the ITI will be held on Thursday, June 1, 1989, 9:30 AM, at the Orange County Sanitation Districts. The purpose of this committee is to discuss the relevant issues concerning the index, to invite suggestions from interested parties of SCAMIT, to reach an agreement on these issues, and to draft recommendations pertaining to the ITI. Jack Word, Battelle Northwest, is very interested in participating on this committee. This ad hoc committee would presumably consist of one appointed member from each interested institution or agency. Various regulatory agencies, e.g. EPA,

FUNDS FOR THIS PUBLICATION PROVIDED IN PART BY ARCO FOUNDATION,
CHEVRON USA, AND TEXACO INC.

The SCAMIT newsletter is not deemed to be a valid publication
for formal taxonomic purposes.

Tetratich, etc. will be invited to attend, but their possible involvement is not yet known. An editor would probably need to be elected. Comments and suggestions from SCAMIT members would be submitted to the new president, Ron Velarde, Ft. Loma Biology Lab, City of San Diego, for consideration. A document consisting of various recommendations would be drafted and made available to each committee member and to Jack Word for editorial changes. A final draft would then be completed and sent to SCAMIT members and to target agencies, e.g. EPA. The vice-president, Larry Lovell, private consultant, will be the chairman of this ad hoc committee.

Third International Polychaete Conference: The International Polychaete Conference will be held on August 6-12, 1989 at California State University, Long Beach (see notice attached to April 1989 newsletter for detailed information). Dr. Donald J. Reish, CSULB, has requested volunteers to help in registration, lead field excursions for conference participants on board the R/V Yellowfin to Catalina Island, and to drive participants around town, e.g. CSULB to R/V Yellowfin dock. Volunteers should contact Dr. Reish at his CSULB office (213-985-4846).

Amphipod Workshop: Dr. J.L. Barnard, National Museum of Natural History, Smithsonian Institution, will lead the amphipod workshop which has become an annual event for SCAMIT. The 2-3 day workshop will be held at the Los Angeles County Museum of Natural History on June 5th, 6th, and possibly the 7th. SCAMIT members are encouraged to organize their specimens and prioritize problematical groups, so that the workshop can concentrate on a few selected groups. Don Cadien, Los Angeles Sanitation Districts, suggested the genus Photis. Sue Garner, Marine Ecological Consultants (MEC), mentioned Liljeborgiidae, Lysianassidae, and Bathymedon as possible groups to include in the workshop. An atlas of southern California amphipods is being planned by J.L. Barnard, but unfortunately has been delayed for various reasons. A work such as this would be very helpful to SCAMIT members.

Taxonomic Changes in the Tanaidacea: Tony Phillips, Hyperion Treatment Plant, informed attendees at the meeting that Dr. Jürgen Sieg, Universität Osnabrück, has published some nomenclatural changes within the tanaid family Leptognathiidae. The tanaid voucher sheets will be rewritten in order to accommodate these changes. Detailed information concerning these modifications will be provided in an upcoming newsletter. Tony also discussed a

recently published paper by Sieg and Dojiri (1989) in Zoologica Scripta concerning Araphura, Arhapuroides, and Tanaella. The full citation is as follows:

Sieg, J. and M. Dojiri. 1989. Remarks on Araphura Bird & Holdich (Crustacea, Tanaidacea) and allied genera, including descriptions of three new species.- Zoologica Scripta, 18: 115-137.

A limited number of reprints are available from the second author:

Mas Dojiri
Biology Laboratory
Hyperion Treatment Plant
12000 Vista del Mar
Playa del Rey CA 90293

Original Volumes of the Danish Ingolf Expedition: Don Cadien mentioned that the originals of the various volumes of Steenstrupia's Danish Ingolf Expedition are still available. He will get more information on the availability of the volumes so that we will be able to make a collective order.

Seventh International Echinoderm Conference: The International Echinoderm Conference will be held on September 9-14, 1990 in Atami, Japan. The first circular (attached to this newsletter) includes information concerning the meetings along with a pre-registration form.

Employment Opportunity: Dr. Gordon Hendler, curator of echinoderms at the Los Angeles County Museum of Natural History, is accepting applications for a curatorial assistant. Interested persons are referred to the attached job announcement. Applications will be accepted until the position is filled.

1988 Barnard/Amphipod Workshop: Notes from last year's amphipod workshop conducted by Dr. J.L. Barnard and held on September 13-15, 1988 at the Los Angeles County Museum of Natural History are available upon request from Mas Dojiri at the above address.

Bodotriidae Workshop: The remainder of the May 1989 meeting consisted of a workshop on the cumacean family Bodotriidae conducted predominantly by Don Cadien. Don distributed a handout entitled "Remarks on the family Bodotriidae" which includes a key to the subfamilies and a key to the species.

Don Cadien and Tony Phillips are currently preparing a manuscript describing Cyclaspis spp. A, B, and C. These three species correspond to the three new species described in Robert Givens (1970)



Ph.D. dissertation, University of Southern California. Robert Given will be included in the authorship of this manuscript. A new species of Glyphocuma, G. sp. A of SCAMIT, is currently being described for publication by Tony. An additional species of Cyclaspis, C. sp. D of MBC, has been collected in 10 ft of water off Huntington Beach; it is a gravid female measuring 2.37 mm in total length.

Don suggested that SCAMIT members get all the collections of Vaunthompsonia from the various agencies together in order to determine the actual number of valid species of this genus off our coast. He suggests that there may really only be two valid species off southern California. Don and Tony request locality collection records of Bodotriidae, especially Cyclaspis, from SCAMIT members. Please send this information to Tony:

Tony Phillips
Biology Lab
Hyperion Treatment Plant
12000 Vista del Mar
Playa del Rey CA 90293

Using video microscopy, the participants at the bodotriid workshop examined and discussed thirteen species of this family, representing the subfamilies Bodotriinae and Vaunthompsoniinae. Don Cadien's key was used to study the following California species:

Bodotriinae

Cyclaspis sp. A of SCAMIT
Cyclaspis sp. B of SCAMIT
Cyclaspis sp. C of SCAMIT
Cyclaspis sp. D of MBC
Cyclaspis nubila Zimmer, 1936
Cyclaspoides sp. A of Cadien

Vaunthompsoniinae

Bathycuma longicaudata Calman, 1912
Glyphocuma sp. A of SCAMIT
Leptocuma forsmani Zimmer, 1941
Vaunthompsonia sp. A of Diener
Vaunthompsonia sp. B of Cadien
Vaunthompsonia pacifica Zimmer, 1943

Remarks on the Family Bodotriidae

The bodotriids are a diverse family of 29 genera worldwide divided into three subfamilies. One of these, the Mancocuminae with three genera, has not been reported from the Pacific. The Bodotriinae, with eleven genera worldwide, is represented in the North Pacific by five genera but only by Cyclaspis and Cyclaspoides in the Northeast Pacific. The Vaunthompsoniinae, with 15 genera worldwide, is represented by four genera in the Northeast Pacific.

The subfamilies are separated on the basis of the number of pereopods with exopods, and by the number of pleopods in the male.

1. Exopods on only the first pair of pereopods.....Bodotriinae
Exopods on two or more pairs of pereopods.....2
2. Male with five pairs of pleopods.....Vaunthompsoniinae
Male with <five pairs of pleopods.....Mancocuminae

Along the west coast of North America the bodotriid fauna consists of 13 species at present, with an additional six known from the Gulf of California in the Panamic province. Only four of these species are described.

Preliminary descriptions of three other species were provided by Given in his 1970 Thesis, but formal description is still pending. The known fauna is as follows:

BODOTRIINAE

- Cyclaspis sp. A of SCAMIT
- Cyclaspis sp. B of SCAMIT
- Cyclaspis sp. C of SCAMIT
- Cyclaspis sp. D of MBC
- Cyclaspis nubila Zimmer 1936
- Cyclaspoides sp. A of Cadien

VAUNTHOMPSONIINAE

- Bathycuma longicaudata Calman 1912
- Glyphocuma sp. A of SCAMIT
- Leptocuma forsmani Zimmer 1941
- Vaunthompsonia sp. A of Diener
- Vaunthompsonia sp. B of Cadien
- Vaunthompsonia sp. C of Diener
- Vaunthompsonia pacifica Zimmer 1943

BODOTRIIDAE

(updated as of 8 May 1989)

<u>Bathycuma longicaudata</u>	Calman 1912
<u>Cyclaspis sp. A</u>	SCAMIT (1986)
= <u>Cyclaspis a</u> sp. n. of Given 1970	
= <u>Cyclaspis sp. A</u> of Myers and Benedict 1975	
= <u>Cyclaspis sp. A</u> of Diener	
<u>Cyclaspis sp. B</u>	SCAMIT (1989)
= <u>Cyclaspis b</u> sp. n. of Given 1970	
= <u>Cyclaspis sp. B</u> of Myers and Benedict 1975	
<u>Cyclaspis sp. C</u>	SCAMIT (1986)
= <u>Cyclaspis c</u> sp. n. of Given 1970	
= <u>Cyclaspis sp. C</u> of Myers and Benedict 1975	
<u>Cyclaspis sp. D</u>	SCAMIT (1989)
= <u>Cyclaspis sp. D</u> of MBC	
<u>Cyclaspis nubila</u>	Zimmer 1936
<u>Cyclaspoides sp. A</u>	(of Cadien)
<u>Glyphocuma sp. A</u>	SCAMIT (1989)
= <u>Leptocuma sp. A</u> of Phillips	
= <u>Glyphocuma sp. A</u> of Phillips	
= <u>Vaunthompsonia sp. B</u> of Given 1970	
<u>Leptocuma forsmani</u>	Zimmer 1941
<u>Vaunthomsonia pacifica</u>	Zimmer 1943
= <u>Vaunthompsonia sp. A</u> of Given 1970	
<u>Vaunthompsonia sp. A</u>	(of Diener)
<u>Vaunthompsonia sp. B</u>	(of Cadien)
<u>Vaunthompsonia sp. C</u>	(of Diener)

Taxa from the Gulf of California and Southern Baja California

<u>[Cyclaspis b</u>	Donath 1985]
<u>[Cyclaspis c</u>	Donath 1985]
<u>[Cyclaspis d sp. n.</u>	Donath 1985]
<u>[Cyclaspis e n. sp.</u>	Donath 1985]
<u>[Cyclaspis f n. sp.</u>	Donath 1985]
<u>[Cyclaspis g n. sp.</u>	Donath 1985]

These 13 species can be separated by use of the following key:

1. Exopods on only the first pair of pereopods.....2
 Exopods on more than one pair of pereopods.....7
2. First three pedigerous segments fused with carapace.....
 Cyclaspoides sp. A
 All five pedigerous segments free.....3
3. Carapace with one or more teeth on the midline.....Cyclaspis sp. A
 Carapace lacking teeth on the midline.....4
4. Antennal sinus absent, both margins of uropodal peduncle setate in
 female.....Cyclaspis sp. D
 Antennal sinus evident, peduncle of uropods lacking setae along both
 margins in female (but inner margin may be serrate).....5
5. Carapace strongly pitted and sculptured, with depression antero-
 dorsally in both
 sexes.....6
 Carapace nearly smooth, with scattered small pits only, without
 depressed areas in either sex.....Cyclaspis sp. B
6. Carapace with trough-like depression extending obliquely back from
 the antennal sinus in both sexes.....Cyclaspis sp. C
 Carapace lacking trough-like depression behind the antennal sinus in
 both sexes.....Cyclaspis nubila Zimmer 1936
7. Carapace lacking teeth or denticles dorsally; lateral margins of 3rd
 (female) or 4th (male) abdominal segment overlapping those of
 adjacent segments..... Leptocuma forsmanni Zimmer 1943
 Carapace with teeth or denticles dorsally; lateral margins of 3rd or
 4th abdominal segment not overlapping those of adjacent segments....8
8. Pleonal segments ridged laterally, lacking eyes or pigmented ocular
 material.....Bathycuma longicaudata Calman 1912
 Pleonal segments not ridged laterally; with eyes.....9
9. Dorsal teeth or denticles in two parallel rows flanking the midline of
 the carapace.....10
 Dorsal teeth in a single row along midline.....Glyphocuma sp. A
10. Dorsal tooth rows running the full length of the
 carapace.....
 Vaunthompsonia pacifica Zimmer 1943
 Dorsal tooth rows restricted to the anterior half of the carapace.....11
11.Vaunthompsonia sp. A*
 Vaunthompsonia sp. B*
 Vaunthompsonia sp. C*

*These three taxa cannot be adequately separated yet

Date Examined: 8 May 1989
Voucher By Don Cadien

Synonymy: Cyclaspis sp. B of Myers & Benedict
Literature: Given 1970, Hale 1944

Diagnostic Characters:

1. Both sexes characterized by depression of thoracic somites: 3-5th somites of male, and 5th somite of female.
2. Carapace without distinct sculpture or pitting in male, female with weak pitting dorsally.
3. Middorsal carapace carina lacking in both sexes.
4. Carapace one third (male) or less (female) of total body length.
5. Uropodal peduncles unarmed both dorsolaterally and medially in the female; bearing 7-8 plumose setae medially in the male.
6. Uropodal rami subequal, with the endopod slightly longer.
7. Exopod biarticulate with article 1 about half article 2.
8. Exopod unarmed laterally and bearing three terminal spines in both sexes; medially with 1 seta in female and 3-4 in male.
9. Endopod sparsely setose on both margins in female, with 1 terminal and two subterminal pectinate spines; male endopod laterally bare, with two plumose setae and seven pectinate spines on medial margin, and one terminal spine.

Related Species and Character Differences:

Cyclaspis sp. A SCAMIT differs in possession of a denticulate middorsal crest. It is also a much larger species. *Cyclaspis* sp. B is ovigerous at a total length of less than 3mm, less than half the size of equivalent stage *Cyclaspis* sp. A. The depression of thoracic somites and virtual absence of carapace sculpture also separate *Cyclaspis* sp. B. from *Cyclaspis* sp. A.

Cyclaspis sp. C SCAMIT differs in having a highly calcified and highly textured carapace with flattened depressed areas anterodorsally and behind the antennal sinus in both sexes. The medial margin of the uropodal peduncles is serrate in *Cyclaspis* sp. C females, not plain as in females of *Cyclaspis* sp. B.

Cyclaspis sp. D SCAMIT differs in lacking a well defined antennal notch, and in lacking the dorsal depression of the thoracic somites which characterize *C.* sp. B. Females of the two species are otherwise similar in aspect, being small and nearly unsculptured. The male of *Cyclaspis* sp. D is not known.

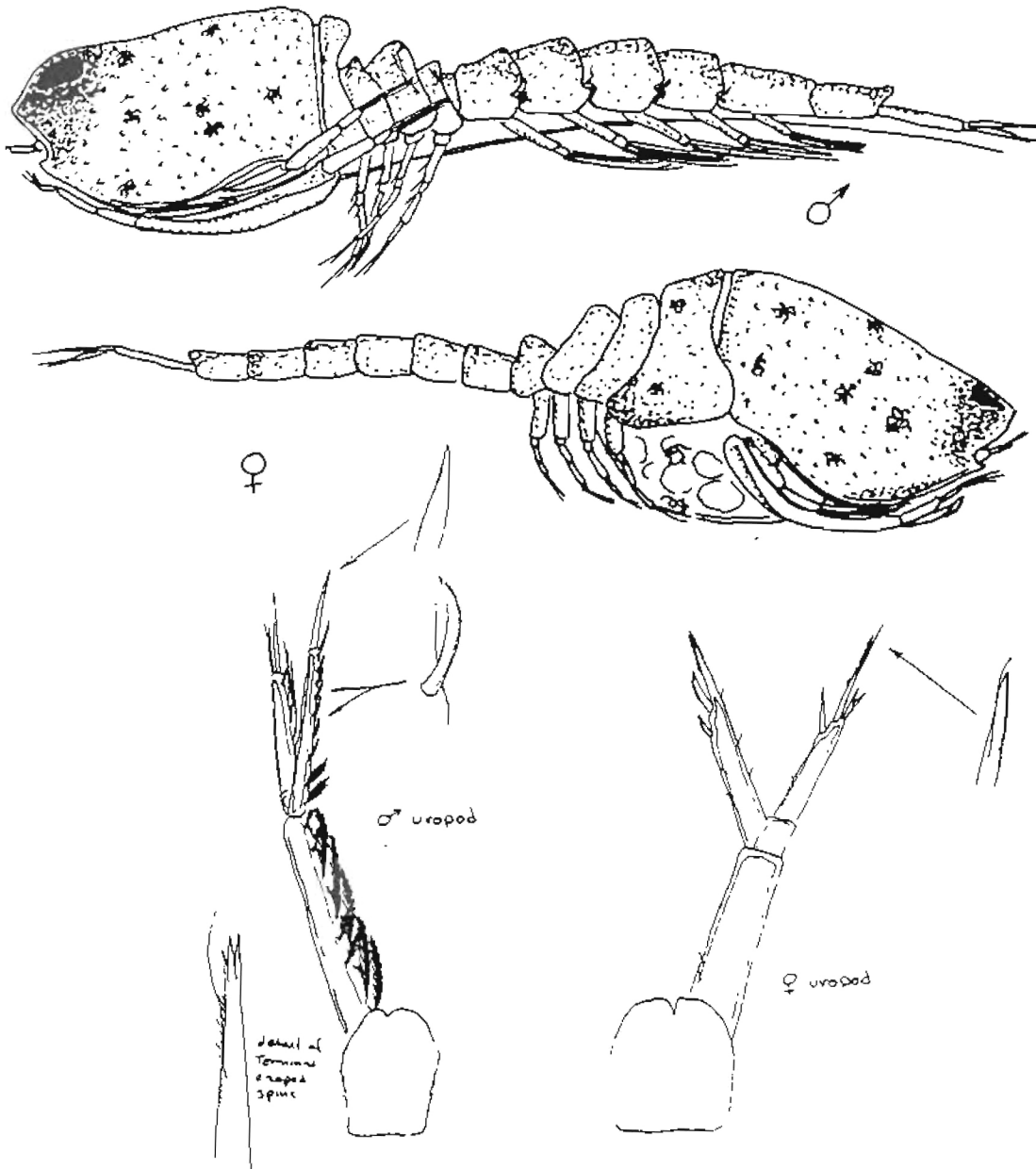
Cyclaspis nubila Zimmer 1936 is much larger than *Cyclaspis* sp. B, being about the same size as *Cyclaspis* sp. A. Even in manca of *C. nubila* the carapace is more highly calcified and heavier than in adults of *Cyclaspis* sp. B. *Cyclaspis nubila* has a flattened depressed area on either side of the middorsal carina at the front of the carapace. This depression is lacking in *Cyclaspis* sp. B, as is the carina itself. Adult females of *C. nubila* lack spination and setation on both the medial and lateral margins of the uropodal peduncles as do those of *Cyclaspis* sp. B, but the peduncles are proportionately longer and the exopods are slightly longer than the endopods. The characteristic thoracic somite depression of *Cyclaspis* sp. B is not found in either sex of *Cyclaspis nubila*.

Cyclaspis sp. B SCAMIT
Bodotriidae

VOL. 8, NO. 2

Distribution: Coronado Beach, San Diego to Goleta; 2.5-20m.

Comments: Like *Cyclaspis* sp. D this species is restricted to the surf zone, with nearly all records from depths less than 5m. Because of the unique depression of the thoracic somites this species is easily recognized by inspection even in 1.5 mm specimens.



Date Examined: 8 May 1989
Voucher By Don Cadlen

Synonymy: Cyclaspis sp. D of MBC

Literature: Given 1970, Hale 1944

Diagnostic Characters:

1. Antennal sinus lacking in female (male unknown).
2. Carapace without distinct sculpture or pitting.
3. Weak middorsal carapace carina.
4. Carapace 40% of total body length.
5. Uropodal peduncles armed with setae both dorsolaterally and medially.
6. Uropodal rami of equal length; endopod with 5 medial and no lateral spines, exopod with 1 mesial seta.
7. Exopod biarticulate with ratio of article lengths 3/11.

Related Species and Character Differences:

Cyclaspis sp. A SCAMIT differs in possession of a denticulate middorsal crest. It is also a much larger species. *Cyclaspis* sp. D is ovigerous at a total length of less than 2.5 mm, about one third the size of equivalent stage *Cyclaspis* sp. A. The absence of an antennal sinus and virtual absence of carapace sculpture also separate *Cyclaspis* sp. D from *Cyclaspis* sp. A.

Cyclaspis sp. B SCAMIT differs in having a well defined antennal notch in both sexes, and in the dorsal depression of the thoracic somites which characterize that species. Females of the two species are otherwise similar in aspect, being small and nearly unsculptured.

Cyclaspis sp. C SCAMIT differs in having a highly calcified and highly textured carapace with flattened depressed areas anterodorsally and behind the antennal sinus in both sexes. The antennal sinus itself is very well developed in sp. C. The medial margin of the uropodal peduncles is serrate in *Cyclaspis* sp. C females, not setose as in females of *Cyclaspis* sp. D.

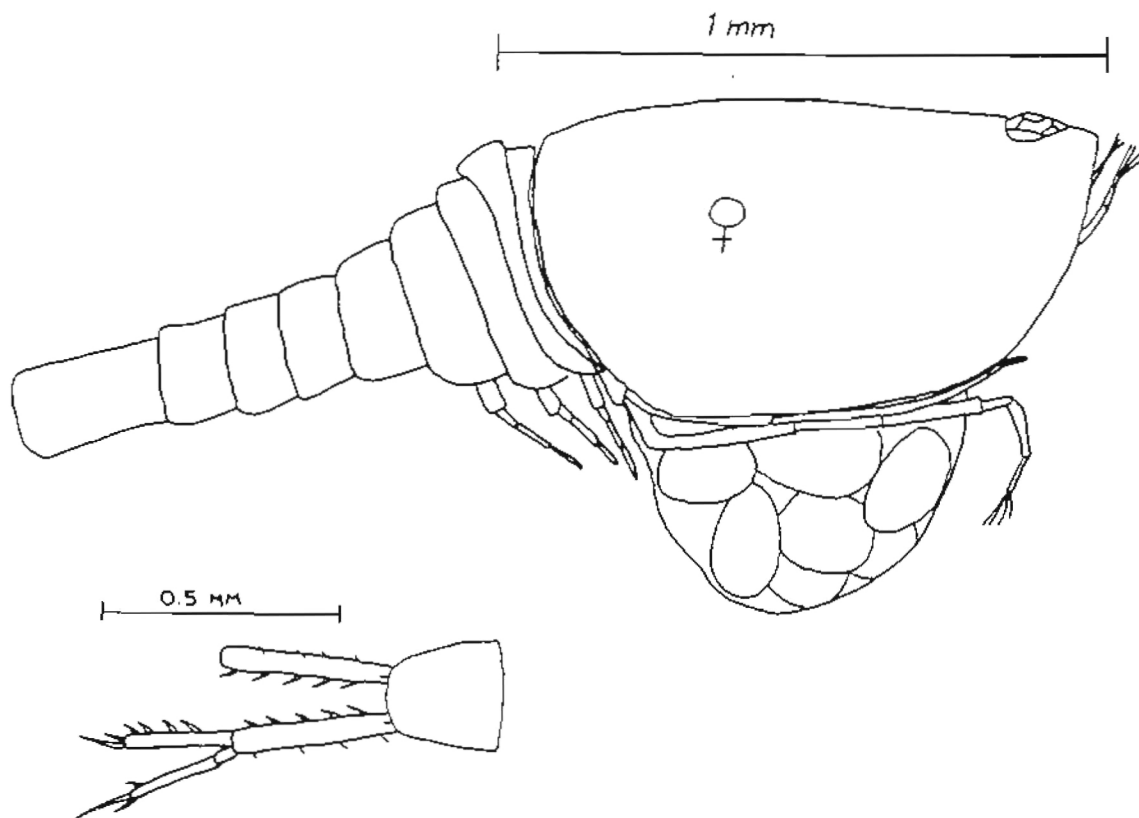
Cyclaspis nubila Zimmer 1936 is much larger than *Cyclaspis* sp. D, being about the same size as *Cyclaspis* sp. A. Even in manca of *C. nubila* the carapace is more highly calcified and heavier than in adults of *Cyclaspis* sp. D. From manca through adult *C. nubila* retains a well defined antennal sinus lacking in *Cyclaspis* sp. D. *Cyclaspis nubila* has a flattened depressed area on either side of the middorsal carina at the front of the carapace. This depression is lacking in *Cyclaspis* sp. D. Adult females of *C. nubila* lack spination and setation on both the medial and lateral margins of the uropodal peduncles.

Cyclaspis sp. D SCAMIT
Bodotriidae

VOL. 8, NO. 2

Distribution: Huntington Beach, Orange County, California; 3.1m.

Comments: The species is still known from a single ovigerous female collected in 1976. Lack of further records from the area (sampled annually since 1975) may indicate that the species is restricted to the surf zone. As most sampling in this zone uses a 1mm mesh screen this small species may not be taken.



SCAMIT CODE: HYP 81

Date Examined: May 18, 1989
Voucher By: Tony Phillips, HYP

Literature: Zimmer, C. 1943. Cumaceen Des Stillen Ozeans. Archiv der Naturgeschichte, 12:130-174.
Jones, N.S. 1969. The systematics and distribution of Cumacea from depths exceeding 200 meters. Galathea Reports, 10:99-180.
Given, R. 1970. The Cumacea of California. PhD Thesis. USC.

Diagnostic Characters:

1. Exopods present on pereopods 1-4, pereopod 4 exopod reduced in both male and female (figure 1a and 2a).
2. Pereopod 2 with distal brush of setae on propodus and dactylus, no spines present (figure 1c and 2c).
3. Basis of maxilliped 3 not greatly expanded (figure 1d and 2d).
4. Five pair of pleopods in male (figure 1a).
5. First free thoracic segment is not visible.
6. Lateral borders of the third (female) or fourth (male) thoracic segment are extended so that they overlap the neighboring segments.
7. Short, stiff setae trim the margin of the thoracic and first four abdominal segments; the first two visible thoracic segments in the female and first three thoracic segments directed anteriorly, the remaining segments posteriorly.
8. Eye present; some specimens difficult to see.

Related Species and Character Differences:

There are three other genera of the Vaunthompsoniinae found in our California fauna: Bathycuma, Glyphocuma and Vaunthompsonia. All three genera can be separated from Leptocuma by their toothed median longitudinal carina on the anterior half of the carapace, pereopod 2 with spines on at least the dactylus, lateral borders of the third thoracic segment do not overlap the second and fourth segments and the female pereopod 4 without an exopod.

Distribution: Rosarita Beach (Baja Calif.) to Santa Barbara, 2-10 meters in coarse sand; 1 individual 70m (Pt. Loma).

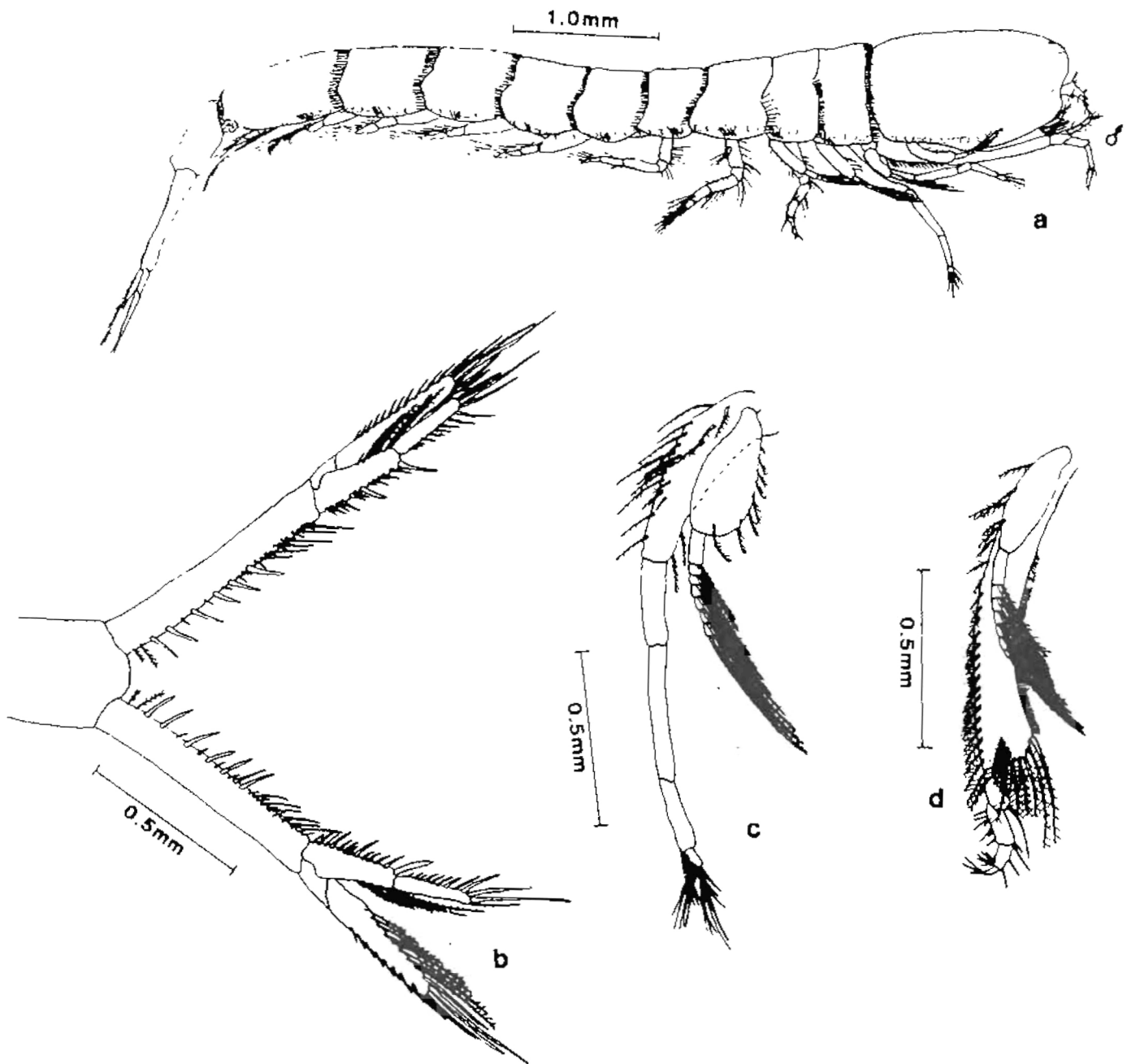


Figure 1. a. adult male; b. telson; c. pereopod 2; d. maxilliped 3.

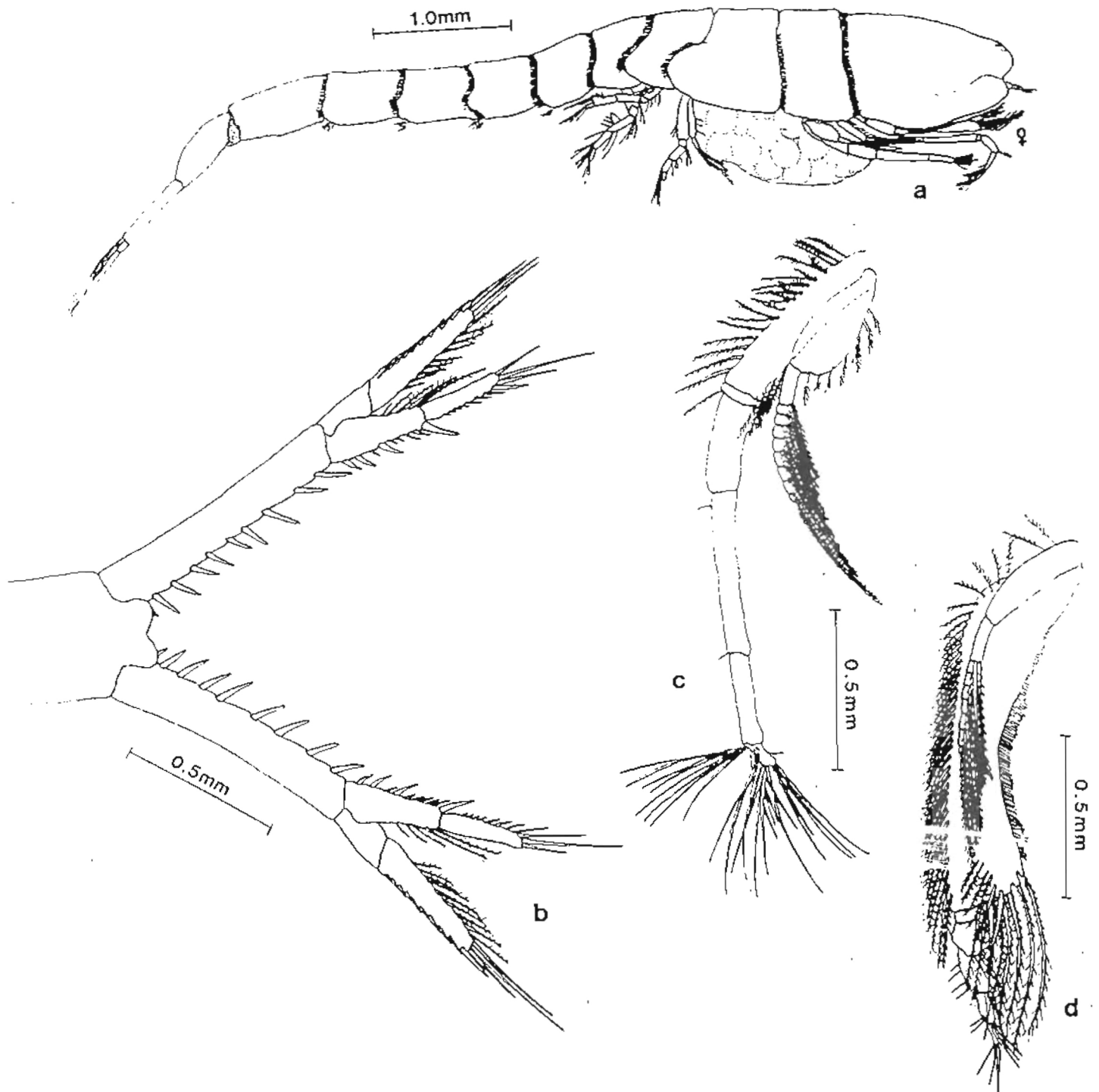


Figure 2. a. adult female; b. telson; c. pereopod 2; d. maxilliped 3.