SOUTHERN CALIFORNIA ASSOCIATION
OF
MARINE INVERTEBRATE TAXONOMISTS

August 1983 Vol. 2, No. 5

Next Meeting:	September 19, 1983
Place:	Marine Biological Consultants 947 Newhall Street Costa Mesa, CA 92627
Guest Speaker (tentative):	John Engle, Catalina Marine Science Center
Specimen Exchange Group:	"Polydora-Boccardia" complex
Topic Taxonomic Group:	Orbinidae and Paraonidae

MINUTES FROM AUGUST 15, 1983

Picnic: The first SCAMIT picnic was alot of fun. There was lots of great food and good company. Sales of t-shirts and mugs at the picnic made the day a successful fund raising day. Thanks to everyone who came. For those who couldn't make it, hope to see you next time.

SCAMIT PICNIC
July 30, 1983
Pt. Fermin Park

New Committee: An idea for a new committee was introduced. The new committee would expedite the decision making process for raising and spending SCAMIT funds. The issue was immediately adopted. The new Fund Raising Committee members are Philip Chang, John Dorsey, John Ljubenkov, Tony Phillips, and John Shisko. This new committee will go into high gear once federal approval of SCAMIT's tax exempt status is granted. (The IRS says it is working on the file.)

Guest Speakers: Three speakers took the floor and talked about different groups of crustaceans. The speakers and their talks were:

Dr. Doug Diener on Cumacea

Doug began by distributing a revised version of the Myers-Benedict key. Most of the problems encountered with cumaceans are due to the fact that there are many undescribed species and that there are few illustrations available. Doug estimated there is a year's worth of illustrating to be done. Then Dough briefly described the local fauna which is included in the voucher sheets. He also suggested to pick up cumaceans by the antennae or legs to prevent crushing the carapace.

Brad Myers on Ostracoda

Ostracods comprise an interesting group of organisms whose members range from swimmers to sessile forms, detrivores to carnivores, and marine to freshwater. When ostracods were first discovered in 1760 they were described as bi-valved insects. The fossil record of ostracods is excellent (second only to forams) particularly of Podocopa. However, Podocopa are small and rarely seen in soft bottomed sampling, instead one finds Myodocopa. When dealing with ostracods external characters generally are sufficient for identification. Sexual dimorphism is critical as males inhabit the water column. The most efficient way to identify ostracods is to use illustrations.

Bonnie Bain on Pycnogonida

Bonnie began with the basics by handing out an illustration of Pycnogonid parts. She then explained the anatomy of Pycnogonids and some of the oddities of the group. For instance, the chelifore, is highly variable and it is not clear whether or not homologous to chelipeds of other arthropods. The oviger is an appendage that exhibits sexual dimorphism and can't be related to any appendage on other arthropods. Identifying Pycnogonids presents problems. Frequently juveniles cannot be identified. There is no single reliable key for the group. Literature is diffuse. Bonnie is hoping to help out. She's currently working on a species list, is sorting out synonyms, and has done a preliminary cladistic analysis on the group.

Specimens Wanted: The following people are interested in specimens for their research. If you have any, please send them on:

Hermit crabs with commensal anenomes for
John Ljubenkov
La Mer
P.O. Box 5202
San Pedro, CA 90033

Holothuroids for
Mary Bergen
Dept. of Biology, USC
University Park
Los Angeles, CA 90089-0371

Pycnogonids for
Bonnie Bain
6034 Malcolm Dr.
San Diego, CA 92115

List of August 15, 1983 Topic Specimens:

LACO 15	Diastylis pellucida
SCCWRP 24	Leptostylis sp. D
PL 25	Leptostylis sp. A
MBC 17	Procampylaspis sp. A
OC 27	Hemilamprops californica
LACO 16	Oxyurostylis pacifica
MBC 16	Leuroleberis sharpei
PL 26	Parasterope barnesi
OC 28	Bathyleberis californica
HYP 25	Rutiderma rostratum
SCCWRP 25	Scleroconcha triterburculata
HYP 26	Rutiderma lomae

Job Openings: Applications are now being taken for Water Biologist for the City of Los Angeles. Deadline for applications September 20, 1983. For more information call John Shisko at (213) 772-3394 ext. 269. Applications may be obtained by calling (213) 485-2468.

VOLUME 2 CORRECTIONS AND ADDITIONS

Number 1

Corrections to "Voucher Sheet Corrections and Additions" under Goniada brunnea ... fig. 2 G. maulata should be G. maculata.

Rhepoxynius heterouspidatus should be Rhepoxynius heterocuspidatus.

Corrections to the "Key to the Species of the Order Bullomorpha Body Characters". 2nd couplet of 2 Melaochlamys should be Melanochlamys and Philinne should be Philine. Note: The usage of Number 5 was omitted.

Aglaja inermis (Cooper, 1862).1862 should be 1863 throughout synonomy.

Aglaja ocelligera (Bergh, 1893).1893 should be 1894 throughout synonomy. Date examined is March 14 instead of March 13.

Cylichnella culcitella (Gould, 1852). 1852 should be 1853 throughout.

Melanochlamys diomedea (Bergh, 1893). 1893 should be 1894 throughout. Date examined is March 14 instead of March 13.

Rictaxis punctocaelatus (Carpenter, 1864). Date examined is March 14 instead of March 13.

Number 2

Molpadia intermedia. Add: (Ludwig, 1894). Molpadiida should be Molpadiidae. Molpadia musculus should be underlined.

Number 3

Under the heading:

Topic Taxonomic Group. Stillipedidae should be Stilipedidae.

Lumbrineriopsis and Lumbrineridae: Lumbrineridae should be Lumbrinerides in both the heading and the text.

Literature Committee: New references. Steele, D.H. 1982. The first Anonys should be Anonyx.

Checklist of west coast Arabellidae, Iphitimidae... Biorin Chamberline, 1919 should be Biborin.

Table of West Coast Drilonereis: For D. falcata under #4 Maxillary formula 4(7) = 4(7) - ... should be 4(7) + 4(7)...

(Number 3 continued)

For D. longa under #5 Pre and Post Setal Lobe Shape change to Pre and Post-both prolonged in posterior. (If not changed, may lead one to believe there are two lobes for both pre and post setal lobes and all are prolonged.)

For D. mexicana under #4 Maxillary formula no max 5 should be no max V

Voucher Sheets

Edwardsia sp. A should be Edwardsia sp. A. Isoedwarsia sp.A should be Isoedwardsia sp. A.

Isoedwardsia sp. A under Related Species...(1) Edwardsia (Edwardsiella) californica Mc Murrich 1913 should be (Mc Murrich, 1913).

Isoedwardsia sp. A should be changed to Edwardsiidae, juvenile.

Pennatula phasphorea var. californica add Kiikenthal, 1913. Under Important Characters: (2)... bring red... should be bright red...

VOUCHER SHEET

Hemilamprops californica Zimmer 1936

Lampropidae

Date Examined & Code: August 15, 1983; OC 27

Key Used: D. Diener. Key distributed at meeting August 15, 1983

Other Literature: Carapace with cephalic shield, peduncle of uropod slightly longer than telson, telson with 5 terminal spines, 3 major spines, central spine shorter, and two smaller spines between major spines, paired lateral spines 3 or 4 major pairs. Males with 3 pairs of pleopods.

Related Species and Character Difference:

Females can only be confused with Mesolamprops dillonensis which have cephalic shield and 4 or 5 major pairs of lateral telsonic spines. Males with 2 pairs of pleopods.

Common Synonyms: None

Variability: Small specimens have less pronounced cephalic shield and fewer pairs of lateral telsonic spines.

Comments: A common nearshore species found between 8 and 100 meters on soft bottoms. Occurs along the entire California coast.

VOUCHER SHEET

Procampylaspis sp. A

Nannastacidae

Date Examined & Code: August 15, 1983; MBC 17

Key Used: D. Diener. Key distributed at meeting August 15, 1983

Other Literature: Hale, H.M. 1945. Rec. S. Aust. Mus., 8: 145-218.
Bonnier, J. 1896. Ann. Univ. Lyon, 26: 528-562.

Important Characters: Carapace generally with clinging detritus, shallow sulcus on lateral sides of carapace edged with a lateral row of papillae. Second maxilliped with rake-like dactylus and long ischium of p 1.

Related Species and Character Differences:

This species can easily be confused with one of the Campylaspis species, however the carapace shape and features of the MXP 2 easily differentiate this genus.

Comments: An undescribed species common along the California coast between 55 and 180 meters.

VOUCHER SHEET

Diastylis pellucida Hart 1931

Diastylidae

Date Examined & Code: August 15, 1983; LACO 15

Key Used: D. Diener. Key distributed at meeting August 15, 1983

Other Literature: Hart, J.F. 1931. Contr. Can. Biol. Fish. N.S. 6:1-18.
12:130-173.
Lomakina. 1958. Opred Po Faunae S.S.S.R., 66:1-301.

Important Characters: Telson with two terminal spines closely spaced, 2-7 pairs of lateral spines, 2 faint oblique mid carapace ridges, small row of denticles form a lateral row from behind the eye onto the pseudorostrum.

Related Species and Character Differences:

Diastylis abotti has 2 strong and 1 weak lateral carapace ridges, however, uropod peduncle subequal to length of telson. D. pellucida uropod peduncle about 1.7 x length of telson. Small specimens and juveniles easily confused with Leptostylis species.

Common Synonyms: None.

Variability: Number of paired lateral telsonic spines is size dependent, small specimens with one pair, large adults with up to 7 pairs.

Comments: An offshore species found between 30 to 600 meters from southern California to Alaska.

VOUCHER SHEET

Oxyurostylis pacifica Zimmer 1936

Diastylidae

Date Examined & Code:	August 15, 1983; LACO 16
Key Used:	D. Diener. Key distributed at meeting August 15, 1983
Other Literature:	Zimmer, C. 1936. Proc. U.S. Nat. Mus., 83:423-439. Zimmer, C. 1943. Arch. Naturgesch 12:130-173.
Important Characters:	Telson long and tapering to a point, carapace and thoracic somites rough covered with fine denticles.

Related Species and Character Differences:

O. tertia has highly sculptured carapace which is lacking in O. pacifica.

Common Synonyms:	None
Variability:	A distinct species at all sizes.
Comments:	A common southern California species found in 10 to over 100 meters in sand silt bottoms.

VOUCHER SHEET

Leptostylis sp. A

Diastylidae

Date Examined & Code: August 15, 1983; SCCWRP 24

Key Used: D. Diener. Key distributed at meeting August 15, 1983

Other Literature: Sars, G.O. 1900. Cumacea 3:1-114.
Jones, N.S. 1963. N.Z. Ocean. Inst., Mem. No 23:1-80.

Important Characters: Smooth narrow carapace, uropod penduncle 2 X + longer than telson.

Related Species and Character Differences:

There are at least 4 underscribed species of this genus along the California coast. L. sp. A can be distinguished from L. sp. B by its narrow hairless carapace, from L. sp. C by lack of small teeth on tip of pseudorostrum and relatively equal length of uropodal endopods and exopods, and from L. sp. D by uropod penducle longer than 2 X the telson length and telson not square when viewed from the dorsal surface.

Comments: A fairly common undescribed species found in central and southern California in water depths between 20 and 100 meters.

Leptostylis sp. D

Diastylidae

Date Examined & Code: August 15, 1983; PL 25

Key Used: D. Diener. Key distributed at meeting August 15, 1983

Other Literature: Sars, G.O. 1900. Cumacea 3:1-114.
Jones, N.S. 1963. N.Z. Ocean. Inst., Mem. No. 23:1-80.

Important Characters: Uropod peduncle less than 2 X telson length. Anus inflated so telson appears square when viewed from above.

Related Species and Character Differences:

See comments for Leptostylis sp. A.

Comments: An undescribed species, more work needs to be done on this species to determine if it is different from L. sp. A.

KEY TO THE CALIFORNIA CUMACEA, DOUGLAS DIENER

KEY TO GENERA OF CUMACEA
FEMALES AND INMATURE MALES

1. No telson (some telsons are small) Figure 1.....2

   Telson present but may be small Figure 1.....11

2. Double row of spines or spinules on mid-dorsal carapace, spines reduced on small specimens, P4 without exopod.....3

   Carapace without double row of spines.....4

3. Pigmented eye.....Vaunthompsonia

   No pigmented eye, P1 to P3 with exopodites (known from 1 individual Calman, 1912).....Bathycuma

4. Exopodites only on first pair of legs.....Cyclaspis

   Exopodites on more than the first pair of legs.....5

5. Exopodites only on the first two pairs of legs (Note, exopodites on P1 and P2 for females and on P1 to P4 for males); carapace subtriangular in lateral view Figure 2.....6

   Expodites on the first three pairs of legs; carapace not subtriangular.....8

6. Carapace bulbous and extending back over free thoracic segments; eye poorly developed Figure 2.....7

   Carapace not so; eye well developed Figure 2.....Cumella

7. Mxp 2 not strongly toothed forming a rake; Art. 2 of P1 short, 20% or less of art. 1; Figure 3.....Campylaspis

   Mxp 2 strongly toothed forming a rake; Art. 2 of P1 long, 40% of art. 1; Figure 3.....Procampylaspis

8. Carapace truncate anteriorally, with anteroventral projection Figure 2.....9

   Carapace not truncate anteriorly Figure 2.....10

9. Uropods with exopodite longer than endopodite; pseudorostrum prominent and nearly vertical Figure 2.....Eudorellopsis

   Uropods with endopodite longer than exopodite; pseudorostrum not evident Figure 2.....Eudorella

10. Eye present; 4 thoracic segments visible (1st segment not visible, 3rd segment overlaps adjacent segments) P4 with small exopod? P2 with distal brush of setea on propodus and dactylus but no spines Figure 3.....Leptocuma

    Eye absent; 5 free thoracic segments with the 3rd segment normal P2 with the spines and setae Figure 3.....Leucon

11. Telson with less than three terminal spines Figure 1....12

    Telson with three or more terminal spines Figure 1.....18

12. Telson with two terminal spines posteriorly directed Figure 1.....13

    Telson with no terminal spines or two very small ventrally directed spines Figure 1.....16

13. Third and fourth thoracic somites markedly elongate, together about one-half the length of the carapace; P2 and P3 seperated.....Diastylopsis

    Thoracic somites not markedly elogate.....14

14. Telson short and somewhat bulbous; antennule poorly developed, Exopodites ~~and~~ on P3 and P4 rudimentary Figure 1.....Leptostylis

    Telson medium to long, tapered distally with numerous lateral spines, basal portion may be cylindrical.....15

15. Telson tapered; posterior anal portion of telson long; numerous lateral spines; antennules and exopodites on P3 and P4 well developed.....Diastylis

    Telson elongate; basil portion cylindrical and much longer than the posterior anal portion; carapace denticulate; eye wanting; rare.....Makrokylindrus

16. Telson short.....17

    Telson long, tapering to an acute and slightly upturned point. (figure 1).....Oxyurostylis

17. Two very small ventrally directed spines on telson; endopod of uropod with 2 or 3 segments.....Anchicolourus

    No apical spines; endopod of uropod with only 1 segment; 1 or 2 pairs of rudimentary pleopods (known from 1 individual Baker 1912).....Pseudocuma

18. Eye wanting; carapace depressed and broad, RARE.....Paralamprops

    Eye present, carapace not as above.....19

19. Carapace with "cephalic shield" Figure 2.....20

Carapace without "cephalic shield" 21

20. Telson with 5 terminal spines, 3 major, 2 minor, and 3 to 4 pairs of lateral spines (occassionally 2 to 5)..... .....Hemilamprops californica

Telson as above, 4 to 5 pairs of lateral spines (occassionally 3 to 6).....Mesolamprops dillonensis

21. No lateral telsonic paired spines....Lamprops carinata
L. tomalesi
L. sp. C vestigal male
L. sp. ? Gladfelter
L. sp. B

With lateral telsonic paired spines.....22

22. Two pairs of lateral telsonic spines; no oblique carapace ridges Figure 1.....Mesolamprops bispinosa

Two to three pairs of lateral telsonic spines with 3 or 4 obilique carapace ridges.....Lamprops quadriplicata

KEY TO GENERA OF CUMACEA II
ADULT AND SUB-ADULT MALES

1. No telson (some telsons are small) Figure 1.....2

Telson present.....11

2. No pleopods.....3

Pleopods present.....5

3. Carapace bulbous and extending back over free thoracic segments: eye poorly developed or if well developed occurring as a single ocular group Figure 2.....4

Carapace not as above; eye or median ocular group well developed; generally small species .....Cumella

4. Mxp 2 not strongly toothed forming a rake; Art. 2 of P1 short, 20% or less of art. 1; Figure 3.....Campylaspis

Mxp 2 strongly toothed forming a rake; Art. 2 of P1 long, 40% of art. 1; eye wanting .....Procampylaspis

5. Two pairs of pleopods.....6

More than two pairs of pleopods (5 pair of pleopods).....8

6. Carapace truncate anteriorally, Figure 2.....7

Carapace not truncate anteriorly.....Leucon

7. Uropods with exopodite longer than endopodite..Eudorellopsis

Uropods with endopodite longer than exopodite .....Eudorella

8. Exopodites only on first pair of legs.....Cyclaspis

Exopodites on at least the first two pairs of legs.....9

9. 4 thoracic segments visible (1st segment not visible, 3rd segment overlaps adjacent segments), P2 with distal brush of setae on porpodus and dactylus but no spines Figure 3.....Leptocuma

5 thoracic segments free and visible, P2 without distal brush of setae on terminal joints, but with spines on at least dactylus.....10

10. Eye well developed.....Vaunthompsonia

Eye not well developed (known from 1 individual Calman, 1912).....Bathycuma

11. Telson with less than three terminal spines 15

Telson with three or more terminal spines 12

12. No pleopods.....Lamprops

Pleopods present.....13

13. Two pairs of pleopods.....Mesolamprops

Three pairs of pleopods.....14

14. Eye present; carapace not depressed; slightly compressed.....Hemilamprops

Eye wanting; carapace depressed and broad; rare.....Paralamprops

15. Telson with two terminal spines posteriorly directed 16

Telson with no terminal spines or two very small ventrall directed spines.....20

16. Third and fourth thoracic somites markedly elongate, together about one-half the length of the carapace..... .....Diastylopsis

Thoracic somites not markedly elogate.....17

17. Telson short and somewhat bulbous; antennule poorly developed.....Leptostylis

Telson medium to long, tapered distally with numerous lateral spines, basal portion may be cylindrical.....18

18. Telson tapered; posterior anal portion of telson long .....Diastylis

Telson elongate; basil portion cylindrical and much longer than the posterior anal portion; carapace denticulate; eye wanting; rare.....Makrokylindrus

19. Telson short.....20

Telson long, tapering to an acute and slightly upturned point.....Oxyurostylis

20. Two very small ventrally directed spines on telson; endopod of uropod with 2 or 3 segments.....Anchicolourus

No apical spines; endopod of uropod with only 1 segment; 1 or 2 pairs of rudimentary pleopods (known from 1 individual Baker 1912).....Pseudocuma

DIASTYLIDAE SPECIES LIST

1.	Anchicolurus occidentalis (Calman, 1912) S. Calif. to Oregon	Nearshore species 5 to 40 meters	
2.	Diastylis abbotti Northern Calif.	Gladfetter, 1974 13 to 100 meters	Offshore species
3.	Diastylis californica S. Calif. to N. Calif.	Zimmer, 1936 25 to 120 meters	Offshore species
4.	Diastylis paraspinulosa S. Calif. to Bearing Sea	Zimmer, 1926 40 to 110 meters in Calif.	Offshore species
5.	Diastylis pellucida S. Calif. to Alaska	Hart, 1931 30 to 600 meters	Offshore species
6.	Diastylis a sp. n. S. Calif. to N. Calif.	Given, 1970 40 to 110 meters	Offshore species
7.	Diastylis sp. A Hueneme to Monterey Canyon	Given, 1970 456 to 750 meters	Canyon species
8.	Diastylis sp. B S. Calif	Given, 1970 86.5 meters	Offshore species
9.	Diastylopsis dawsoni Pt. Arguello to Alaska	Smith, 1880 rare south of Monterey Bay 13 to 100 meters	Offshore species
10.	Diastylopsis tenuis S. Calif to Point Arguello (one record from Monterey Bay)	Zimmer, 1936 0 to 36 meters	Nearshore species
11.	Leptostylis sp. A S. & Central Calif.	Given, 1970 21 to 80 meters	Offshore species
12.	Leptostylis sp. B S. Calif.	Given, 1970 11 to 138 meters	Offshore species
13.	Leptostylis sp. C Santa Monica Bay	Diener 45 meters	
14.	Leptostylis sp. D L.A. Harbor	Diener 16 meters	
15.	Makrokylindrus sp. La Jolla Canyon	Given, 1970 976 meters	
16.	Oxyurostylis pacifica S. Calif.	Zimmer, 1936 10 to 100 meters	
17.	Oxyurostylis tertia Calif. records?	Zimmer, 1943	

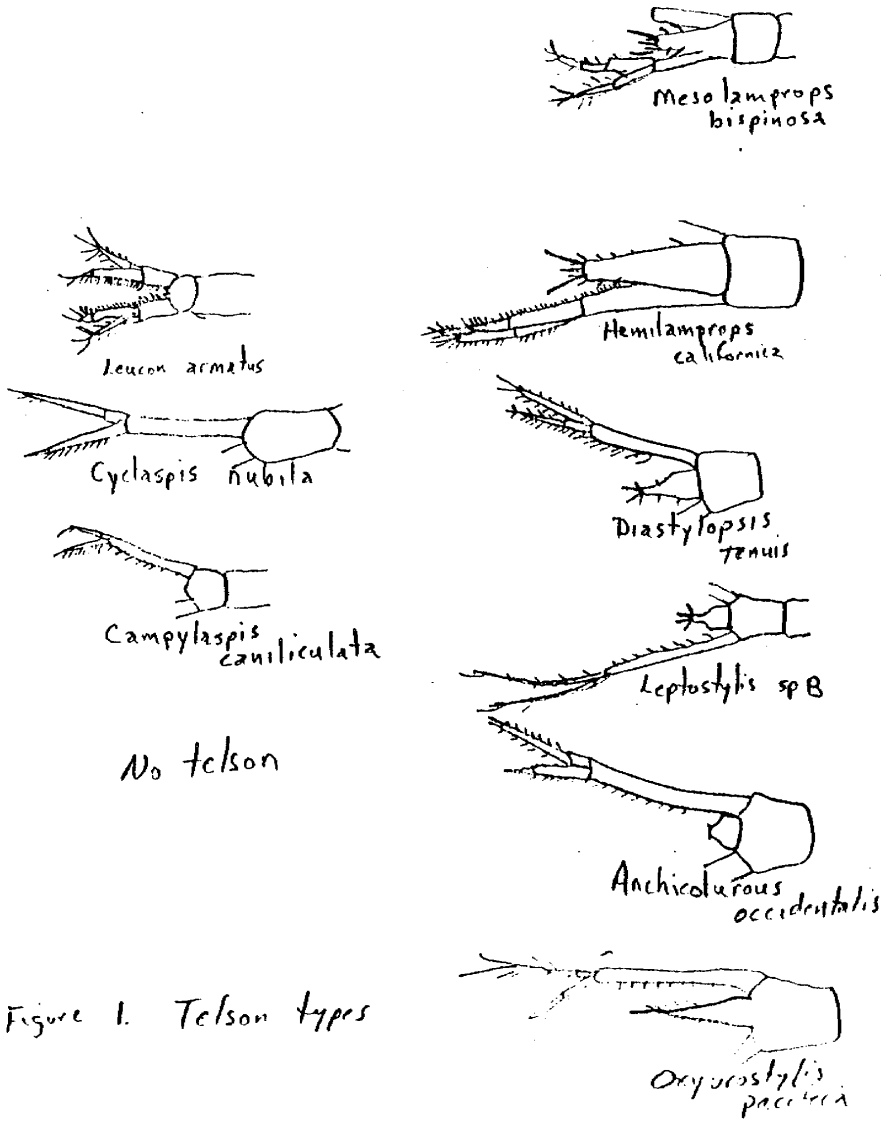


Figure 1. Telson types

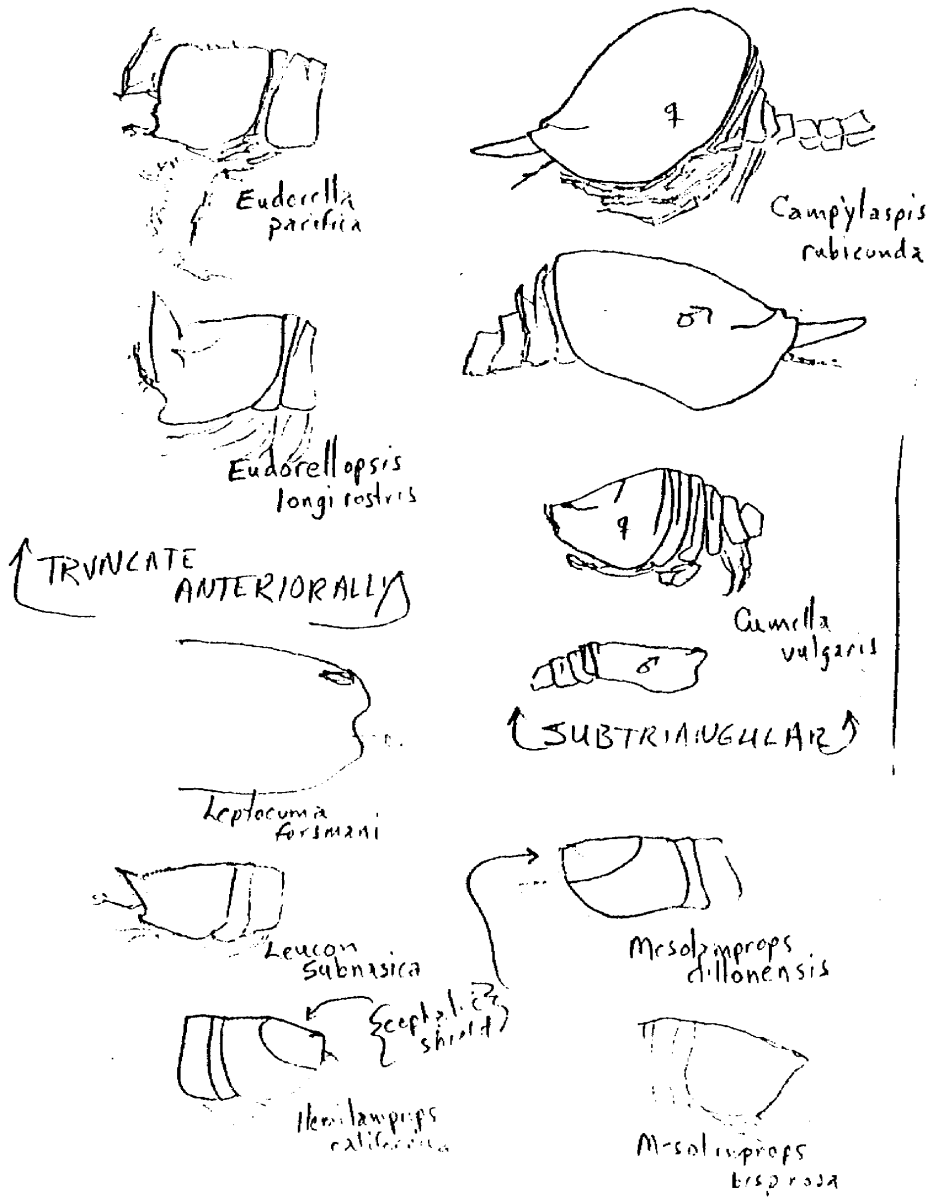
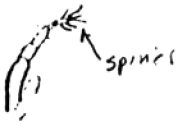


Figure 2. Carapace types

P2 setal brush
Leptocuma forsmani



P1 Leucon subnasica

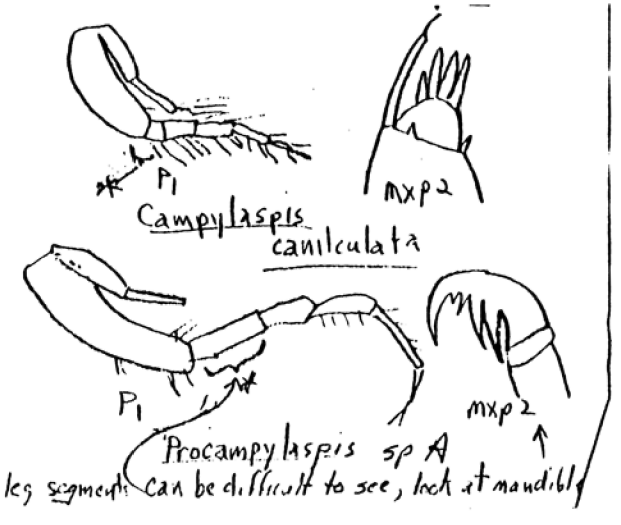


Figure 3 Above - P2 leg showing setal brush lower joint mandible and P1 type