

DDF A1.21

PUGET DM939
DATA DOCUMENTATION FORM

76-15-13

7601513

NOAA FORM 24-13
(4-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED
O.M.B. No. 41-R2651

TR0497

F024

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

IN HOUSE

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED DAVID M. DAMKAER NOAA, PACIFIC MARINE ENVIRONMENTAL LABORATORY 7600 SANDPOINT WAY N.E. SEATTLE, WA. 98115											
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED P SERP PUGET SOUND ENERGY-RELATED RESEARCH PROJECT		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT SF 7601 (also File ID)									
4. PLATFORM NAME(S) MV COMMANDO	5. PLATFORM TYPE(S) (E.G., SHIP, BOOY, ETC.) SHIP	6. PLATFORM AND OPERATOR NATIONALITY(IES) <table border="1"> <thead> <tr> <th>PLATFORM</th> <th>OPERATOR</th> <th>FROM: MO/DAY/YR</th> <th>TO: MO/DAY/YR</th> </tr> </thead> <tbody> <tr> <td>U.S.</td> <td>U.S.</td> <td>02/23/76</td> <td>02/24/76</td> </tr> </tbody> </table>		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR	U.S.	U.S.	02/23/76	02/24/76
PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR								
U.S.	U.S.	02/23/76	02/24/76								
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR _____ MONTH _____		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED. STRAIT OF JUAN DE FUCA GENERAL AREA									
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?) <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)											
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1) DOUGLAS B. DEY NOAA / PMEL 7600 SANDPOINT WAY N.E. SEATTLE, WA. 98115 (206) 442-4900											

MAGNETIC TAPE LABEL/RECEIPT

#76-1513

1151

Job. No.	User Name	PL	Task No.	Date
	031			10/7/76
Reel No.	Density	Drive	Mast. Reel	
1 of 1	200/ 556/800/1600	#	#	
Track	Tape	Storage Location	Packed	Decimal/ASCII
7/9	New/Used			BBC/BINARY/ASCII
Data Description				
Form 10278 w/ Time duration field corr.				
Remarks/Special Entries/Title/Job Name				
DSN= PUGETI #76-1513				
Vol-Ser-	Lnch	Blk. Fact.	Release Authorized by	Date Released
001151	80	20		

NOAA Form 47-29
(4-73)

U. S. DEPT. OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADM.

TRANSLATOR TAPE: VOL=SER=07402, DSN= PUGETI,
80 x 50, SC, 9 TRK, 1600 BPI, EBCDIC

(TRANSLATOR TAPE = TAPE MADE
FROM CARDS)

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Record Types 1, 2, 3 And 6
Total Records = 809

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

VOL= SER= 001151, DSN= PUGET1, FB, SL
LRECL= 80, BIKsize = 1600, 9TRK

3. ATTRIBUTES AS EXPRESSED IN

☐ PL-1 ☐ ALGOL ☐ COBOL
☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER _____

ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

<p>5. RECORDING MODE</p> <p><input type="checkbox"/> BCD <input type="checkbox"/> BINARY</p> <p><input type="checkbox"/> ASCII <input checked="" type="checkbox"/> EBCDIC</p> <p><input type="checkbox"/> _____</p>	<p>9. LENGTH OF INTER-RECORD GAP (IF KNOWN) <input checked="" type="checkbox"/> 3/4 INCH</p> <p><input type="checkbox"/> _____</p>
<p>6. NUMBER OF TRACKS (CHANNELS)</p> <p><input type="checkbox"/> SEVEN</p> <p><input checked="" type="checkbox"/> NINE</p> <p><input type="checkbox"/> _____</p>	<p>10. END OF FILE MARK</p> <p><input type="checkbox"/> OCTAL 17</p> <p><input type="checkbox"/> _____</p>
<p>7. PARITY</p> <p><input type="checkbox"/> ODD</p> <p><input type="checkbox"/> EVEN</p>	<p>11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p> <p>VOL=SER= 001151</p> <p>DSN= PUGET1</p> <p>NAPIS # 76-1520</p>
<p>8. DENSITY</p> <p><input type="checkbox"/> 200 BPI <input checked="" type="checkbox"/> 1600 BPI</p> <p><input type="checkbox"/> 556 BPI</p> <p><input type="checkbox"/> 800 BPI</p> <p><input type="checkbox"/> _____</p>	<p>12. PHYSICAL BLOCK LENGTH IN BYTES</p> <p>1600</p> <p>13. LENGTH OF BYTES IN BITS</p>

Changes made:

Station numbers: bytes 11-15 in Record Types 2, 3, 6 did not have unique station numbers.

An 'A', 'B', 'C', etc. was added to differentiate the stations, i.e. '00001' became '000A1' the next '00001' became '000B1'.

Size of subsample: in bytes 31-34 Record type 6 decimal point was removed and fields were left justified (see sample listing enclosed)

Record Type 4's in byte 10 were changed to '6'.

April 26, 1977 The track number 'TR0497' was inserted into the field File Id on all record types.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
METHOD OF IDENTIFYING EACH RECORD TYPE

Six (6) record types: File Header Record (1); Location Record (2);
Total Haul Data Record (3); Subsample Data Record (4); and Text Record (5);
Subsample Data 2 Record (6); differentiated by byte 10.

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL
☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER _____
ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

<p>5. RECORDING MODE</p> <p><input type="checkbox"/> BCD <input type="checkbox"/> BINARY</p> <p><input type="checkbox"/> ASCII <input type="checkbox"/> EBCDIC</p> <p><input type="checkbox"/> _____</p>	<p>9. LENGTH OF INTER-RECORD GAP (IF KNOWN) <input type="checkbox"/> 3/4 INCH</p> <p><input type="checkbox"/> _____</p>
<p>6. NUMBER OF TRACKS (CHANNELS)</p> <p><input type="checkbox"/> SEVEN</p> <p><input type="checkbox"/> NINE</p> <p><input type="checkbox"/> _____</p>	<p>10. END OF FILE MARK <input type="checkbox"/> OCTAL 17</p> <p><input type="checkbox"/> _____</p>
<p>7. PARITY</p> <p><input type="checkbox"/> ODD</p> <p><input type="checkbox"/> EVEN</p>	<p>11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME KEY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p>
<p>8. DENSITY</p> <p><input type="checkbox"/> 200 BPI <input type="checkbox"/> 1600 BPI</p> <p><input type="checkbox"/> 556 BPI</p> <p><input type="checkbox"/> 800 BPI</p> <p><input type="checkbox"/> _____</p>	
<p>12. PHYSICAL BLOCK LENGTH IN BYTES</p>	
<p>13. LENGTH OF BYTES IN BITS</p>	

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '024'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '1'
Vessel	11	11	Bytes	A11	
Cruise	22	6	Bytes	A6	
Cruise Dates	28	17	Bytes	I2,5(A1,I2)	XX/XX/XX-XX/XX/XX Beginning year, month, day; ending year, month, day
Area/Project	45	19	Bytes	A19	Left justified
Investigator/ Institution	64	17	Bytes	A17	Left justified

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '024'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '2'
Station Number	11	5	Bytes	A5	
Latitude,					
Degrees	16	2	Bytes	I2	
Minutes	18	2	Bytes	I2	
Seconds	20	2	Bytes	I2	
Hemisphere	22	1	Bytes	A1	'N' or 'S'
Longitude,					
Degrees	23	3	Bytes	I3	
Minutes	26	2	Bytes	I2	
Seconds	28	2	Bytes	I2	
Hemisphere	30	1	Bytes	A1	'E' or 'W'
Date in GMT,					
Year	31	2	Bytes	I2	
Month	33	2	Bytes	I2	
Day	35	2	Bytes	I2	
Time in GMT,					
Hour	37	2	Bytes	I2	
Minute	39	2	Bytes	I2	
Depth to Bottom	41	5	Bytes	I5	To whole meters
Sample Interval,					
Upper	46	4	Bytes	I4	To whole meters
Lower	50	4	Bytes	I4	To whole meters
Blank	54	27	Bytes	27X	

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '024'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '3'
Station Number	11	5	Bytes	A5	
Gear Code	16	2	Bytes	A2	(use File 024 Gear Code)
Mesh Size	18	4	Bytes	I4	In microns
Duration	22	3	Bytes	I3	Hours to tenths
Haul Length	25	4	Bytes	I4	To whole meters
Blank	29	4	Bytes	4X	
Total Settled Volume	33	4	Bytes	I4	To whole milliliters
Total Water Displaced	37	4	Bytes	I4	To whole milliliters
Total Dry Weight of Haul	41	7	Bytes	I7	Grams to hundredths
Total Wet Weight of Haul	48	7	Bytes	I7	Grams to hundredths
Volume of Water Filtered	55	6	Bytes	I6	To whole cubic meters
Blank	61	20	Bytes	20X	

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '024'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '4'
Station Number	11	5	Bytes	A5	
Sample Number	16	4	Bytes	A4	
Taxonomic Code	20	10	Bytes	5A2	
Life History Code	30	1	Bytes	A1	
Size of Sub- Sample	31	4	Bytes	I4	Percent to tenths
Number in Sub- Sample	35	5	Bytes	I5	
Concentration	40	6	Bytes	I6	Number per cubic meter
Dry Weight	46	7	Bytes	I7	Grams to thousandths
Wet Weight	53	7	Bytes	I7	Grams to thousandths
Number of Adults	60	5	Bytes	I5	Whole number
Number of Juveniles	65	5	Bytes	I5	Whole number
Number of Eggs	70	5	Bytes	I5	Whole number
Number of Larvae	75	5	Bytes	I5	Whole number
Blank	80	1	Bytes	1X	
<p>Note: There are two possible ways this record type can be used. If, for example, dry weights were to be measured for each Life History Stage, then a record type 4 will be created for each stage indicated and bytes 60 through 80 will be blank. If all measurements other than counts will be total measurements then Life History Code will equal A and adults and juveniles may be reported on one record type 4.</p>					

RECORD NAME Text (Zooplankton)

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '024'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '5'
Station Number	11	5	Bytes	A5	
Sequence Number	16	4	Bytes	I4	
Text	20	61	Bytes	61A1	

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '024'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '6'
Station Number	11	5	Bytes	A5	
Sample Number	16	4	Bytes	A4	
Taxonomic Code	20	10	Bytes	5A2	
Life History Code	30	1	Bytes	A1	
Size of Sub- Sample	31	4	Bytes	I4	Percent to tenths
Number in Sub- Sample	35	5	Bytes	I5	
Concentration	40	6	Bytes	I6	Number per cubic meter to thousandths
Dry Weight	46	7	Bytes	I7	Grams to thousandths
Wet Weight	53	7	Bytes	I7	Grams to thousandths
Number of Adults	60	5	Bytes	I5	Whole number
Number of Juveniles	65	5	Bytes	I5	Whole number
Number of Eggs	70	5	Bytes	I5	Whole number
Number of Larvae	75	5	Bytes	I5	Whole number
Blank	80	1	Bytes	1X	
<p>Note: There are two possible ways this record type can be used. If, for example, dry weights were to be measured for each Life History Stage, then a record type 6 will be created for each stage indicated and bytes 60 through 80 will be blank. If all measurements other than counts will be total measurements then Life History Code will equal A and adults and juveniles may be reported on one record type 6.</p>					

File 024 Gear Code

- 01 - 3/4 meter ring net
- 02 - 1 meter ring net
- 03 - 1 meter NIO (National Institute of Oceanography) net
- 04 - 60 centimeter Bongo net
- 05 - 60 centimeter Vertical closing ringnet
- 06 - 1 foot ring net
- 07 - Miskin bottle
- 08 - 2 meter Tucker net

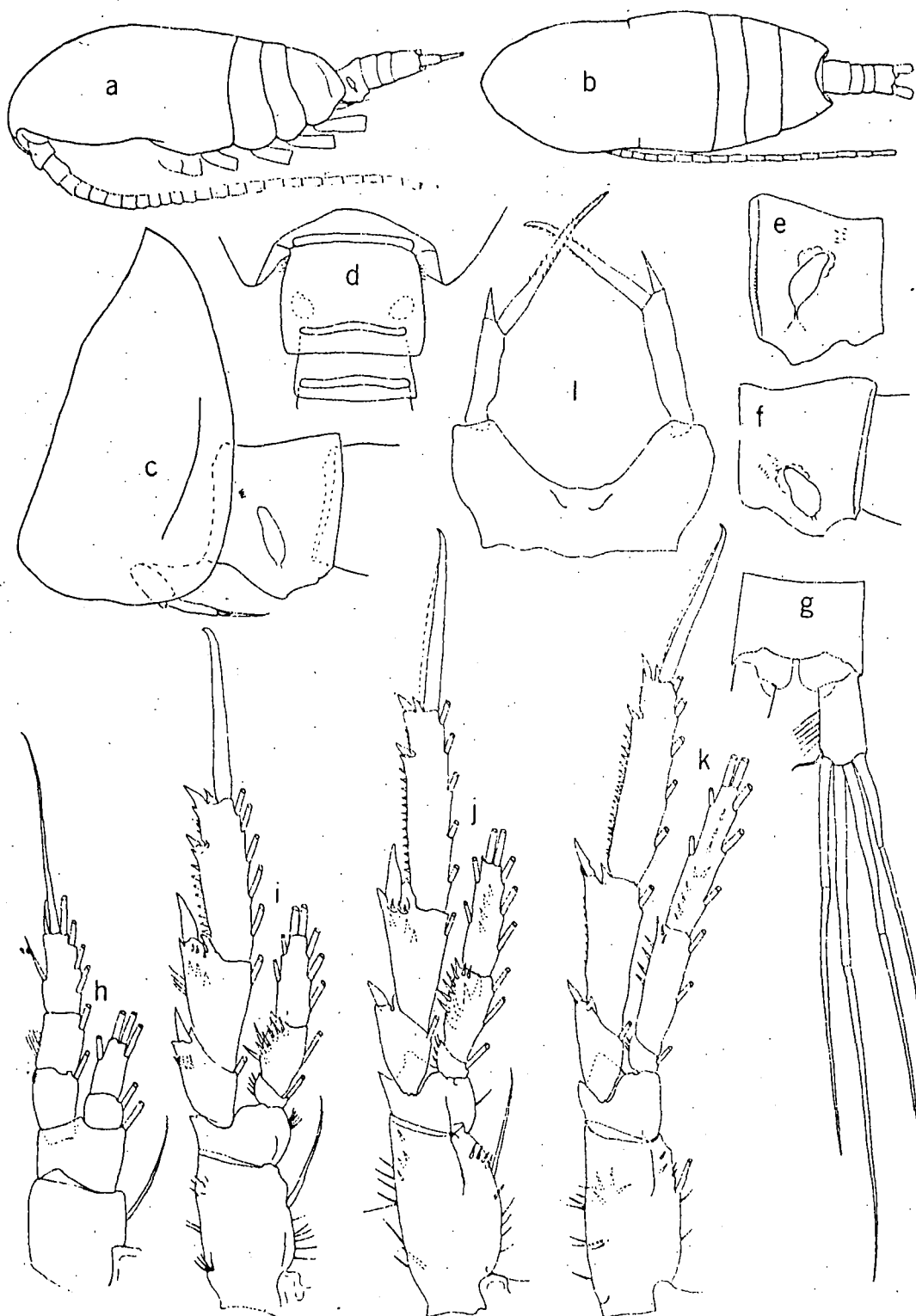


FIGURE 20.—*Paracalanus quasimodo*, new species, ♀: *a*, lateral view; *b*, dorsal view; *c*, 5th pedigerous and genital segments, lateral; *d*, same, dorsal; *e-f*, right and left sides of genital segment; *g*, anal segment and caudal rami, dorsal; *h-k*, legs 1-4.

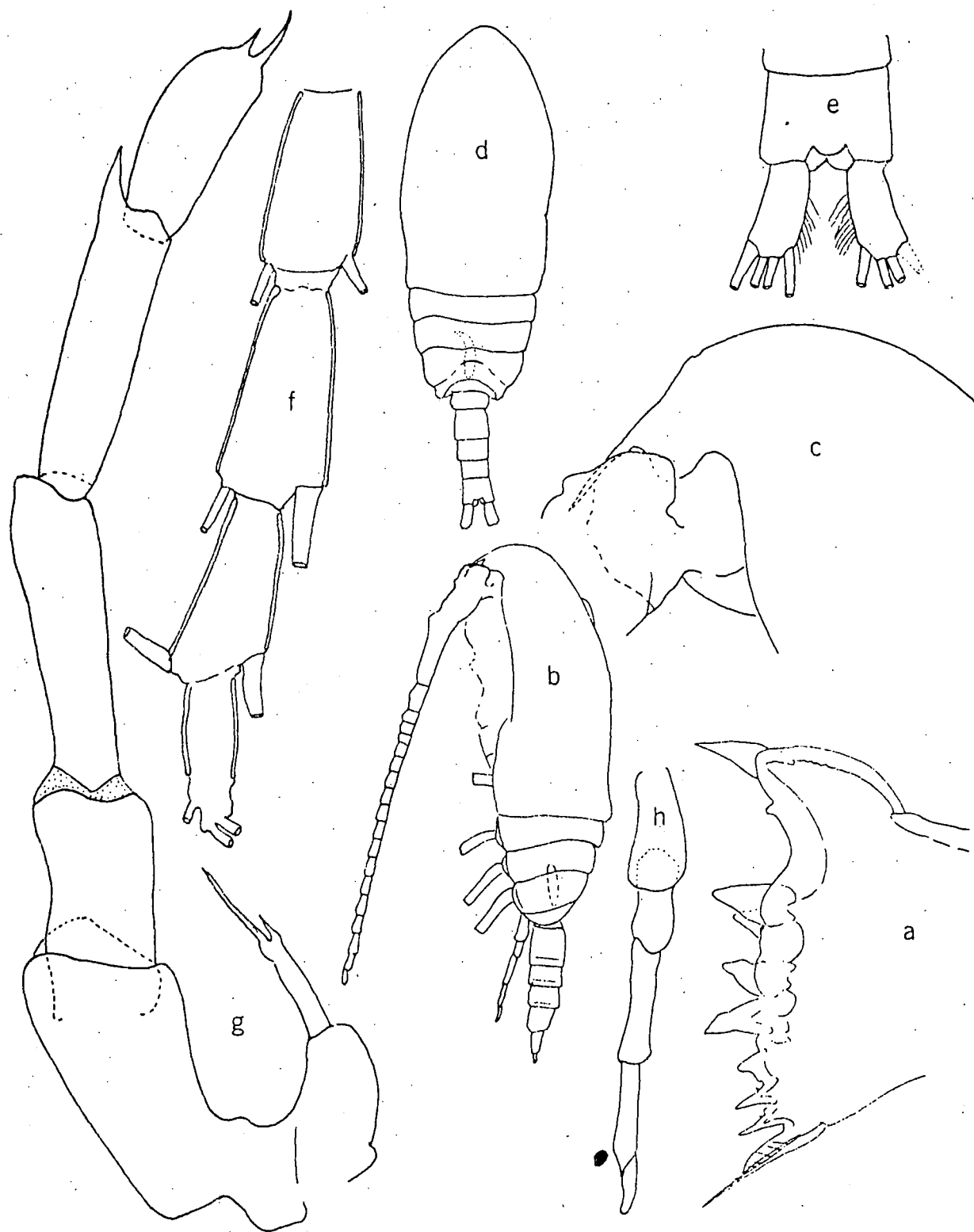


FIGURE 21.—*Paracalanus quasimodo*, new species: a, mandibular blade, ♀; b–h, ♂: b, lateral view; c, head and base of antenna 1, lateral; d, dorsal view; e, anal segment and caudal rami, dorsal; f, distal segments of antenna 1; g, leg 5, anterior; h, left leg 5, lateral.

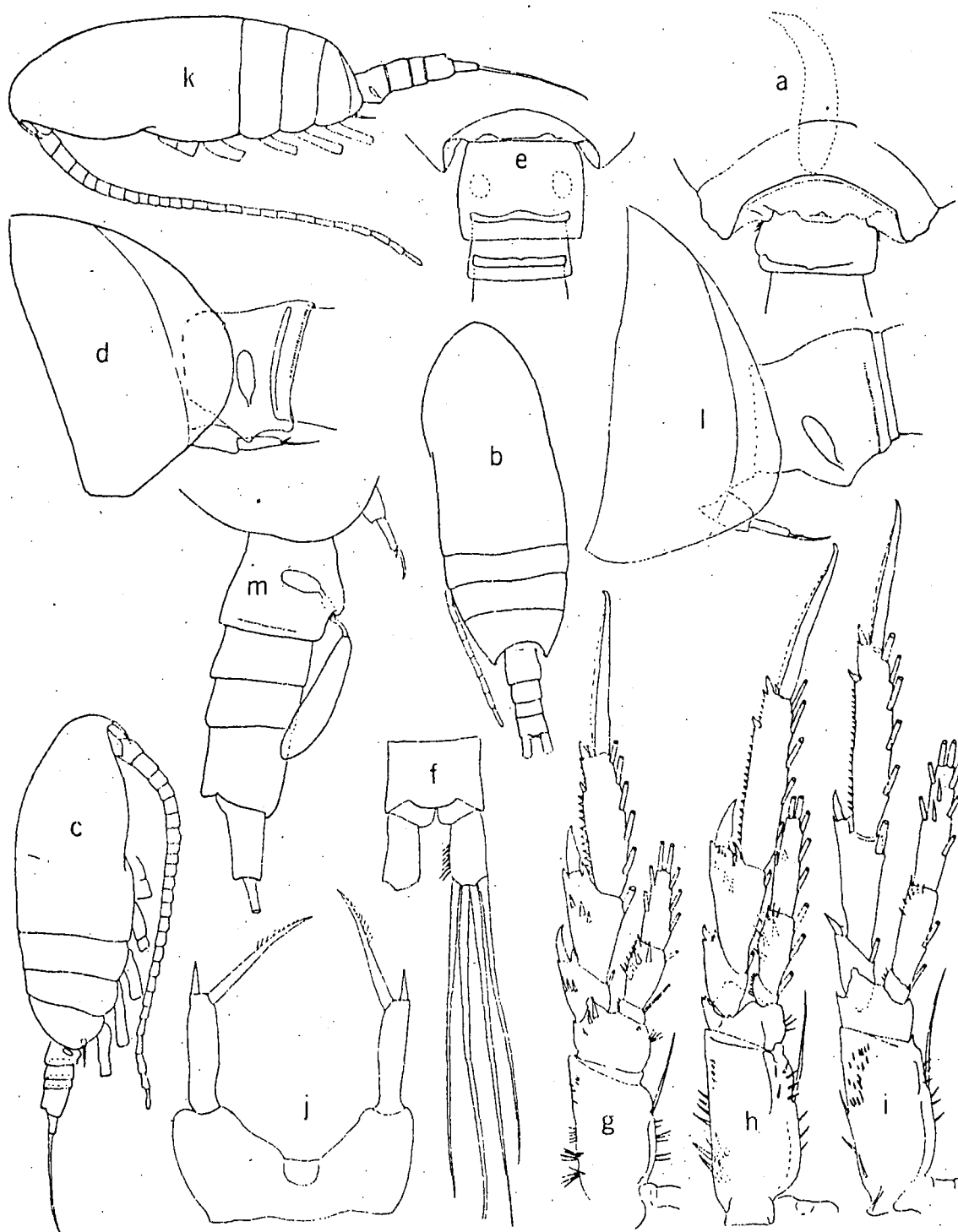


FIGURE 22.—*Paracalanus quasimodo*, new species, ♂: a, posterior prosome and genital segment, dorsal. *Paracalanus indicus*, ♀: b–j, from Gill Cruise 4, Station 35: b, dorsal view; c, lateral view; d, posterior prosome and genital segment, lateral; e, same, dorsal; f, anal segment and caudal rami, dorsal; g–j, legs 2–5. k–l, from Gulf of Naples: k, lateral; l, posterior prosome and genital segment, lateral. m, from Martinique, West Indies; urosome and spermatophore, lateral.

Life History Code

- blank - No information
- 0 - Indeterminable
- 1 - Egg
- 2 - Nauplius
- 3 - Zoea
- 4 - Megalop
- 5 - Veliger
- 6 - Larva
- 7 - Juvenile
- 8 - Adult
- 9 - Combination of 6, 7, and 8
- A - Combination of 7 and 8
- B - Combination of 6 and 7
- C - Juvenile/adult - sexual maturity unknown

ORDER then
should have
some prim. prod.
+ phy. sal. 7-22-76

File Header	FILE	FILE	RECORD TYPE	VESSEL	CRUISE	START DATE			END DATE			AREA/PROJECT	INVESTIGATOR/INSTITUTION					
	TYPE	ID				YR	MO	DY	YR	MO	DY		FILE	INSTITUTION				
Location	FILE	FILE	RECORD TYPE	STATION	LATITUDE			LONGITUDE			DATE (GMT)	TIME (GMT)	DEPTH TO	SAMPLE INTERVAL		BLANK		
	TYPE	ID		NUMBER	DEG	MIN	SEC	N or S	DEG	MIN	SEC	E or W	YR	MO	DY		HR	MIN
Total Haul Data	FILE	FILE	RECORD TYPE	STATION	G	MESH	DURATION	HAUL		TOTAL	TOTAL	TOTAL	TOTAL	VOLUME	BLANK			
	TYPE	ID		NUMBER	E	SIZE	(HRS TO %)	LENGTH	BLANK	SETTLED VOLUME	WATER DISPLACED	DRY WEIGHT OF HAUL	WET WEIGHT OF HAUL	OF WATER FILTERED				
Subsample Data	FILE	FILE	RECORD TYPE	STATION	SAMPLE	TAXONOMIC		SIZE OF	NUMBER	CONCENTRATION	DRY WEIGHT	WET WEIGHT	NUMBER	NUMBER	NUMBER	BLANK		
	TYPE	ID		NUMBER	CODE	LIST	(% TO %)	IN	(NO. PER M ³)	(GRAMS TO 1000)	(GRAMS TO 1000)	OF ADULTS	OF JUVENILES	OF EGGS				
Text	FILE	FILE	RECORD TYPE	STATION	SEQUENCE	TEXT												
	TYPE	ID		NUMBER	NUMBER													

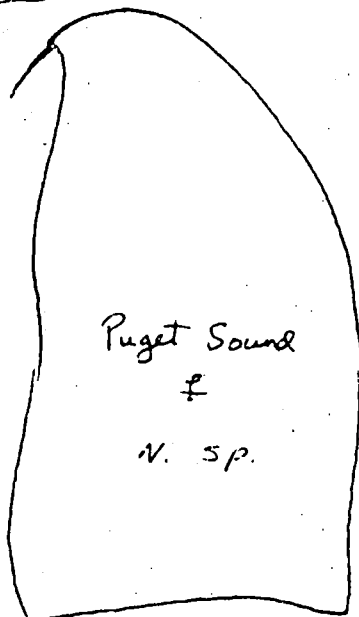
DOCUMENTATION OF
NEW SPECIES
IN THIS DATA SET

Paracalanus m. sp. 53110301

Paracalanus

E. T. E. Bowman

Nov. 25, 1974



spermatheca



Paracalanus m. sp. is quite similar to Paracalanus quasimodo Bowman (1971). Bowman himself has pointed out in the above sketch the most conspicuous differences between the two, i.e., overall size and shape of the prosome and spermatheca.

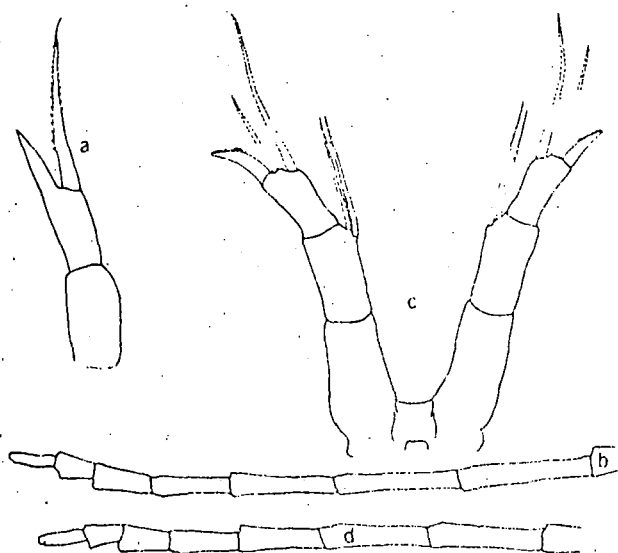


FIGURE 19.—*Rhincalanus rostrifrons*, ♀: a, 5th leg; b, distal segments of 1st antenna, dorsal. *Rhincalanus cornutus*, ♀: c, 5th legs; d, distal segments of 1st antenna, dorsal.

association, the other also a constituent of the shelf association but much less common. The two species were not distinguished at first, and both were enumerated as *P. parvus* in the counts of Cruises 1-3. When I realized that I was lumping two species I examined them in detail and concluded that the less common species is identical with the *P. parvus* of Giesbrecht, which I consider to be *P. indicus* Wolfenden (see under *P. indicus*) and the common species is an undescribed species which I propose to name *Paracalanus quasimodo*.

Paracalanus quasimodo, new species

FIGURES 20-21, 22a

SYNONYMY.—Probably many references to western Atlantic specimens of "*Paracalanus parvus*," summarized by González and Bowman (1965), are attributable to *P. quasimodo*.

DIAGNOSIS.—Female. In *Parvus* group. Body rather stocky for a *Paracalanus*, about 1.0 mm in length. Prosome about 3 times as long as urosome, with characteristic dorsal hump similar to those in some species of *Acrocalanus* but less strongly developed. Forehead not vaulted. Head fused with 1st pedigerous somite; 4th and 5th pedigerous somites separated by indistinct suture. Genital segment rather

broad in relation to length; lateral part of posterior margin sometimes armed with row of minute spinules; lateral surface with cluster of spinules on either side, anterior and dorsal to spermatheca. Spermatheca obovate, distal half often narrower than proximal half. Remaining urosomites relatively broader and shorter than those of *P. indicus*. Antenna 1, 25-merous, often broken at suture between segments 8 and 9, reaching to about posterior margin of caudal ramus.

Legs 1-4 with surface armature as shown in Figures 20h-k; pattern very similar to that of *P. indicus*; basipod conspicuously spinose. Leg 5, terminal spine longer than 2nd segment.

Male. Genital segment with cluster of spinules on either side, otherwise identical with *P. indicus*.

The name is derived from the protagonist of Victor Hugo's classic novel, *The Hunchback of Notre Dame*, and alludes to the distinctive shape of the prosome.

TYPES.—Holotype ♀ (USNM 134484) and allotype ♂ (USNM 134485) from Cruise 4, Station 57, 27 October 1953, off Florida, 33°34'N, 78°24'W.

Paracalanus indicus Wolfenden, new rank

FIGURES 22b-m, 23a

Paracalanus parvus (Claus).—Giesbrecht, 1892:164-199, pls. 1, 6, 9.—Sewell, 1929:68-71, figs. 24-25.

Paracalanus parvus var. *indicus* Wolfenden, 1905:998, pl. 96: figs. 7, 9-11.

DIAGNOSIS.—Female. Body more slender and slightly shorter than *P. quasimodo*, length about 0.9 mm. Prosome about 3.2 times as long as urosome; dorsal hump only slightly or not at all developed, hence prosome not so high in relation to its length as in *P. indicus*. Forehead not vaulted. Genital segment, viewed dorsally, narrower than in *P. quasimodo*, lateral parts of posterior margin with row of minute spinules, without cluster of spinules above spermatheca. Spermatheca subelliptical, not narrowing distally.

Antenna 1 reaching about to posterior margin of anal segment. Armature of legs very similar to that of *P. quasimodo* but slightly less strongly developed.

Male. Identical to *P. quasimodo* except for the lack of spinules on the genital segment.

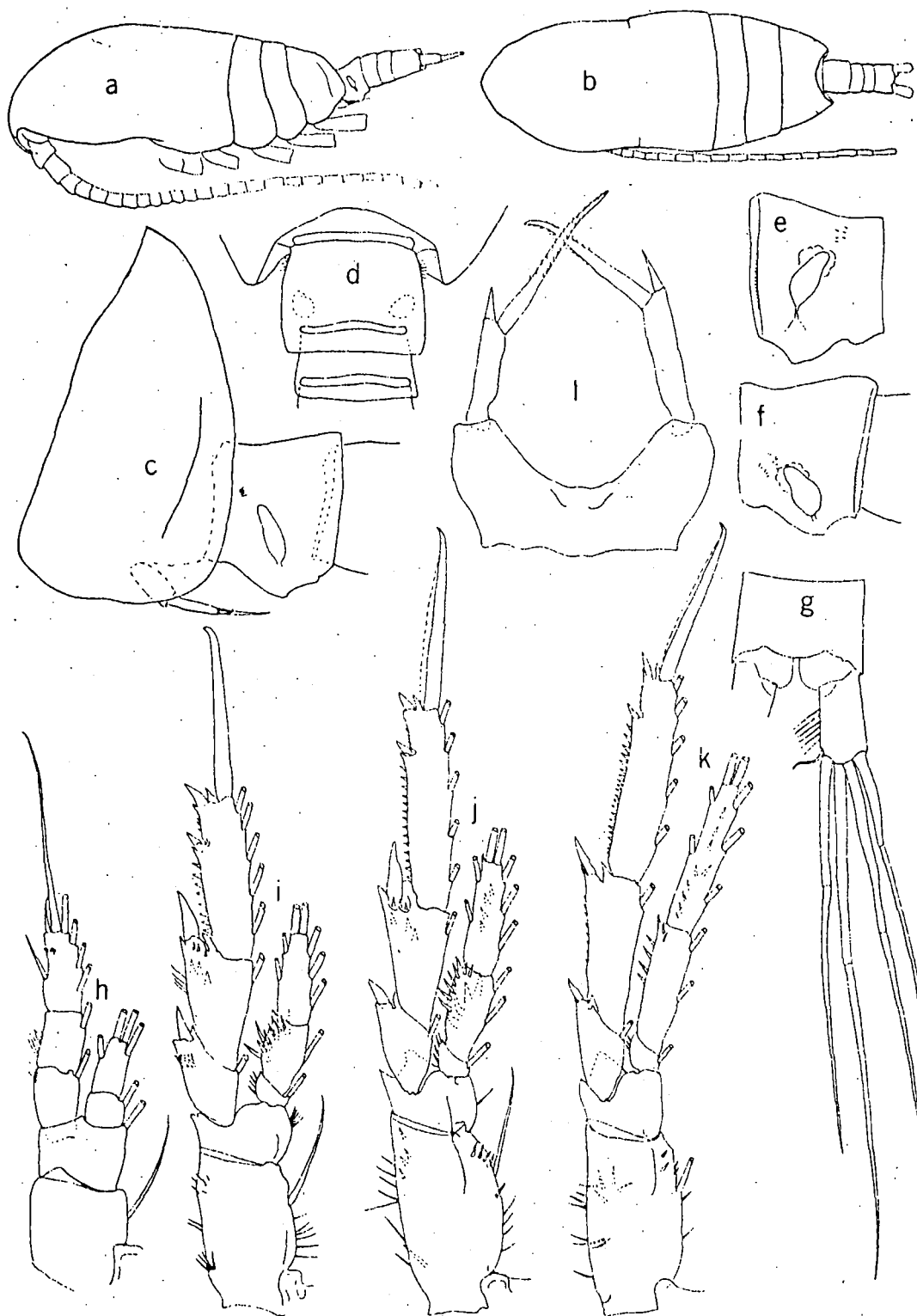


FIGURE 20.—*Paracalanus quasimodo*, new species, ♀: *a*, lateral view; *b*, dorsal view; *c*, 5th pedigerous and genital segments, lateral; *d*, same, dorsal; *e*–*f*, right and left sides of genital segment; *g*, anal segment and caudal rami, dorsal; *h*–*k*, legs 1–4.

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
7601513	F124	TR0497	0082	313F	31CU	1976/02/23	TR0497	300475

(1 row affected)

Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
7601513	F124	TR0497	31CU	27	811	76/02/23	76/02/24

(1 row affected)