ACCESSION NUMBER 77-0825

RECEIVED OCT 3 1977

TR1724

DDF A:3:01

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

NEGOA

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

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

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

Department of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

OCSEAP BLM/NOAA
R.U. #(156) 424

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

File I.D. # DIS004

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Discoverer	ship	U.S.	U.S.	2/21/77	2/26/77

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR ___ MONTH ___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART (SPECIFY BELOW)

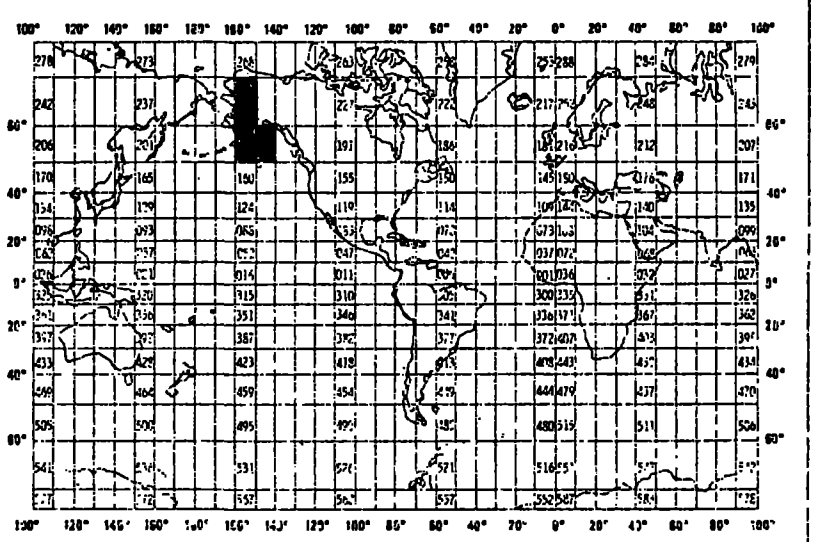
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1)

Dr. T. Saunders English
(206) 543-5077

11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA

Cook Inlet



NOAA FORM 24-13

B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Pelagic fish eggs and larvae	Taxonomic code numbers	NODC Taxonomic Code-March 1977	see attached procedures . .	. . . . .
Commercially important crab and shrimp larvae	Taxonomic code numbers	NODC Taxonomic Code-March 1977	see attached procedures . .	. . . . .

NOAA FORM 24-13

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, 5, 6, (column 10) used in OCSEAP file type 024 (zooplankton).

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

Record type 1 File Header
2 Location
3 Total Haul
6 Subsample
5 Text

No record type 4 cards were used.

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

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER David Roetcisoender
ADDRESS Dept. of Oceanography WB-10, Univ. of Washington, Seattle, WA 98195

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE ☐ BCD ☐ BINARY ☐ ASCII ☐ EBCDIC ☐ _____

6. NUMBER OF TRACKS (CHANNELS) ☐ SEVEN ☐ NINE ☐ _____

7. PARITY ☐ ODD ☐ EVEN

8. DENSITY ☐ 200 BPI ☐ 1600 BPI ☐ 556 BPI ☐ 800 BPI ☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH ☐ _____

10. END OF FILE MARK ☐ OCTAL 17 ☐ _____

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

12. PHYSICAL BLOCK LENGTH IN BYTES

13. LENGTH OF BYTES IN BITS

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
File type 024 with parameters not sampled, lined out on following pages.					
Station number (Location card)	11	5	bytes	A5	Station numbers are alphanumeric and change with different mesh sizes (e.g. #1 for 333u mesh and #A1 for 505u mesh).
Text (Text card)	20	61	bytes	61A1	Amplification of egg size classes, lengths of larvae, stages of crab and shrimp larvae and subspecies taxonomic codes.

RECORD NAME File Header (Zooplankton)

14. FIELD NAME	15. POSITION FROM-1, MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
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

USCOMM-DC 44780-P72

RECORD FORMAT DESCRIPTION

5/17/77

CORD NAME Location (Zooplankton)

FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
le Type	1	3	Bytes	A3	Always '024'
le Identifier	4	6	Bytes	A6	
cord Type	10	1	Bytes	I1	Always '2'
tation Number	11	5	Bytes	A5	
titude,					
Degrees	16	2	Bytes	I2	
Minutes	18	2	Bytes	I2	
Seconds	20	2	Bytes	I2	
Hemisphere	22	1	Bytes	A1	'N' or 'S'
ngitude,					
Degrees	23	3	Bytes	I3	
Minutes	26	2	Bytes	I2	
Seconds	28	2	Bytes	I2	
Hemisphere	30	1	Bytes	A1	'E' or 'W'
ate in GMT,					
Year	31	2	Bytes	I2	
Month	33	2	Bytes	I2	
Day	35	2	Bytes	I2	
ime in GMT,					
Hour	37	2	Bytes	I2	
Minute	39	2	Bytes	I2	
epth to Bottom	41	5	Bytes	I5	To whole meters
ample Interval,					
Upper	46	4	Bytes	I4	To whole meters
Lower	50	4	Bytes	I4	To whole meters

AA FORM 24-13

USCOMM-DC 44289-P72

RECORD NAME Location (Zooplankton)

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
Ship Speed	54	3	Bytes	I3	Knots to tenths
Surface Water Temperature	57	3	Bytes	I3	Degrees Celsius to tenths
Blank	60	21	Bytes	21X	

USCOMM-DC 44289-P72

RECORD NAME Total Haul Data (e.g. Plankton)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
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
Duration of Tow	61	6	Bytes	3I2	Hours, minutes and seconds (this field replaces Duration Field when further precision is required)
Haul Type Code	67	1	Bytes	A1	D = Double Oblique H = Horizontal S = Step Oblique V = Vertical
Blank	68	13	Bytes	13X	

RECORD NAME Subsample Data 2 (Zooplankton)

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	UNITS	17. ATTRIBUTES	18. USE AND MEANING
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	

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.

RECORD NAME Text (Zooplankton)

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	UNITS	17. ATTRIBUTES	18. USE AND MEANING
File Type	1	3	Bytes	A3	Always '02h'
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	

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALIBRATED (√)
		YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME) (√)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√)	ONLY AFTER REPAIR (√)	ONLY WHEN NEW (√)	
-----	------- see	attached proc	edures ----	------	------	-------	------	----	--

NOAA FORM 24-13

Procedures and Quality Control for R.U. (156) 424

NOAA Discoverer Leg I, 02/21/77 - 02/26/77

1. Procedures - Field and Laboratory

Zooplankton and ichthyoplankton were sampled with a bongo net in a double oblique tow. The bongo net consisted of a double-mouthed frame (each mouth with an inside diameter of 60 cm and a mouth area of 0.2827 m^2) made of fiber glass and weighing 95 lbs (a 100 lb weight was also attached to this net). A 333 µm mesh net with an open area ratio (OAR) of 8:1 and a 505 µm mesh net, 8:1 OAR, were attached to the frame. A TSK flow meter was mounted in the mouth of each net to determine the volume of water filtered. A bathykymograph (BKG) was attached to the frame to determine the depth of tow. Double oblique tows required deployment at 50 m/min, a 30 sec soaking time, and retrieval at 20 m/min. A towing speed of 3-4½ knots was typical. The sampling depth for double oblique tows was usually 200 m following standard MARMAP procedures. In shallower water, the net was placed as close to the bottom as possible without endangering the net. Several subtractive hauls were made at stations that showed a strong acoustic scattering layer to help determine the composition of that layer.

Samples were placed in 1000-ml bottles and preserved with a stock solution of formalin, propylene glycol, propylene phenoxetol and sea water in a 2:8 ratio. The solution was changed and the sample preserved 24 hrs later. A label was filled out and inserted in the jar. The jar was capped and sealed with plastic electrical tape for shipment and storage.

Fish eggs, larvae, crab and shrimp larvae were sorted by students. Whole samples were sorted if numbers of organisms were less than 200. Samples with larger numbers of organisms were split using a Cooney-Halstead (unpubl.) splitter. Splits were limited in number so that at least 100 fish eggs, fish larvae, crab larvae or shrimp larvae remained in the subsample. Organisms were identified and counted by trained personnel using a dissecting microscope. Crab and shrimp larvae (zoea) were identified to stages of development and reported on text cards (5 in column 10).

Fish eggs were categorized into four size classes with a list of possible fish for each category (Table 1). The identity of many eggs is uncertain unless live samples are available so that pigment color can be used, thus necessitating this tabulation. Text cards (Record Type '5') following subsample data cards (Record Type '4') have egg size class listed, followed by actual measurements of eggs to the nearest hundredths of a millimeter in diameter. If more than three eggs, the largest and the smallest are measured. Eggs include all stages of eggs prior to hatching

Table 1. List of Possible Fish for Egg Size Categories

- 1 mm category (0.74-0.88 mm)

Limanda aspera
Limanda proboscidea

1 mm category (0.90-1.28 mm)

Gadus macrocephalus
Isopsetta isolepis
Parophrys vetulus
Platichthys stellatus
Psettichthys melanostictus

2 mm category (1.30-2.54 mm)

Bathylagus stilbius
Eopsetta jordani
Glyptocephalus zachirus
Lyopsetta exilis
Microstomus pacificus
Pleuronectes quadrituberculatus
Pleuronichthys coenosus
Pleuronichthys decurrens
Theragra chalcogramma

3 mm category (2.56-3.90 mm)

Hippoglossoides elassodon
Hippoglossoides robustus
Hippoglossus stenolepis

1. Procedures (cont.)

Fish larvae include newly hatched and all stages prior to metamorphosis. Larvae if less than 10 mm in length are measured to the nearest tenth of a millimeter under a microscope using a calibrated micrometer eye piece. Larvae are measured by standard length. Juveniles (or young) include fish after metamorphosis to acquisition of adult fin rays and adult body configuration. Adults include fish that are sexually mature. Larvae, juveniles or adults, if 10 mm or greater in length are measured by a metric ruler to the nearest millimeter. If more than three larvae, juveniles or adults, the largest and the smallest are measured.

Only commercially important crab and shrimp larvae were identified. Crab larvae were sorted from the 505 um mesh netsonly and identified as megalopa or zoea. Zoea include all stages prior to megalopa. Shrimp larvae were identified to zoea, juvenile or adult. Juvenile shrimp are post-zoeal stages, i.e. have an adult body configuration but possess certain zoeal characteristics such as long exopods on the walking legs.

Decapoda

(1) Taxon code numbers 6183 and 6188 .... have been used for unidentified non-commercially important crab larvae, either Section Anomura or Brachyura.

(2) Taxon code 617916 .... has been used for unidentified non-commercially important shrimp larvae of the family Hippolytidae. They were the only non-commercially important shrimp larvae sorted and counted because of their close resemblance to pandalid larvae.

2. Instrument Calibrations

The TSK flowmeters were initially received with calibration data already calculated by the company. Calibrations are checked annually by towing the flowmeters over a measured distance at an approximate sampling speed of 3 kts.

The following formulae from the CALCOFI manual was used to compute the quantity of water filtered for each net tow using a TSK flowmeter:

$$\frac{\text{total revolutions}}{\text{duration (secs)}} = \text{rev./sec.}$$

$$\text{rev./sec.} \longrightarrow \begin{matrix}\text{read}\\ \text{off}\\ \text{chart}\end{matrix} \longrightarrow \text{meters/rev.} = \text{factor}$$

factor x 0.2827 m^2 (mouth area of 60 cm bongo net) x total rev.

= volume filtered m^3

2. Instrument Calibrations (cont.)

Ships speed was calculated by taking the average of the two TSK flowmeters and multiplying by 1.9425 = knots.

The BKG's (bathykymograph's) helical springs were calibrated by immersing the instrument to a series of known depths and then identifying the corresponding points on the resulting trace. The BKG's are calibrated annually.

CORRECTIONS 77-0825

File ID DIS004 changed to TR1724

on station A11, CD type 3, data in cols 62-66 shifted to cols 63-67 - data in Duration of tow was right justified and the alpha D put in correct col 67

18 master records, CD type 2, inserted with their respective detail records
Stations: A1, A2, C2, A3, A4, A5A, C5A, E5A, G5A, A6, C6, E6, G6, A7, A8, A9, A10, A11