NAFC - PLANKTON SORTING AND

IDENTIFICATION FORMAT FOR

MARINE PLANKTON

FORMAT 4

MAY 1985

(REVISED APRIL 5, 1989)

(REVISED DECEMBER 6, 1989)

(REVISED NOVEMBER 18, 1991)

(REVISED MARCH 1, 1994)

(REVISED FEBRUARY 9, 1999)

NOTE: ANY CHANGES TO BE COORDINATED WITH DARLENE FIANDER

c:\john\pelagic\plank\_sort\_ident.doc

NAFC - PLANKTON SORTING AND IDENTIFICATION

FIELD POSITIONS CODES

1 NOT USED

SHIP 2-4 ATC - A. T. CAMERON

BAF - BAFFIN

BOS - BOSTON WHALER

DAW - DAWSON

EEP - E. E. PRINCE

GAD - GADUS ATLANTICA

HAM - LADY HAMMOND

HAW - NFLD. HAWK

HUD - HUDSON

KAP - KAPITAN SHAITANOV

KLI - KLINTSKY (USSR DATA)

KOK - KOKSHAISK (USSR DATA)

MAR - MARINUS

NEE - A. NEEDLER

PAN - PANDORA II

PAR - PARIZEAU

PET - PETREL

SHA - SHAMOOK

SIB - SMALL INSHORE BOAT

TEL - TELEOST

TEM - WILFRED TEMPLEMAN

ZAG - ZAGREB

TRIP 5-7 ACTUAL TRIP NUMBER

STATION 8-10 SEQUENTIAL OR PRE-SET STATION NUMBER WITHIN A TRIP

YEAR 11-12 1999 = 99

DAY 13-15 JULIAN DAY OF THE YEAR SAMPLING STARTED

BOTTOM DEPTH 16-19 DEPTH OF BOTTOM OVER WHICH SAMPLE WAS

COLLECTED (IN METRES)

NAFC - PLANKTON SORTING AND IDENTIFICATION

FIELD POSITIONS CODES

LATITUDE 20-24 LATITUDE AT START OF SAMPLING IN DEGREES AND MINUTES TO 1 DECIMAL

47 30 30 = 47305

LONGITUDE 25-29 AS PER LATITUDE

NAVIGATION 30-31 1 - DEAD RECKONING

METHOD 2 - SEXTANT

3 - DECCA

4 - LORAN C

5 - SATELLITE NAVIGATION

6 - NAVALL

7 - BIONAV

8 - GPS

32-37 NOT USED

GEAR 38-39 1 - BONGO 61 CM SIDE UNSPECIFIED

2 - BONGO 61 CM LEFT

3 - BONGO 61 CM RIGHT

4 - BONGO 20 CM SIDE UNSPECIFIED

5 - BONGO 20 CM LEFT

6 - BONGO 20 CM RIGHT

10 - CONE NET 50 CM - VERTICAL

11 - CONE NET 80 CM - VERTICAL

12 - CONE NET 100 CM - VERTICAL

13 - CONE 75 CM - VERTICAL

16 - CONE NET 50 CM - HORIZONTAL

17 - CONE NET 75 CM - HORIZONTAL

18 - CONE NET 100 CM - HORIZONTAL

22 - TUCKER TRAWL (8 SQ. METRES OPENING)

23 - TUCKER TRAWL (4.5 SQ. METRES OPENING)

24 - RMT 1 + 8 (NIO)

25 - RMT 8 (NIO)

26 - FILMAR 2 SQ. METER PLANKTON NET

30 - ISAAC KIDD MWT

33 - IYGPT TRAWL

(CONT’D)

NAFC - PLANKTON SORTING AND IDENTIFICATION

FIELD POSITIONS CODES

GEAR (CONT’D) 38-39 41 - MOCSSY NET 1

42 - MOCSSY NET 2

43 - MOCSSY NET 3

44 - MOCSSY NET 4

45 - MOCSSY NET 5

46 - MOCSSY NET 6

47 - MOCSSY NET 7

48 - MOCSSY NET 8

49 - MOCSSY NET 9

51 - 20X20 SOVIET PELAGIC TRAWL

MESH SIZE 40-43 MESH SIZE OF NET TO 3 DECIMALS

(E.G. 0.333 MM = 0333)

9999 = .333 AND .505 MM MESH COMBINATION

9998 = 1.000 MM & .505 MM & .333 MM FILMAR

WATER VOLUME 44-49 VOLUME OF WATER FILTERED BY NET TO

NEAREST METER CUBED (M3)

START TIME 50-53 START TIME OF SAMPLE IN GMT 24-HR CLOCK

1 P.M. = 1300

END TIME 54-57 END TIME OF SAMPLE (AS PER START)

MIN. DEPTH 58-61 MINIMUM DEPTH OF SAMPLE IN METRES

MAX. DEPTH 62-65 MAXIMUM DEPTH OF SAMPLE IN METRES

PLANKTON 66-69 VOLUME OF PLANKTON IN SAMPLE TO

VOLUME NEAREST MILLILITRE (MLS)

PLANKTON 70-74 WET WEIGHT OF PLANKTON IN SAMPLE TO

WEIGHT NEAREST GRAM (G)

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GEAR STATUS 75-76 OPERATION OF GEAR

1 - COMPLETELY SUCCESSFUL

2 - PAIRED BONGO - 1 SIDE ONLY

3 - SOME GEAR DAMAGE; REMAINING SAMPLE

KEPT

10 - UNSUCCESSFUL

SAMPLE STATUS 77-78 1 - COMPLETE SAMPLE

2 - VOLUME/WEIGHT ONLY AVAILABLE

3 - ICHTHYOPLANKTON ONLY AVAILABLE

4 - ZOOPLANKTON

5 - ICHTHYOPLANKTON EXAMINED - NO SPECIES

FOUND

6 - ZOOPLANKTON EXAMINED - NO SPECIES

FOUND

7 - CAPELIN AND HERRING ONLY REMOVED

8 - ICHTHYOPLANKTON ONLY; SAMPLE

INCOMPLETE FOR CAPELIN

10 - ZOOPLANKTON ADDITION -

ICHTHYOPLANKTON DONE PREVIOUSLY

11 - ICHTHYOPLANKTON ADDITION -

ZOOPLANKTON DONE PREVIOUSLY

12 - ZOOPLANKTON ADDITION - NO SPECIES

FOUND

13 - ICHTHYOPLANKTON ADDITION - NO SPECIES

FOUND

20 - SAMPLE NOT PROCESSED

SAMPLE QUALITY 79 1 - FULL QUANTITATIVE SAMPLE

2 - NON-QUANTITATIVE SAMPLE (INCOMPLETE OR

DAMAGED)

3 - SAMPLE NOT PROCESSED

4 - AT SEA SUBSAMPLE

TOW DURATION 80-84 NET TOW TIME IN SECONDS

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FIELD POSITIONS CODES

CONVERSION 85-90 MULTIPLIER (TO ONE DECIMAL), FOR CONVERSION

FACTOR OF SUBSAMPLE TO TOTAL CATCH

CF = (1/(SUBSAMPLE MLS/TOTAL MLS))

EXAMPLE (FOR TOTAL MLS. = 2000) :

SUBSAMPLE MLS CF

50 400

100 200

150 133

200 100

250 80

300 67

350 57

400 50

1000 20

2000 10

SUBSAMPLING 91-92 1 - NO SUBSAMPLING

METHOD 2 - MOTODA PLANKTON SPLITTER

3 - FOLSOM PLANKTON SPLITTER

4 - BEAKER TECHNIQUE

5 - STEMPEL PIPETTE

6 - MOTODA SPLITTER AND STEMPEL PIPETTE

7 - AT SEA SUBSAMPLING FOR CAPELIN AND

HERRING ONLY

PRESERVATION 93 PRESERVATIVE USED

1 - FORMALIN (5%, NA2B407 BUFFER)

2 - ETHANOL (95%)

3 - NOT PRESERVED

4 - ETHANOL (100%)

5 - FIXED IN FORMALIN (5%) BUT PRESERVED

IN ETHANOL (100%)

6 - FORMALIN (5%, NA2PO4)

7 - LIVE MEASUREMENTS

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FIELD POSITIONS CODES

SPECIES CODE 94-99 SIX-LETTER ALPHA CODE - (FOY AND ANDERSON

1986 FISHERIES AND AQUATIC SCIENCES DATA REPORT #595)

“NOFISH” IF NO SPECIES PRESENT IN SAMPLE

LIFE STAGE 100-102 SEE APPENDIX I

STATE 103-104 1 - GOOD CONDITION

2 - FISH EGGS - DEAD

3 - FISH EGGS - DEAD AND COLLAPSED

4 - FISH EGGS - COLLAPSED IN ALCOHOL

5 - LARVAE - POOR CONDITION - MEASURABLE

6 - LARVAE - POOR CONDITION - NOT

MEASURABLE

7 - HEADS ONLY

8 - TAILS ONLY

9 - FRAGMENTS

10 - DAMAGED

MEASUREMENT 105-106 1 - STANDARD LENGTH

METHOD 2 - TOTAL LENGTH

3 - FORK LENGTH

4 - NOTOCHORD LENGTH, NON-FLEXION

5 - DIAMETER

6 - NOT MEASURED

107-108 NOT USED

SIZE 109-112 MILLIMETRES TO 1 DECIMAL

N.B. FOR STANDARD LENGTH, MEASURE LARVAE

TO THE END OF THE NOTOCHORD IN PRE-FLEXURE

LARVAE AND TO THE END OF THE HYPURAL PLATE IN POST-FLEXURE LARVAE. WHERE MEASUREMENTS TO 0.1 MM IS NOT POSSIBLE, USE MM SIZE RANGES I.E. FROM 6.5 TO 7.4 = 7.0 MM

NAFC - PLANKTON SORTING AND IDENTIFICATION

FIELD POSITIONS CODES

NUMBER 113-118 NUMBER OF EACH SIZE OR SPECIES COUNTED IN

SAMPLE OR SUBSAMPLE FOR EACH SPECIES-

STAGE

STATE, PER MM SIZE GROUP FOR FISH

119-120 NOT USED

SPECIES CODE 121-130 TEN-DIGIT NUMERIC SPECIES CODE (FOY AND

ANDERSON 1986 DATA REPORT #595)

“0000000000" IF SPECIES = “NOFISH”

FOY, M. G., AND J. T. ANDERSON. 1986. MARINE PLANKTON COMPUTER CODES

FOR THE NORTHWEST ATLANTIC FISHERIES CENTRE. CAN. DATA REP.

FISH. AQUAT. SCI. NO. 595. 94 P.

APPENDIX I - LIFE HISTORY STAGE CODES

These codes consist of a 3-digit numeric code assigning a life history stage to a corresponding taxonomic classification. There are five categories: EGGS, NAUPLII, COPEPODITES, LARVAE and JUVENILES. A life history stage must be coded with each taxonomic classification code.

EGGS

CODE STAGE

200 EGGS (NS)

210 INVERTEBRATE EGGS - NOT SPECIFIED

211 INVERTEBRATE EGGS - CALANOID

212 INVERTEBRATE EGGS - CYCLOPOID EGG MASSES

250 FISH EGGS - NOT SPECIFIED

251 FISH EGGS - STAGE I

252 FISH EGGS - STAGE I-1

253 FISH EGGS - STAGE I-2

254 FISH EGGS - STAGE II

255 FISH EGGS - STAGE III

256 FISH EGGS - STAGE IV

257 FISH EGGS - DEAD OR COLLAPSED

NAUPLII

CODE STAGE

300 NAUPLII - NOT SPECIFIED

311 NAUPLII - STAGE I

312 NAUPLII - STAGE II

313 NAUPLII - STAGE III

314 NAUPLII - STAGE IV

315 NAUPLII - STAGE V

316 NAUPLII - STAGE VI

351 NAUPLII SIZE - < 0.2 MM (0.005 MG)

352 NAUPLII SIZE - 0.21 - 0.40 MM (0.0075 MG)

353 NAUPLII SIZE - > 0.41 MM (0.010 MG)

COPEPODITES

CODE STAGE

400 COPEPODITE - NOT SPECIFIED

404 COPEPODITE - STAGE IV-V

405 COPEPODITE - STAGE I-II

406 COPEPODITE - STAGE III-IV

407 COPEPODITE - STAGE V-VI

408 COPEPODITE - STAGE I-IV

409 COPEPODITE - STAGE I-III (ADDED 25 JUNE 87 JTA)

410 COPEPODITE – STAGE I-V (ADDED 01 OCT 2020 DB)

411 COPEPODITE - STAGE I

412 COPEPODITE - STAGE II

413 COPEPODITE - STAGE III

414 COPEPODITE - STAGE IV

415 COPEPODITE - STAGE V

416 COPEPODITE - STAGE VI - NOT SPECIFIED

417 COPEPODITE - STAGE VI - FEMALE (0)

418 COPEPODITE - STAGE VI - MALE (0)

420 COPEPODITE - CYCLOPOID < OR - 0.4 MM

421 COPEPODITE - CYCLOPOID - 0.4 - 0.8 MM

422 COPEPODITE - CYCLOPOID > 0.8 MM

NOTE: ADULT MALE AND FEMALE COPEPODS HAVE BEEN CODED USING 651, 652 AND POSSIBLY 650.

LARVAE

CODE STAGE

500 LARVAE - NOT SPECIFIED

510 INVERTEBRATE LARVAE - NOT SPECIFIED

520 FISH LARVAE - NOT SPECIFIED

521 FISH LARVAE - PRE-FLEXION

522 FISH LARVAE - FLEXION

523 FISH LARVAE - POST-FLEXION

524 FISH LARVAE - NON-FLEXION (NOTOCHORD)

525 YOLK SAC LARVAE

540 TROCOPHORE – POLYCHAETE

550 CYPRIS (added 21 Dec 2020)

555 CALYPTOSIS

560 FURCILLIA

570 ZOEA

580 MEGALOPS

590 VELIGER - GASTROPODS

JUVENILE

CODE STAGE

600 JUVENILE - NOT SPECIFIED

610 INVERTEBRATE JUVENILE

620 FISH JUVENILE

650 ADULT - NOT SPECIFIED

651 ADULT - FEMALE 90)

652 ADULT - MALE (0)

660 POST LARVAE

700 LIFE STAGE - NOT SPECIFIED

ADDITIONAL INFORMATION FOR CODER

The coding form is set up for 6 different levels of coding, P1 - P6. The basic rule to follow in coding data onto these forms is that when any value/field for a particular “P” level changes, then all values/fields for that “P” level must be coded, plus all values/fields for all subsequent “P” levels. Otherwise, the fields are left blank.

Additional comments include:

No leading zeros.

No decimals.

Utilize complete page for species unless there is a change in any header info.

Do not repeat header info unless there is a change in header.

EG: For MOCSSY samples, header level P3 will change as GEAR increments, there is

no need to repeat fields in header levels P1 and P2.

Do not repeat : Species name

Stage

State

Measurement type

Unless there is a change in any one of these fields and then repeat all fields in level P5 only.

If a page is filled, just continue with another blank form using the fields in P5 and P6 only.

For SIZE move unrecorded decimal 1 place to right.

EG: An egg measuring 0.5 mm should be recorded as 5.

An egg measuring 1.2 mm should be recorded as 12.

A larvae measuring 5 mm should be recorded as 50/

A larvae measuring 15 mm should be recorded as 150.