

Cooperative Monkfish Survey
Feb. 26-April 6, 2001

Standard Operating Procedures

I. Towing

Tow duration: 30 minutes (from time winches locked to time winches engaged for haul back)

Tow speed: 2.5 knots (Mary K.) 3.0 knots (Drake)

Tow direction: tow along depth contour, towards next station if possible, okay to curve tow track to avoid fixed gear

Scope: in depths \leq 120 fathoms (220 m) 3:1 fathoms of wire
in depths $>$ 120 fathoms (220 m) 2:1 plus 25 fathoms of wire

Shake out net as comes up on every tow so that we do not have fish remaining in the net from previous tows!!

II. Station locations

Station location marks start point of tow. Computer plotter package has stations marked as random or industry.

If location is not towable for any reason, relocate station as close as possible at similar depth.

For slope areas where it is possible to make deeper tows, add stations to explore the outer depth distribution of monkfish. General guideline for when to continue to tow: Previous tow has caught at least 5 monkfish. Continue adding stations at 50 fathom increments in depth until catch drops below 5 monkfish per tow.

III. Sampling Priorities

1. **Weight** of the catch of each species
2. **Length composition** for each species (subsample freely for all species but goosfish. Subsample goosfish lengths only if catches are very large and size composition is uniform)

3. Detailed **biological sampling for goosefish**: individual lengths, individual weights, food habits, sex, maturity, vertebra removed for ageing.

Sampling rate for biological samples:

10-19 cm	3/tow
20-29 cm	3/tow
30-39 cm	3/tow
40-49 cm	3/tow
50-59 cm	4/tow
60-79 cm	1 per 1 cm
>= 80	all

Sampling rate for food habits:

1 goosefish for every 5 cm interval (per tow). Food habits sampling is lower priority than the other biological sampling for monkfish.

Check carefully for blackfin monkfish – see species ID photo's.

4. Special request priorities (**see notebook section on Special Requests**):

- a) Red crab – measure to nearest mm (NOT CM!) using calipers if time permits. Get length composition by sex for each tow.
- b) Summer flounder
- c) Witch flounder
- d) cephalopods
- e) skates
- f) sponges

IV. Logs

Use standard NEFSC survey log sheets and coding and additional “tow log” provided for recording haul information.

V. Electronics

Refer to Chad's instruction sheets (where available) or the manufacturers handbooks for operation.

Download and examine inclinometer and temperature data between every tow. The inclinometer data are critical, so we need to closely monitor its operation. Back up data to zip drive every tow. Follow Chad's sheets for naming conventions for the downloaded files.

Reset computer clock using GPS time every day.

VI. Communications

Daily email to Steve Murawski [or Anne Richards on leg 2] copied to the other vessel, sent at around 10:00 a.m., summarizing progress and any issues/concerns which arise.

VII. Miscellaneous

If pots come up in a haul, retain them if they have ID, but cannot be returned to the water.