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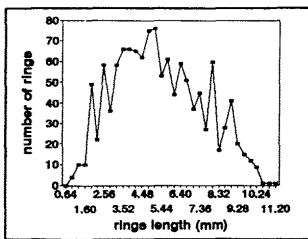
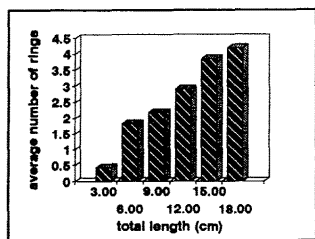
This work is part of a wide research project aimed to clarify the growth pattern of Mediterranean hake, *Merluccius merluccius* L. Identification of the first winter annual ring is a primary goal to understand the pattern of otolith rings formation. Examined otoliths came from fishes collected both by sampling of commercial landings and by trawl surveys carried out in the Northern Tyrrhenian Sea from October 1990 to September 1991. Otolith rings were measured along their longitudinal axis through a micrometric binocular according to a methodology suggested by ALDEBERT Y., MORALES-NIN B. and OLIVER P. in the frame of the EEC research project MA-1-232 (pers. comm.). Fish length composition of the sample was restricted to fish smaller than 21.0 cm in total length (T.L.) to ensure the coverage of all rings formed during the first year of life. Two specimens were sampled for each 1 cm size class in T.L. every month. Here we deal with one aspect only of the problem that is in a sample of otolith rings those formed periodically rather than occasionally will appear more often. Moreover a consistent measurement of the length of all rings on every otolith of a sample will produce a frequency distribution of length at which rings occur in the studied sample.

Fig. 1 shows the average number of visible rings measured in each otolith by 3 cm size class of T.L. It is evident that the number of false rings change in accordance with T.L., at least in the first 20.0 cm of fish T.L.; an overall average number of 4 false rings has been found and we can have up to 9 rings in the last size class of 18.0 cm. These findings are similar to those reported by GONI (1983) and GONI and PINEIRO (1988).

The overall frequency distribution of rings length by 0.32 mm size class is shown in Fig. 2. This distribution exhibits several modes that need a further analysis in order to be explained. Splitting of this polymodal distribution through Bathacharya's method is currently in progress.

Fig. 1: average number of rings by 3 cm T.L. size class

Fig. 2: frequency distribution of otolith rings measurements



REFERENCES

- GONI R., 1983. - *ICES, C.M.* 1983/G:10.
GONI R. & PINEIRO C., 1988. - *ICES, C.M.* 1988/G:18.