

JOINT SESSION OF
SPECIES INTERACTION AND FOOD STUDIES

Chairman: K. Hoydal
Rapporteur: N. Daan

During a Joint Session of the Biological Oceanography Committee, the Pelagic Fish Committee, the Baltic Fish Committee and the Demersal Fish Committee the papers referring to biological interaction were presented. Although "Food and feeding studies of fish in relation to multispecies assessment" had been set as special topic for two Committees at the Statutory Meeting in 1981, the large number of papers presented already this year indicates that the interests in this field is growing rapidly.

The report of the ad hoc Working Group on Multispecies Assessment Model Testing (C.M.1980/G:2) was briefly summarised. Following the conclusions of the Group, the Committee passed a recommendation to urge the countries with interests in the North Sea to secure both the research vessel effort and analytical labour in order to get a large-scale stomach sampling programme for cod, saithe, whiting, mackerel and haddock started in 1981.

Six papers (C.M.1980/L:59, L:60, L:61, L:62, L:63 and L:64) dealt with aspects of the stomach sampling programme, which has been carried out for a number of years now by the Northeast Fisheries Center in Woods Hole. This direct response to a request from the ad hoc Working Group to make available information about general aspects of this programme was greatly appreciated, because it will facilitate the solution of logistic problems with which the coordinators of this project are faced.

Differences in the ratio of demersal and pelagic productive levels between the North Sea and Georges Bank were observed in relation to lower trophic levels (see paper L:64). This suggests that the food webs are different in both areas. The greatest discrepancy is in the consumption estimates of particulate primary production. This is an important subject for additional research, and scientists on both sides of the Atlantic are encouraged to pursue studies to refine the initial consumption estimates.

Special attention was drawn to the conclusions of the review paper on digestion in fish (C.M.1980/L:59), which are in direct agreement with the recommendation in the report of the ad hoc Group that there is a strong need for a systematic study of digestion rates in important fish species with respect to effects of food type, particle size, meal size and predator size.

A simple ecosystem model, developed primarily to study simple ways to have the responses of such a model, corresponding to what is generally known from the real world was presented (C.M.1980/L:26). Although serious doubts were expressed about the possibility to test this model, some features evoked an interesting discussion. The division of a prey stock in a "healthy" compartment and a "displaced" compartment which suffers from starvation and the formulation of largely independently varying predation mortalities on these two compartments was in particular considered to be worthwhile investigating further.

Two papers (C.M.1980/L:27, L:28) were presented on feeding experiments of larval herring, which also dealt with models to interpret the results in term of prey selection and rate of intake. This approach appeared to be very promising in respect of a better understanding of larval food consumption.

Regretfully, seven papers (C.M.1980/G:36, H:10, H:33, G:23, G:37, G:43) had to be deferred to a late afternoon session on Friday.

Two papers: on stomach contents of cod and whiting on Nephrops trawling grounds in the North Sea were presented. These papers might become especially useful when abundance estimates of the predators in those areas become available so that predation mortality can be directly estimated.