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ANNALES BIOLOGIQUES FOR 1973 - INTRODUCTION TO PLANKTON CONTRIBUTIONS

There are the same number of contributions to this chapter as last year, but with a slightly different coverage. There is more information about the northern areas, and less about the southern.

In the eastern part of the Irminger Sea the spring outburst came about a month later than usual, and the amount was with few exceptions lower, or much lower, than the long-term mean. Copepods were also below average in the eastern part; in the western part they were abundant in the early months. The larvae Sebastes were again very abundant in the eastern area, while the amount in the western area was close to the long-term mean.

Soviet investigations of the primary production in the Norwegian Sea showed good agreement with the corresponding values in 1971, the highest production was found in the Jan Mayen area. Joint investigations gave a pattern of phytoplankton distribution somewhat different from that of the previous years; there was an intensive blooming of diatoms in the southern Norwegian Sea. The zooplankton biomass was close to normal in the northern part, and extremely low in the southern part. Averaged over the whole area, the biomass was the lowest so far observed.

Soviet investigations northwest of Northern Norway showed an intensive blooming of phytoplankton, followed by an extremely high abundance of Calanus together with generally high biomass of zooplankton. In the western Barents Sea there were lower values. These results were in general agreement with more detailed British observations on chlorophyll a values and phytoplankton from the same areas. Soviet investigations on the stocks of euphausiids in the Barents Sea indicated that the conditions for summer feeding of cod should be quite favourable in 1973.

The detailed studies at Ocean Weather Station "India", which started in 1971, continued in 1973. The spring bloom occurred earlier than in the last two years, the phytoplankton standing crop was lower than in 1972, but the level of production was similar.

Plankton recorder surveys around the British Isles showed that the phytoplankton spring outburst was late in most oceanic areas, but values were above average west of the British Isles. Phytoplankton was also abundant in the northwestern North Sea, and particularly in the southern North Sea. The number of copepods was lower than the long-term mean in most areas, but higher than in the two previous years. The number of Salpa fusiformis was lower than in any year since 1949 and oceanic species were more restricted in their distribution than usual.

Scottish investigations in the northern and northwestern North Sea gave lower than average values for chlorophyll a, but the standing stock of zooplankton was high in April/May. Some data on chlorophyll a and primary production east of the British Isles are found in a Polish contribution.

In the southern Baltic, the values of chlorophyll a were lower than in 1971 and 1972; the seasonal distribution differed from 1972 and was similar to the one in 1971. The zooplankton in the southern Baltic had been greatly influenced by the marked inflow of saline, well-oxygenized water in the spring of 1972, and several species were found in the southern Baltic that year, which had not been found there before. Such indicator species were also found in 1973, but in smaller amounts.

In the central Baltic the phytoplankton development was weaker than the year before, but over the years there seems, from Soviet investigations, to be an increasing eutrophication. The concentrations of phytoplankton pigments were higher in the Gulf of Riga than in the open sea. Both in the central Baltic and in the Gulf of Riga the conditions for zooplankton development were favourable in 1973.

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