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NEDERLANDSE DIERKUNDIGE VERENIGING (NETHERLANDS ZOOLOGICAL SOCIETY)

Proceedings 1977

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Summary of the annual report

On January 1st, 1978, the membership of the society was 805 (1977: 829). In 1977 the death occurred of our members Dr. J. W. Sluiter and Dr. J. Westenberg.

On April 28th, the opening of the new main buildings of the N.I.O.Z. on Texel was celebrated with a festivity, in which the opening address was held by Mr. Klein, Secretary of State of the Ministry of Education and Science.

At the annual meeting in Amsterdam, February 18th, G. A. ZWEERS was elected member of the Board, replacing the outgoing member TH. E. SPREY.

The scientific activities of the Society are listed below.

Journal of Meetings, 1977

Amsterdam, February 12th: annual meeting.

J. JOOSSE (Amsterdam) gave a lecture on: Multidisciplinary investigations in snails.

Wageningen, March 18th, scientific meeting in cooperation with the "Koninklijke Nederlandse Botanische Vereniging".

Theme: Productivity of the Sea. (The papers have been published in: Vakblad voor Biologen 57, 1977).

1. J. J. ZIJLSTRA (The Netherlands Institute for Sea Research, NIOZ, Texel): General aspects of productivity of the oceans.

The share of marine products in the human food supply is low and insignificant (1%).

Total production of organic matter by autotrophs in the sea most likely equals that of the land-masses. Marine primary production is limited less by light than by physical processes as vertical mixing of the waters, determining nutrient transport to the photic zone.

The utilization of primary food by herbivores in the sea is probably more complete and efficient than in terrestrial systems. Indications are that 20% of the marine autotroph production is turned into herbivore tissues against less than 1% on the land.

It seems therefore unlikely that the low production of human food in the oceans is determined mainly by a low primary production or a poor utilization of plants by herbivores in the sea. Rather, the length and complexity of the food chains in the oceanic system, ultimately determined by the small size of the autotrophs, is responsible.

2. W. W. C. GIESKES (NIOZ, Texel): Phytoplankton, primary production and eutrophication in the Southern North Sea.

3. P. H. NIENHUIS (Delta Institute for Hydrobiological Research, Yerseke): Primary production in the "Grevelingen".

4. H. G. FRANSZ (NIOZ, Texel): Zooplankton productivity in the Southern Bight.

The estimation of biomass, growth and production of zooplankton species from net samples taken in the Southern Bight is discussed. In copepod nauplii and young copepodites, P/B-values ranged in 1973 from 0.12 d^{-1} in spring to 0.25 d^{-1} in summer. In older copepodites and adults, the range is 0.03–0.09 d^{-1}. The yearly production of total zooplankton amounted to about 45 gC/m^2 near the coast and 30 gC/m^2 offshore. Biomass and productivity per m^3 were highest near the Dutch coast in June-July, presumably due to the relatively high phytoplankton density. The high phytoplankton densities of clear offshore waters in early spring do not enhance the zooplankton production.

5. J. J. BEUKEMA (NIOZ, Texel): The trophic function of marine zoobenthos.

The main food organisms of most marine benthic animals are unicellular algae and bacteria. These tiny primary food particles are thus converted into food pieces large enough to be handled efficiently by such marine carnivores as bottom fishes and sea birds.