II.- Macrobenthos

1.- Material and methods

The material was collected with a 0,1 m^2 van Veen grab, weighing ± 90 kg and with a 0,25 m^2 Shipeck bottom sampler, weighing 61 Kg . At all stations five to seven replicate samples were collected. The contents of the grab samples were sieved through a 1 mm steel screen and the fauna was preserved in 5 % formaldehyde.

In the laboratory the samples were sorted into *Polychaeta*, *Arthropoda*, *Mollusca* and *Echinodermata*, and the wet weights for the various groups were determined after blotting on filter paper for 5 - 10 minutes . The wet weights were converted into ash-free dry weights following conversion factors determined by Jensen, von Brand, Durchon *et al* . The mean conversion factor for *Polychaeta* was 0,19 , for *Arthropoda* 0,19 , for *Pelecypoda* 0,066 , for *Ophiuroidea* 0,0375 and for *Echinoidea* 0,015 . The standing crop referred to below, represents the sum of ash-free dry weights of these four infaunal groups, epifauna not included.

2.- Preliminary results and discussion

The results were obtained from one sample at each station, therefore they give only a rough idea of the fauna and standing crop. From the localities Z 1 , Z 2 , Z 6 and Z 8 we have sampled 3 to 9 replicates, during the period November 24 (1970) — March 9 (Pollution program T.W.O.Z. — Ministry of Agriculture).

In the whole area the number of individuals per m^2 varies between 5,500 (M01) to ± 1,000 (M21-M23). In the winter samples taken nearshore (Lombardzijde) the individual numbers are very low in comparison with the other samples of deeper water.

Comparison of the standing crops from the different localities investigated, must be viewed with caution because of the different seasons in which the samples were taken (M01-M025 : June-September 1971; M02-M05 : January 1971; Z01-Z08 : November 1970-March 1971). Nevertheless we can state

that there is a difference in standing crop between the nearshore stations M01 and M05 and the others.

In the first group of stations, the ash-free dry weight per m^2 of the macrobenthic infauna is relatively high. The standing crop at the other group of stations (series M) was dominated by benthic animals with a life span of about 1 year , whereas at the stations M05 and M01 the standing crop was dominated by species with a life span of 2 years or more, such as the lamellibranchs *Abra alba* and *Macoma balthica* (Thorson 1957)(1). The production of organic matter by the macrobenthos at the group of stations (series 11) may therefore be as high as or higher than at the first group, in spite of the lower standing crop.

Communities

Locality	
M01	*Abra alba* community mixed with *Tellina tenuis – Tellina fabula* community
M05	*Macoma balthica* community mixed with *Abra alba* community
M09	*Venus gallina* community – « *Branchiostoma*-bottom »
M12	*Amphiura filiformis* community
M13	*Amphiura filiformis – Echinocyamus* community mixed with *Venus gallina* community
M22	*Venus gallina* community – « *Branchiostoma*-bottom »
Z1	*Abra alba* community, mixed with the *Macoma balthica* community
Z2	*Abra alba* community, mixed with *Tellina tenuis – Tellina fabula* community
Z6	*Macoma balthica* community (mixed with *Abra alba* community)
Z8	*Abra alba* community, mixed with *Tellina tenuis – Tellina fabula* community
02	*Abra alba* community (mixed with other communities)
04	*Amphiura filiformis – Echinocyamus* community
05	*Tellina tenuis – Tellina fabula* community

(1) THORSON (1957), Bottom communities (sublittoral and shallow shelf), in Treatise in marine ecology and paleoecology (J.W. Hedgpeth, ed.), vol. 1, pp. 461-534, Mem. Geol. Soc. Am., 67.

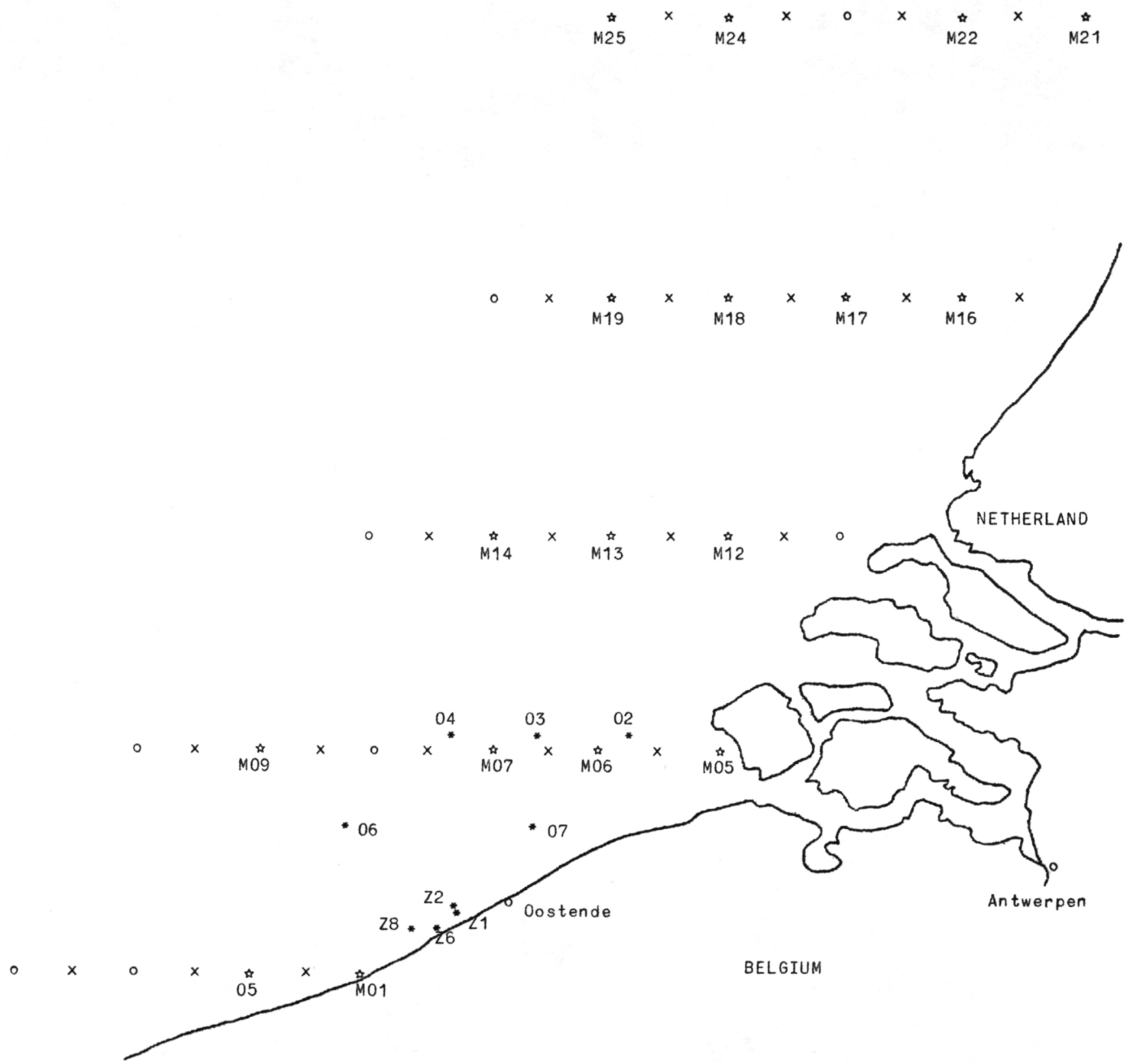
M25
M24
M22
M21
M19
M18
M17
M16
NETHERLAND
M14
M13
M12
04
03
02
M09
M07
M06
M05
06
07
Z2
Z8
Z1
Z6
Oostende
Antwerpen
BELGIUM
05
M01

fig. 65.

fig. 66.- Individual numbers per m^2 (x 100).

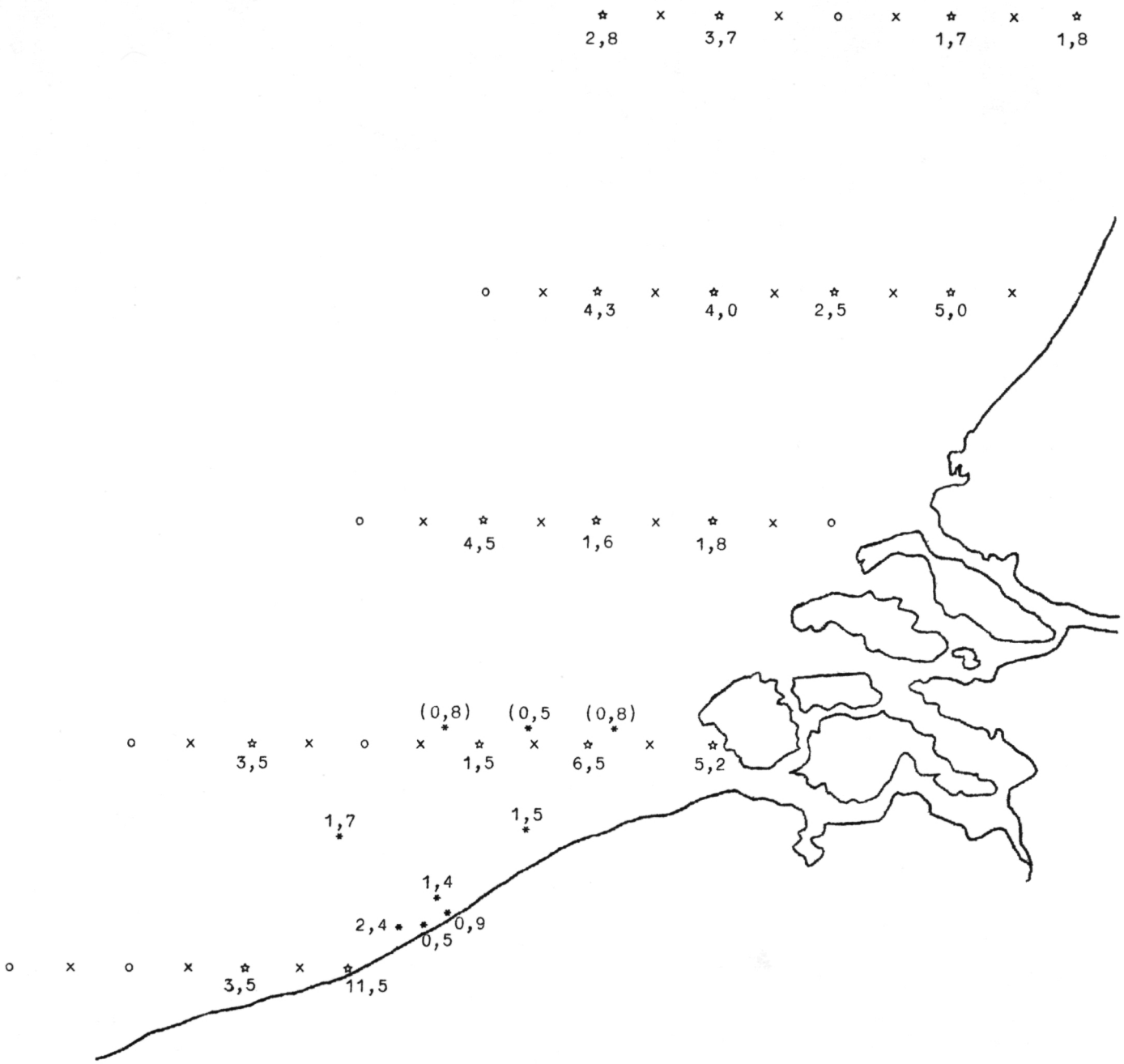

fig. 67.- Standing crop in grams per 1 m^2 .
() : winter samples.