

„WALTHER HERWIG III“

Cruise 277

REPORT

19.07. – 17.08.2005

Personnel

| Name | Institution |
|---------------------------|------------------------------|
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| 5. Herr Sascha Bednarz | ISH-BFA |
| 6. Herr Hermann Neumann | ISH-BFA |
| 7. Herr Paul Debes | ISH-BFA |
| 8. Herr Michael Weinert | ISH-BFA |
| 9. Dr. Ingrid Kröncke | Forsch. Senckenberg |
| 10. Herr Sebastian Rakers | Forsch. Senckenberg |
| 11. Herr Stefan Weiel | FTZ Westküste |
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Objectives

1. To participate in the ICES co-ordinated 'International Bottom Trawl Survey' in the North Sea, 3. quarter
2. Biological monitoring of the fish fauna in 6 small areas (boxes)
3. Distribution of temperature, salinity and nutrients in the area of investigation
4. Monitoring of the benthic epi- and infauna in the boxes and in the German Bight
5. Monitoring of seabirds

Narrative (Fig. 1)

W. Herwig III left Bremerhaven the 17th of July 2005. The scientific programme started next morning at ICES-rectangle 38F7. During this day another 3 rectangles were monitored by taking samples of fish, water (nutrients, temperature, salinity) and benthic epi-fauna (Tab. 1). The vessel then worked in the boxes C, L and M (3 days each). After a two days break in Bergen (Norway) the standard programme was continued at boxes D and B. After two days fishing in 8 ICES-rectangles in the German Bight, 4 days in Box A and

another 11 rectangles the scientific program ended the 16th of August. One day later the 'W. Herwig III' docked at Bremerhaven.

Tab. 1: Activities (stations) during the cruise

| area | GOV-hauls | CTD | nutrients | 2m-beamtrawl | v.Veen grab |
|-----------------|-----------|-----|-----------|--------------|-------------|
| Box A | 26 | 20 | 4 | 12 | 11 |
| Box B | 21 | 15 | 3 | 9 | 9 |
| Box C | 16 | 12 | 4 | 8 | 8 |
| Box D | 21 | 15 | 3 | 9 | 9 |
| Box L | 21 | 15 | 3 | 9 | 9 |
| Box M | 21 | 15 | 3 | 9 | 9 |
| ICES-rectangles | 26 | 26 | 26 | 23 | 23 |
| total | 152 | 118 | 46 | 79 | 78 |

Results (Tab. 1 and Figs. 2-7)

A total of 152 half an hour and valid hauls were made using the GOV trawl equipped with the standard ground gear, of which 126 hauls were carried out in the boxes to monitor changes in species compositions and 26 hauls in different ICES-rectangles as part of the IBTS Q3 survey, mainly within the German Bight. At 118 stations salinity, temperature and at 46 stations nutrients were measured. Epibenthos was sampled by a 2m beam-trawl at 79 stations and 78 grab samples were taken to investigate the sediment.

The preliminary number at age data for the recruiting year-classes of the commercial important species and the catch data were submitted to the co-ordinator of the IBTS-Q3 survey and ICES resp. to make these data available to the ICES assessment working groups within due time.

Fig. 1 shows the area of investigation. The mean species compositions in the 6 boxes and the variability within the time periods are shown in Figs.2 to 7.

Dr. S. Ehrich

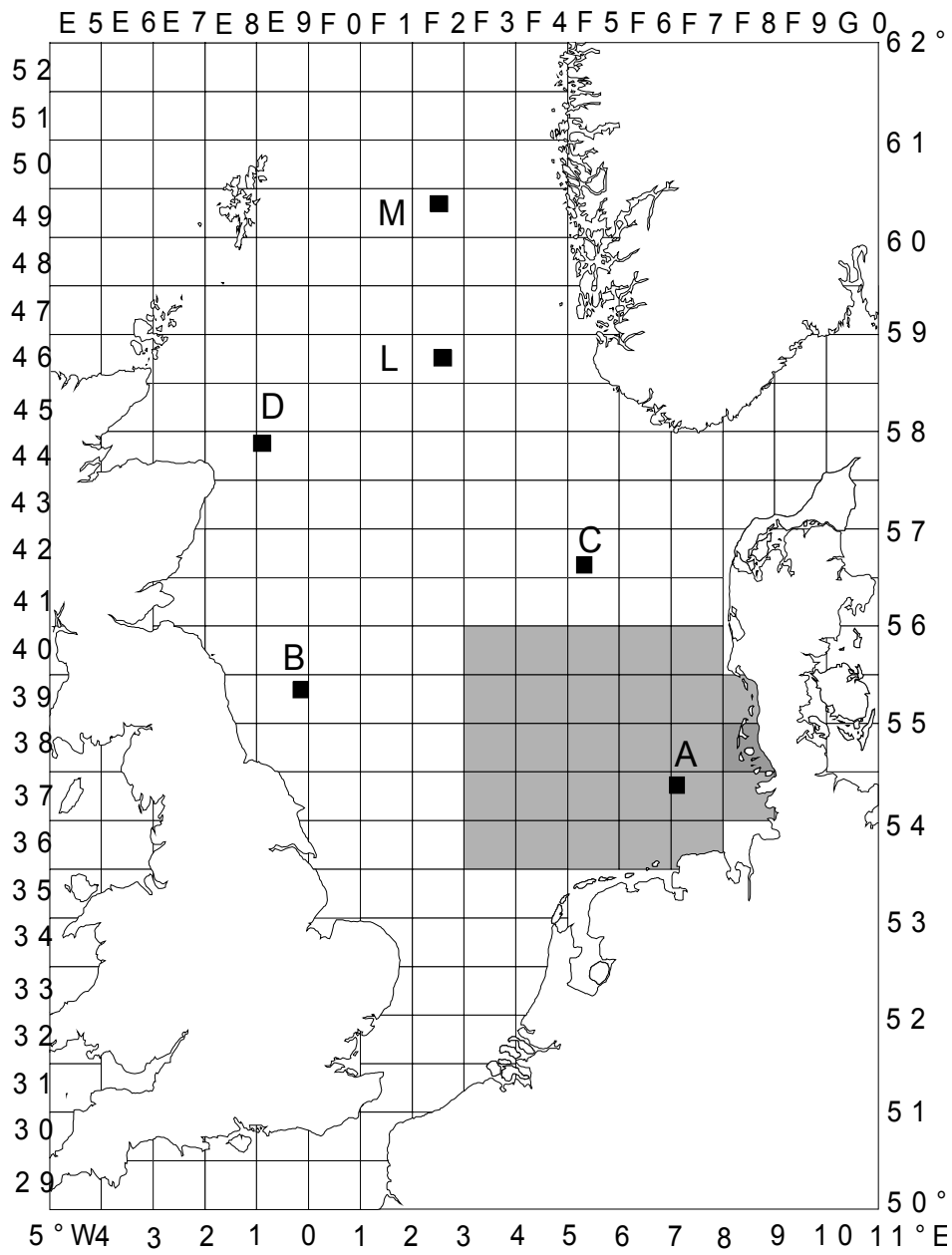


Fig. 1: „Walther Herwig III“. Cruise no. 277. Area of investigation and boxes

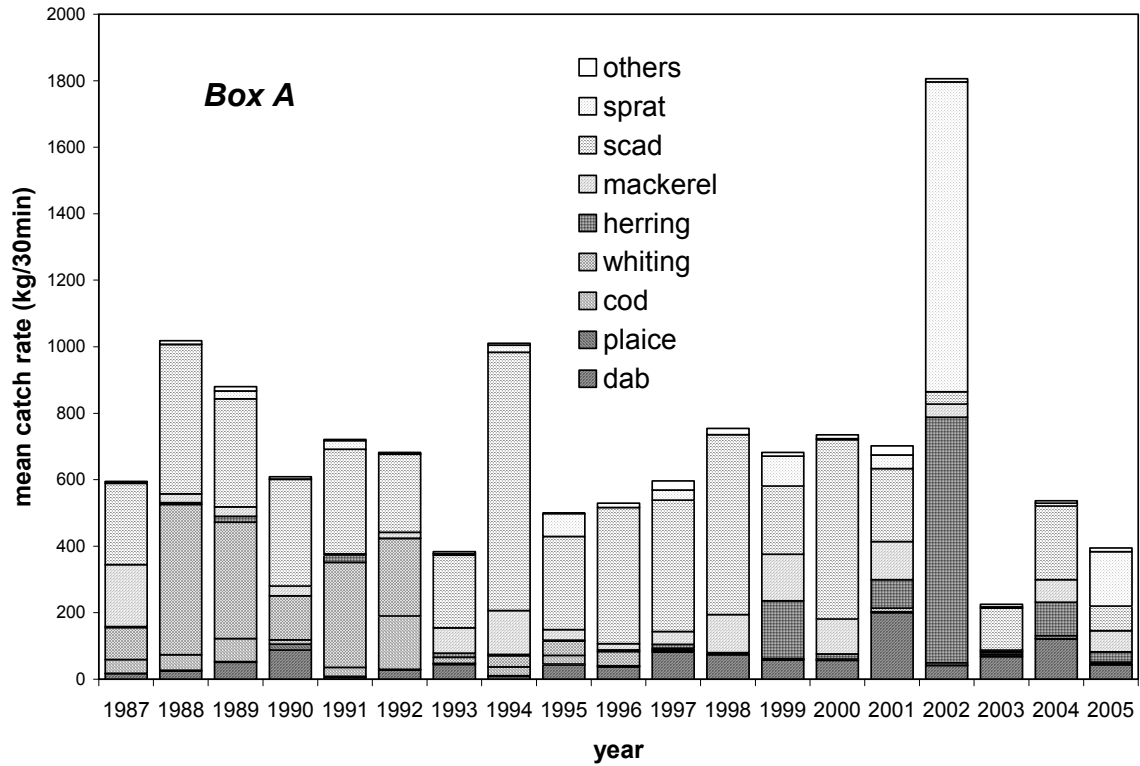


Fig. 2: Box A: German Bight: Main species composition (kg/30min) from 1987 to 2005 (summer)

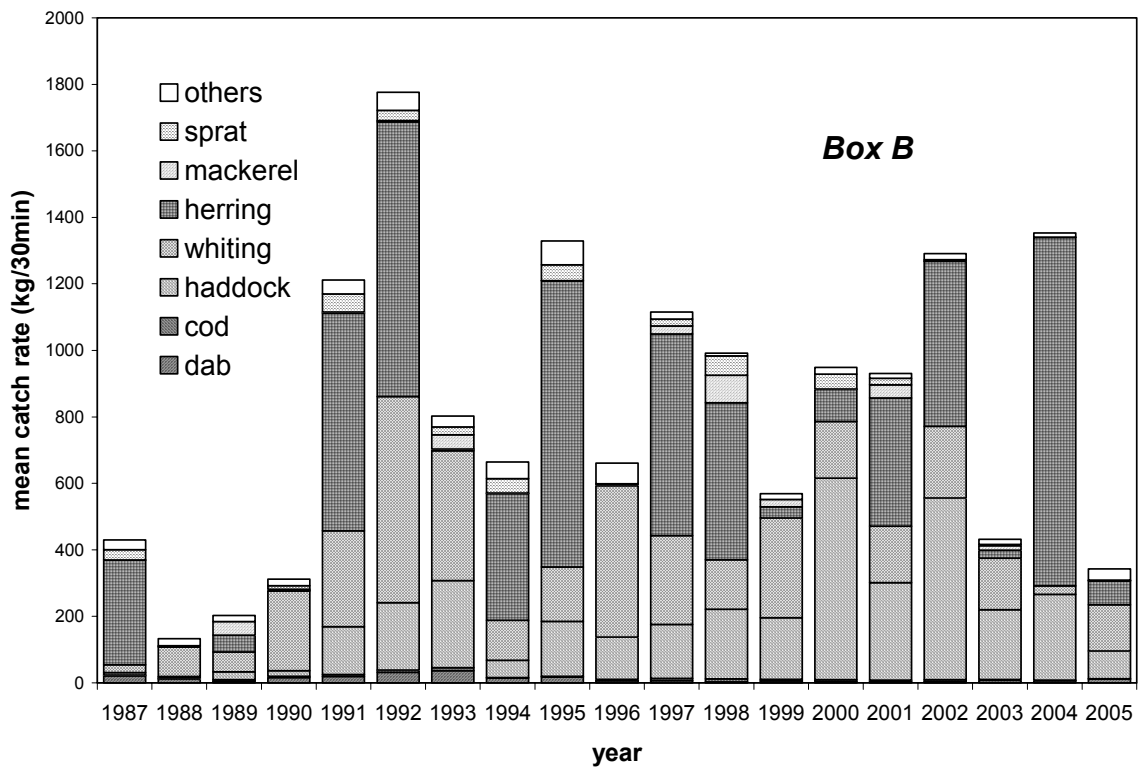


Fig. 3: Box B. English coast. Main species composition (kg/30min) from 1987 to 2005 (summer)

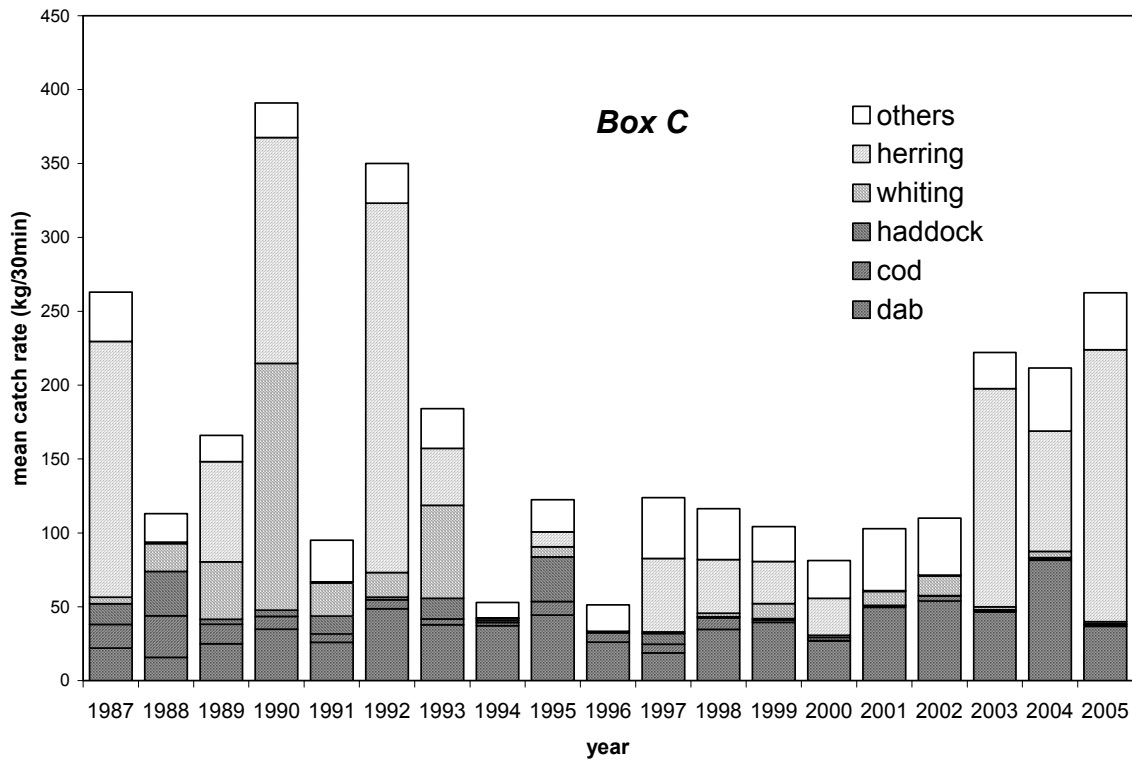


Fig. 4: Box C. Danish coast. Main species composition (kg/30min) from 1986 to 2005 (summer)

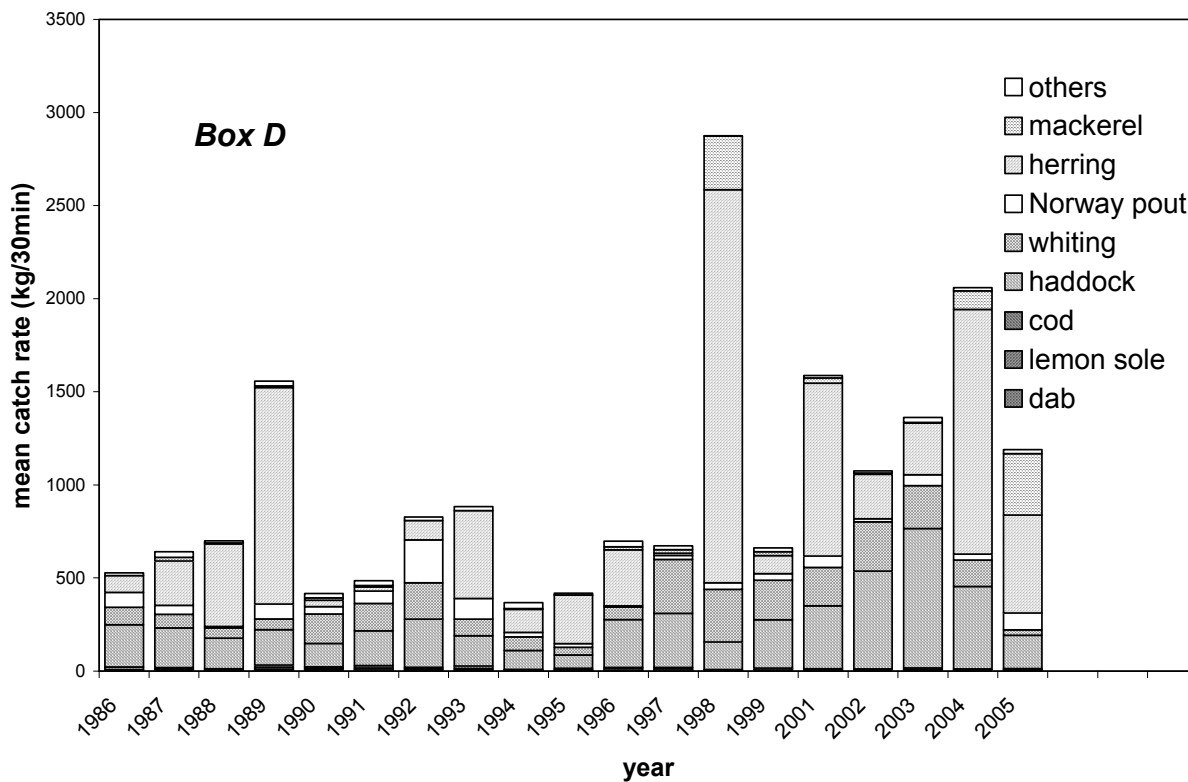


Fig. 5: Box D. Scottish coast. Main species composition (kg/30min) from 1986 to 2005 (summer)

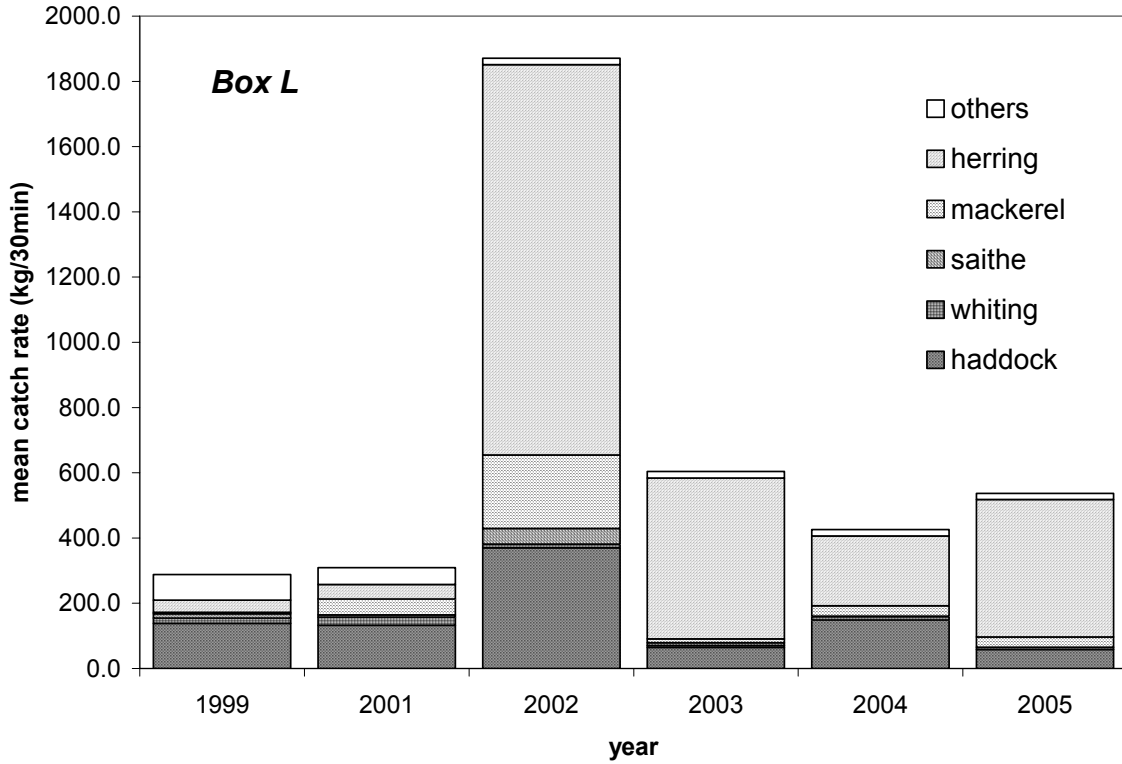


Fig. 6: Box L. Norwegian coast. Main species composition (kg/30min) in 1999 and from 2001 to 2005 (summer)

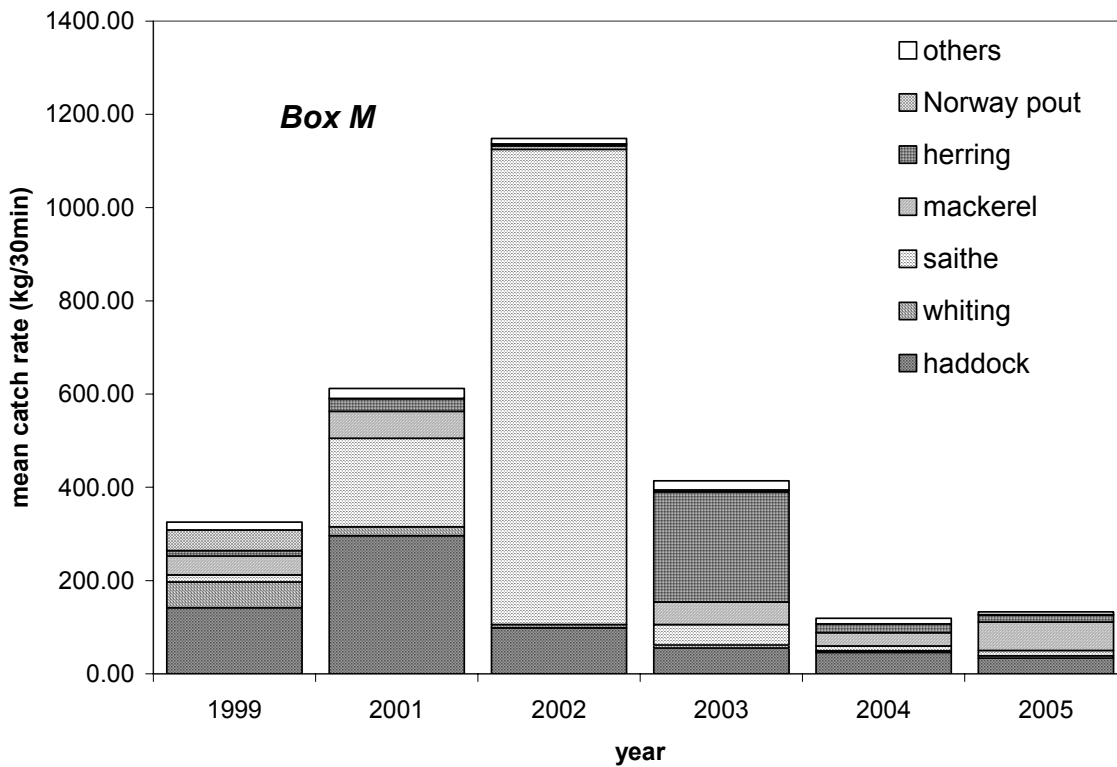


Fig. 7: Box M. Norwegian coast. Main species composition (kg/30min) in 1999 and from 2001 to 2005 (summer)