

„WALTHER HERWIG III“

Cruise 254

REPORT

22.07. – 17.08.2003

Personnel

Name	Institution	Part
1. Dr. Siegfried Ehrich	ISH-BFA	I
2. Dipl. Oz. Peter Cornus	ISH-BFA	II
3. Svenja Cummerow	ISH-BFA	I + II
4. Wiebke Mohr	ISH-BFA	I + II
5. Sascha Bednarz	ISH-BFA	I + II
6. Ingo Wilhelms	ISH-BFA	I
7. Sandra Löhndorf	EU-DG14	II
8. Dipl.-Biol. Sonja Terraschke	ISH-BFA	I + II
9. Dipl.-Biol. Jens Ulleweit	ISH-BFA	I + II
10. Dr. Ingrid Kröncke	Forsch. Senckenberg	I + II
11. Hermann Neumann	Forsch. Senckenberg	I + II
12. Dipl.-Biol. Henning Reiss	Forsch. Senckenberg	I + II
13. Erich Marschmann	ISH-BFA	II
14. Bastian Kulschewski	ISH-BFA	I+II
15. Dr. Gerhard Rech	BMVEL	I; until 24.7.03

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
(as part of the ICES-Project MAFCONS)

Narrative (Fig. 1)

With one day delay the scientific programme started in the morning of 22th of July at ICES-rectangle 36F6. During the next 5 days 19 rectangles were monitored by taking samples of fish, water (nutrients, temperature, salinity) and benthic epi- and infauna (Tab. 1). The vessel than worked for 2 days in box C and another 3 days in box L, before it sailed to Bergen/Norway to have a two days break.

In the evening of the 4th of August W. Herwig III left Bergen and stayed for 3 days each in the boxes M, D, B, and A, only interrupted by one day fishing in 4 ICES-rectangles in the German Bight. The scientific program ended on the 16th of August. The 'W. Herwig III' docked at Bremerhaven on Friday, the 17th of August 2003.

Tab. 1: Activities (stations) during the cruise

area	GOV-trawl	Hydro-Sonde	nutrients	2m-beam-trawl	v. Veen grab
Box A	20	14	9	8	26
Box B	21	15	6	9	30
Box C	14	10	4	6	21
Box D	21	15	9	9	30
Box L	21	15	6	9	30
Box M	21	15	9	9	30
ICES-rectangles	23	23	23	23	115
total	141	107	66	73	282

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

A total of 141 half an hour and valid hauls were made using the GOV trawl equipped with the standard ground gear, of which 118 hauls were carried out in the boxes to monitor changes in species compositions and 23 hauls in different ICES-rectangles as part of the IBTS Q3 survey, mainly within the German Bight. At 107 stations salinity, temperature and at 66 stations nutrients were measured. Epibenthos was sampled by a 2m beam-trawl at 73 stations and 282 grab samples were taken to sample the benthic infauna.

The preliminary number at age data for the recruiting year-classes of the commercial important species and the catch data were submitted to ICES to make these data available 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.

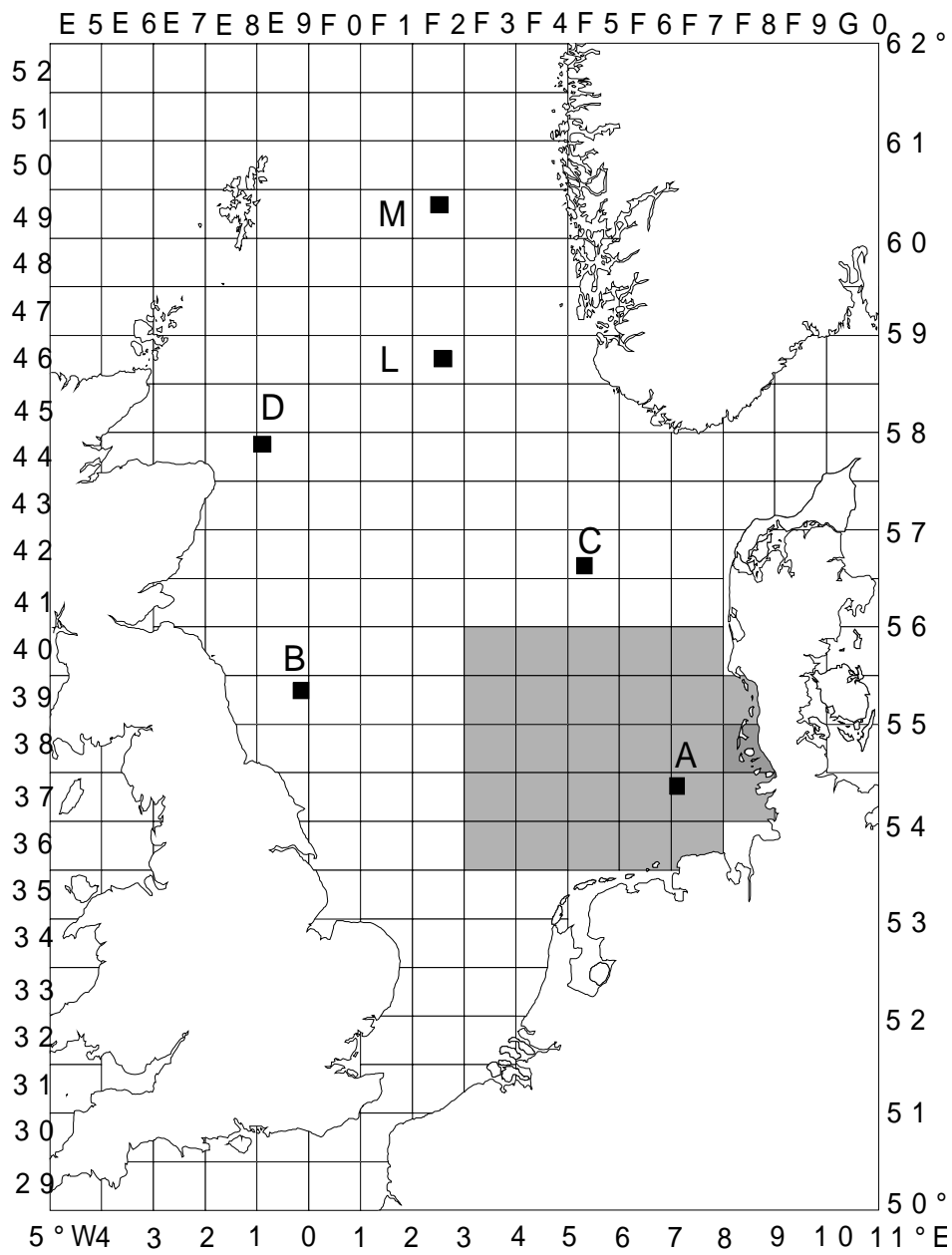


Fig. 1: „Walther Herwig III“. Cruise no. 254. Area of investigation and boxes

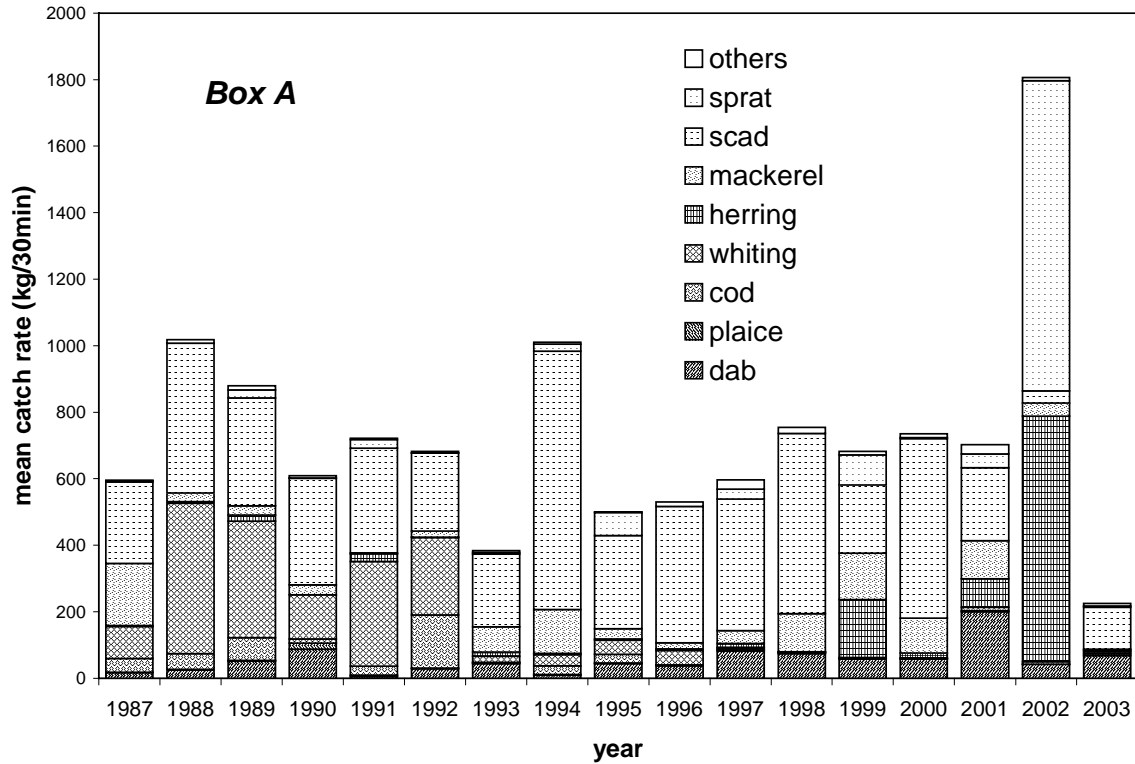


Fig. 2: Box A: German Bight: Main species composition (kg/30min) from 1987 to 2003 (summer)

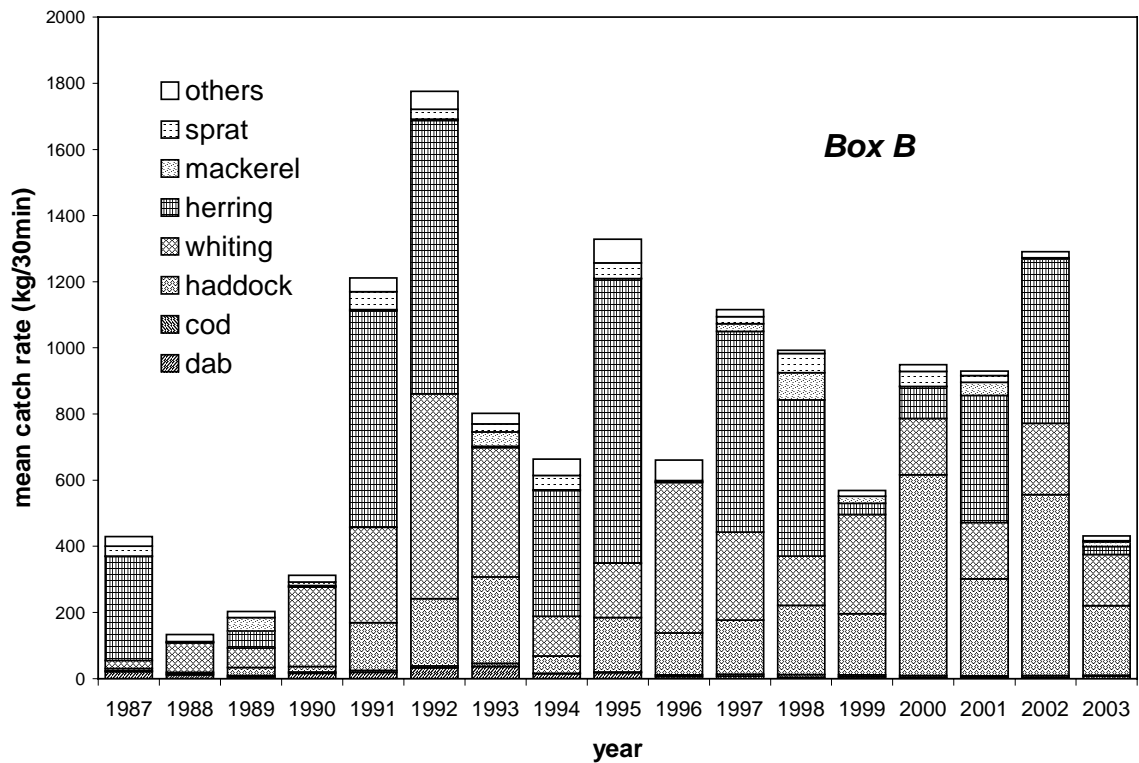


Fig. 3: Box B. English coast. Main species composition (kg/30min) from 1987 to 2003 (summer)

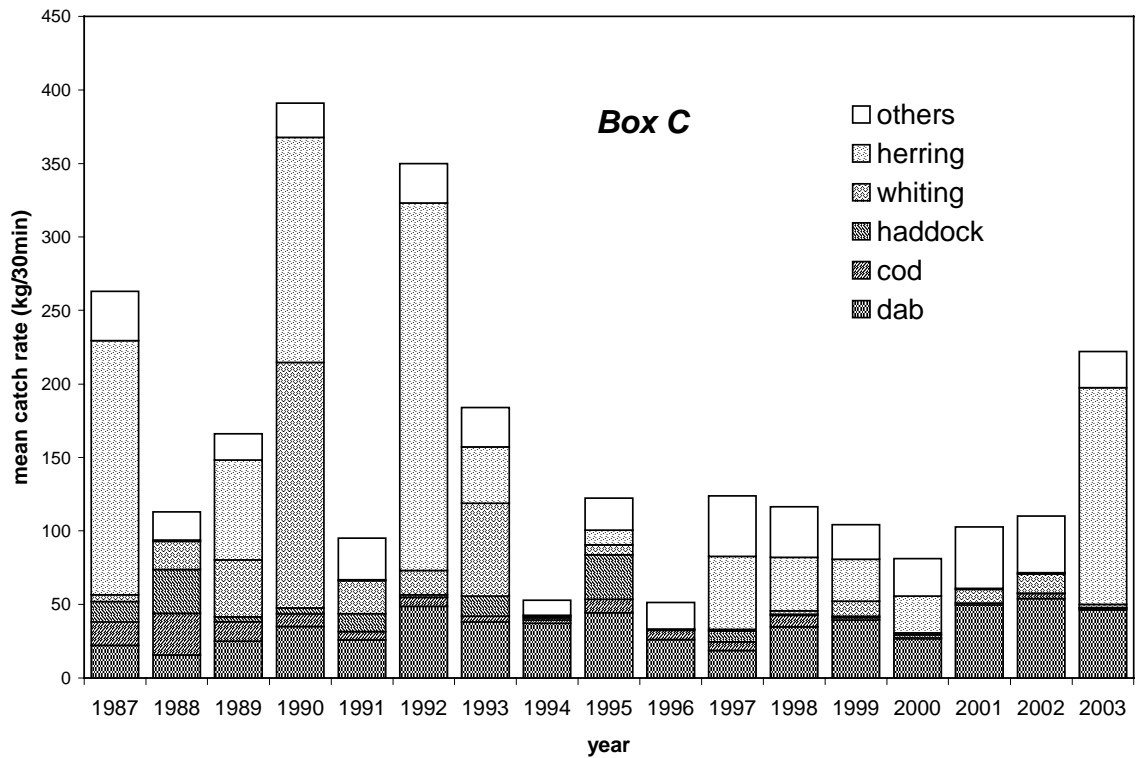


Fig. 4: Box C. Danish coast. Main species composition (kg/30min) from 1986 to 2003 (summer)

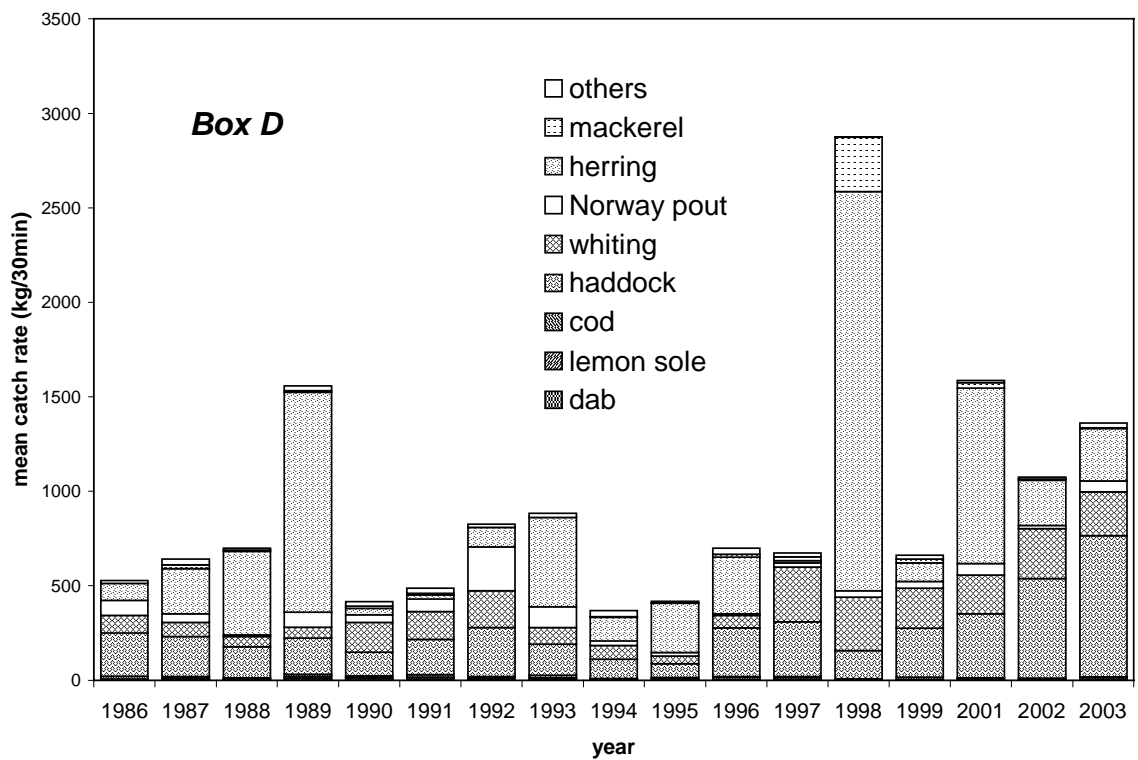


Fig. 5: Box D. Scottish coast. Main species composition (kg/30min) from 1986 to 2003 (summer)

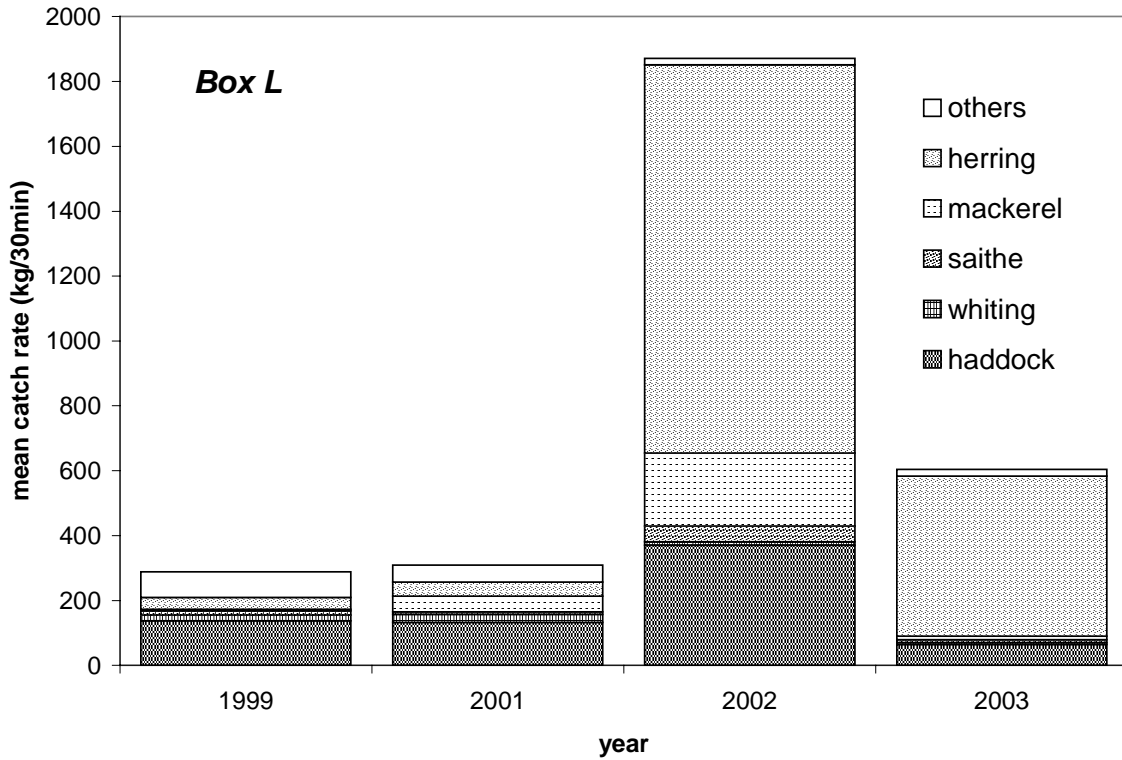


Fig. 6: Box L. Norwegian coast. Main species composition (kg/30min) in 1999 and from 2001 to 2003 (summer)

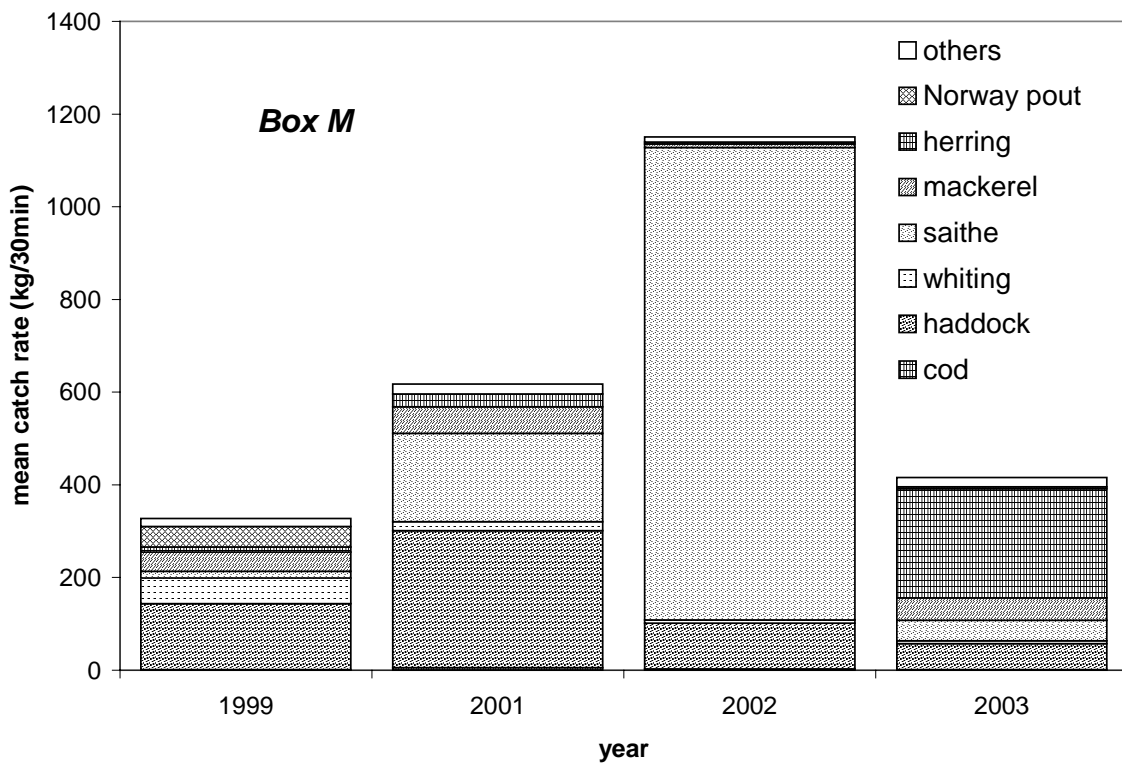


Fig. 7: Box M. Norwegian coast. Main species composition (kg/30min) in 1999 and from 2001 to 2003 (summer)