CRUSTACEA

BELGIUM - BELGIQUE

(F. Redant)

Nephrops norvegicus

The market sampling programme on the Norway lobster (Botney Gut - Silver Pit stock, Central North Sea) was continued, to evaluate the impact of fishing on population structure and composition, and to complete the existing data-base for analytical assessment studies. The methods used to calculate the LPUEs and the mean sizes of *Nephrops* landed were slightly modified, to produce estimates which are less sensitive to variations in recruitment and fishermen's selection (discarding).

The status of the Central North Sea *Nephrops* stock was assessed using both Jones' LCA and a traditional multi-fleet VPA, with knife-edged age classes derived from the existing annual length distributions of landings and discards.

In cooperation with DIFTA (Hirtshals, Denmark) and EEC-funded research project was carried out to investigate :

(a) The selectivity of Norway lobster trawls for *Nephrops* and whiting ;
(b) The composition of the commercial finfish by-catch (particularly cod, whiting, gurnard, dab, plaice and sole), and
(c) The composition of the finfish and *Nephrops* Discards.

The investigations also comprised survival experiments to determine the instantaneous mortality rates of discarded *Nephrops*. During the September sampling campaign, which was part of the selectivity and discard study, data were collected to establish the maturity ogive of female *Nephrops* in the Central North Sea.

Sampling Data for *Nephrops norvegicus*

Belgium 1993

		No. of samples		
Area	Season	Research Vessel	Market samples	Nos. measured
IVbc	1 st Qt		4	600-800 per sample
	2nd Qt		6	600-800 per sample
	3rd Qt		6	600-800 per sample
	4th Qt		6	600-800 per sample

FRANCE

(D. Latrouite)

Maja squinado

La campagne d'évaluation directe du recrutement conduite annuellement sur les deux principales nourriceries de Manche, dans le 7E en baie de Saint-Brieuc et sur la côte Ouest du Cotentin, a fourni un indice d'abondance valant à la moitié de celui de l'année précédente. Les captures d'automne et

d'hiver de la campagne de pêche 1993-1994 attestent la valeur de ce résultat. Ce niveau de recrutement intervient après une série de 3 années successives de recrutement élevé (1990, 1991 et 1992).

GERMANY - ALLEMAGNE

(T. Neudecker and U. Piatkowski)

Crangon crangon

Investigations focusing on the abundance and geographical distribution of brown shrimp in winter have been continued in January. They exhibit a high proportion of females this year more evenly distributed off the west coast of Schleswig-Holstein and north of the Ems estuary. This survey became necessary because of the concern of the fishery whether the socalled "winter fishery" for *Crangon* might have a negative effect on the brown shrimp stocks (BFA f. Fischerei, ISH, Hamburg).

Larval abundance has been another topic. Preliminary studies have continued in accordance with the winter survey covering parts of the German Bight (BFA f. Fischerei), while intensive sampling was conducted in the northern part of the German Wadden Sea resulting in an annual cycle of the occurrence of *Crangon* larvae in that area (Universities of Hamburg and Kiel). Other studies of the University of Hamburg show results of the annual cycle and abundance of post larval shrimp on the sandy mud flats of the coastal area. The long time series of the BFA f. Fischerei on the proportion of shrimp fishery and other organisms in the catches of the shrimp fishery has been continued but suffered severely from lack of samples due to changes in the fisheries and the application of new, not comparable net types. Indices of different size classes per 1 000 m• in some parts of the Wadden Sea area are also available from the trilateral Belgium-Sutch-German demersal young fish survey and reveal a decrease of the larger shrimps fraction in the 20-year time series.

All these investigations have led to uncertaincies in the timing and growth rates of brown shrimp in the German Bight and require further intensive research. Therefore, the "Study Group on Life History, Population Biology and Assessment of *Crangon*" will meet in Hamburg to elucidate some of the questions.

Technological investigations have shown that higher selectivity for consumption shrimp is possible saving the undersized stock (BFA f. Fischerei).

Technological investigations have shown of an overfished stock because of the instability of catches and the decrease of larger market grades of brown shrimp while the effort is increasing. Some indications supporting these concerns were found like decreasing fractions of larger shrimps in the population and decreases of abundance indices in a tidal channel system being investigated since 1974.

The total annual catch in 1993 was 12.653 tons but with a share of 3.018 tons industrial shrimp included. This means that the total amount of consumption shrimps (9.045 t) remained still bellow the ten years average.

The effects of discarded fish on seabird populations are the subject of ecosystem and nature-conservancy research programmes (University of Olderburg).

Other species

The abundance of *Cancer pagurus* has been a side project in German Bight fishery research surveys (BFA f. Fischerei) and the small, traditional local lobster fishery (*Homarus gammarus*) around the isle of Helgoland has been under observation by the "Biologische Anstalt Helgoland".