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International Council for the  
Exploration of the SeaCM 1977/E:30  
Fisheries Improvement CommitteeTHE INTRODUCTION OF NON-INDIGENOUS MARINE ORGANISMS TO THE ICES AREA - PROGRESS  
REPORT FOR THE UK

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The ICES Working Group on the Introduction of Non-indigenous Marine Organisms was formed in 1970. The main report was produced in 1972 (ICES, 1972); this was subsequently updated to include information received to the end of 1973 (Franklin, 1974). One recommendation of the Working Group was that regular progress reports should be made by member countries on developments in the introductions field. The present paper summarizes the information for the UK to June 1977. The main headings used are those of the original questionnaire on which the general reports of the Working Group have been based (see ICES 1972).

## I RELEVANT LAWS

In England and Wales existing legislation was revoked and replaced by the 1974 Molluscan Shellfish (Control of Deposit) Order, the provisions of which are explained by Key (1977). Basically this strengthens the defence against the introduction of NEW pests by forbidding any proposed deposit of molluscs from outside England and Wales, except under licence granted by the Ministry of Agriculture, Fisheries and Food. With regard to limiting the spread of EXISTING pests, arrangements for the control of molluscs taken from one area within England and Wales for deposit in another have been revised to cover all areas. The coast of England and Wales is now divided into 27 separately designated areas so that, although there is no restriction on movements for deposit within the boundaries of any one area, deposits from outside the area must be covered by a licence.

Under the Salmon and Freshwater Fisheries Act of 1975 the written authority of the relevant Regional Water Authority must be obtained before the introduction of fish or fish eggs into the inland waters of England and Wales.

## II OTHER PROCEDURES

No new information.

## III DELIBERATE INTRODUCTIONS (for growth and fattening)

The Portuguese oyster *Crassostrea angulata* was imported to the east coast of England until 1975 when further shipments were stopped due to the risk of introducing disease organisms.

Hatchery-produced Pacific oysters (*Crassostrea gigas*) have been very widely distributed throughout the UK.

## IV SPECIES INTRODUCED ACCIDENTALLY WITH DELIBERATE INTRODUCTIONS

No new species were reported. Developments are as follows:-

### i PREDATORS

A recent check on the distribution of the American tingle (*Urosalpinx cinerea*) indicated that only limited expansion in the range had occurred, the drill still being restricted to southeast England.

### ii PARASITES

The copepod parasite *Mytilicola intestinalis* has extended its range slightly in southwest England and in Morecambe Bay, northwest England. A method has been developed for the rapid examination of large numbers of mussels for the presence of *Mytilicola* (Dare, 1977). Licences are now granted for the relaying of hatchery seed oysters from infected to *Mytilicola*-free areas, provided the molluscs do not exceed 6 cm in any dimension. (Additional restrictions with respect to other pests must, of course, be met.)

### iii DISEASES

No new diseases were reported. An ICES Working Group on the Diseases of Molluscs and Crustaceans of Commercial Importance was formed following the 1976 Statutory Meeting. Future developments in shellfish diseases in the ICES area will be reported on by this group. It is possible that diseases of marine fish will also be covered.

### iv COMPETITORS

A modified brine-dipping technique has been developed for the treatment of seed oysters from hatcheries in areas infested with the American slipper limpet *Crepidula fornicata*, to allow relaying in non-infested areas (Franklin 1976).

## V COMPLETELY ACCIDENTAL INTRODUCTIONS

The immigrant Japanese seaweed *Sargassum muticum* is now well established in the Solent (Isle of Wight) area of the south coast of England. Drift plants have been widespread in the English Channel, but only a few isolated attached specimens have been located outside Solent waters - to the west in Dorset (Kimmeridge) and Devon (River Yealm and Plymouth). These few plants have been destroyed.

An intense research programme has been financed by central and local government bodies to develop an effective means of destroying the weed, mainly to prevent interference in the use of small harbours and amenity beaches. (No serious adverse effects on fisheries have been reported, though some complaints have been received regarding the fouling of trawl nets in the Solent area by seaweeds in general.)

Eradication of *Sargassum* by hand-gathering was attempted initially, but although several hundred tonnes were removed by this method during 1976, the practice has been largely abandoned as ineffective. Results from herbicide experiments have not been encouraging since difficulties have been encountered in the penetration of the highly sulphated *Sargassum* cell-walls. The effectiveness of herbicides is also reduced by the plant's virtual lack of a vascular system.

Additionally, research is now being undertaken on the development of a suitable mechanical method of removing the weed.

## VI SPECIES INTRODUCED FOR HATCHERY REARING

Crustacea: *Penaeus monodon* from the Philippines

" " " S Africa

" " " Taiwan

" " " Tahiti

*Penaeus merguensis* from the Philippines

" " " Tahiti

*Penaeus indicus* from S Africa

*Penaeus astecus* from USA

Molluscs: *Crassostrea gigas* from Canada

" " " Hong Kong

" " " Israel (Red Sea)

(A report has been produced on recommended quarantine measures for marine molluscs - Spencer *et al* 1977.)

Fish: Dover sole (*Solea solea*) and turbot (*Scophthalmus maximus*) eggs from France.

Coho salmon (*Oncorhynchus kisutch*) eggs from Canada.

Widespread importation of rainbow/steelhead trout (*Salmo gairdneri*) eggs from various countries.

#### VII FURTHER INTRODUCTIONS

As required for hatchery experiments.

#### VIII LIVE EXPORTS FOR CONSUMPTION

*Pecten maximus* to Spain.

*Ostrea edulis* to Spain.

*Venerupis decussata* to France.

*Uca squinado* to France and Spain.

#### IX OTHER LIVE EXPORTS

*Penaeus merguensis* to S Africa.

*Solea solea* and *Scophthalmus maximus* eggs to France.

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