

Annex 3: National Reports (ICES Member Countries)

NATIONAL REPORT

Belgium

2004

Prepared by Francis Kerckhof

Highlights

The major event during 2004 was the first discovery in the southern bay of the North Sea of the Asian shrimp *Palaemon macrodactylus* Rathbun, 1902 yet another introduction originating from the temperate North-West Pacific. The species proved to be already established in several suitable habitats.

1.0 Laws and regulations

There is no new legislation to report.

2.0 Deliberate releases

2.1 Fish

The Sea Fisheries Department (CLO-SFD, Oostende, Belgium) has stopped the restocking project of sole *Solea solea* and turbot *Scophthalmus rhombus*.

A private company, the N.V. Joosen-Luyckx Aqua Bio in Turnhout, is still elevating 6 species of sturgeons, including *Acipenser baeri*, *A. gueldenstaedti* (Osietra) and *A. ruthenus* (sterlet). The firm uses *A. baeri* for the production of caviar (Royal Belgian Caviar). Research is ongoing on the production of caviar from other species and some species are cultivated for ornamental use.

3.0 Accidental Introductions and transfers

Several non-indigenous species such as *Crassostrea gigas*, *Ensis directus*, *Crepidula fornicata*, *Elminius modestus*, *Hemigrapsus penicillatus* constitute now an important, and in some cases even a dominant, part of the Belgian marine fauna. And the number is still augmenting. Their success is for a great deal due to the alterations made by man to the environment, chiefly beamtrawling and the construction of artificial hard substrates. In man-made environments such as harbours, the overall presence of non-indigenous species is even more obvious (Kerckhof and Houziaux, 2003).

3.2 Invertebrates

Mytilopsis leucophaea (= *Congerina cochleata*): This species is present in the harbour of Antwerpen, causing nuisance by the obstruction of water intake pipes of some chemical plants. A Ph.D. study is ongoing at the University of Gent, with the aim to find a possible biological control of the problems caused by this species.

Caprella mutica: This species has been first recorded in 1998 when it was present on several buoys marking the entrance to the harbour of Zeebrugge. Also recorded from the marina of Zeebrugge and from buoys off Blankenberge and Oostende. In the Zeebrugge area, the species is still present.

Ficopomatus enigmaticus: As in 2002 and 2003 this species was also in 2004 very abundant in the harbour of Oostende, forming reef like structures on several submerged substrates on vessels.

Megabalanus coccopoma: This species proved to be already present on buoys off the Dutch coast (off Terschelling) in 1976 and 1977 but was apparently not properly recognised. Recent investigations confirmed that the species is still present on the buoys in the same area off Terschelling. From 1997 on this species has been found each year in the southern bight of the North Sea, mainly on buoys but also on floating objects and even in the littoral zone. The continuous findings along the Belgian and Dutch coast prove that it is well established in this region of the North Sea.

Hemigrapsus penicillatus: This species was recorded for the first time from the coasts of Belgium and Northern France in 2003. The pencil-crab is now very abundant especially in estuaries and harbour areas for instance amongst reefs of pacific oysters *Crassostrea gigas*. During 2004 the species has also been discovered, although in lower numbers, on groins in the vicinity of Oostende thus in an open shore habitat.

Hemigrapsus sanguineus: *H. sanguineus* has not been found yet in Belgium.

Palaemon macrodactylus: This Asian shrimp was first identified from Zeebrugge, where it was fished on 12 June 2004 between the epiflora and epifauna of the pontoons of the marina (d'Udecem d'Acoz *et al.*, 2005).

After this initial discovery, searches have been made in sheltered biotopes, estuaries and lagoon-like habitats (tidal and non-tidal) from June until early October in the southern Bay of the North Sea (Northern France, Belgium and the Netherlands). No attention has been paid to open coasts since the occurrence of *P. macrodactylus* is less probable in such habitats. Additionally, a single sample collected in November 1999 from Walsoorden (Westerschelde estuary) was also considered since it included some aberrant *Palaemon* specimens that indeed proved to be *P. macrodactylus*. These investigations showed that the species was present in several localities along the Dutch and Belgian coast including the Westerschelde estuary, but it has not been found yet in the northern French ports of Calais and Dunkerque.

The specimens were found in sheltered, polluted marine habitats (marina of Zeebrugge, sluice dock at Oostende), in the mesohaline part of the Westerschelde estuary (several marinas and harbours) and in brackish canals (IJmuiden, Rotterdam). All specimens were collected between fouling of pontoon floats, along harbour walls or between litter and reeds (*Phragmites australis*) in canals.

The invasion of *P. macrodactylus* is probably of recent date. Taking into account the sample from November 1999 *P. macrodactylus* must have been introduced in the Westerschelde estuary most likely prior to that year. Worth mentioning is also that, although the Asian shrimp is now present in the sluice dock of Oostende, a pond known to harbour many introduced species, it was not found there in 1996, 1998 and 1999.

P. macrodactylus has probably been introduced to Belgium and The Netherlands via ballast water of ships and not by shellfish importations. All water bodies where this species was caught are characterised by intensive intercontinental and regional ships' traffic.

It is clear that *P. macrodactylus* is a very successful invader and it is likely that it will colonise an extensive range of localities.

Telmatogeton japonicus: This giant chironomid has recently been identified from buoys off the Belgian coast. *T. japonicus* is common on all of the offshore buoys even the remote ones. Specimens live in the splash zone, *i.e.* the vertical zone of the buoy, above the algae zone, where they form a characteristic zone. The species is present during most of the year and apparently the only Chironomid living on the buoys.

T. japonicus can live on ships' hulls and is probably transported around the world by shipping. Other European records are from Denmark (2002 on the towers of windmills of the offshore

windmill park Horns Rev), the Netherlands (several localities), Iceland, Ireland, Norway, Poland and Germany. It has been first discovered along the Kieler Förde in 1962 and then described as *T. remanei* (now considered a junior synonym of *T. japonicus*).

3.3 Algae and higher plants

Undaria pinnatifida: After the first record in 2000, this species is still present in de marina of Zeebrugge, but apparently not spreading due to predating of Coots *Fulica atra*.

4.0 Live Imports

In Belgium there is a lot of (uncontrolled) import and export of a wide variety of marine and fresh water species, for research, human consumption, aquaculture and aquariums. It is almost impossible to obtain figures on quantities or on origin.

8.0 Bibliography

- d'Udecem d'Acoz, C., Faasse, M., Dumoulin, E. and De Blauwe, H. 2005. Occurrence of the Asian shrimp, *Palaemon macrodactylus* Rathbun, 1902, in the Southern Bight of the North Sea, with a key to the Paleomonidae of north-west Europe (Crustacea, Decapoda, Caridea). Nederlandse Faunistische Mededelingen, submitted.
- Kerckhof, F. and Cattrijsse, A. 2001. Exotic Cirripedia Balanomorpha from buoys off the Belgian coast. *In* Burning issues of North Sea ecology, Proceedings of the 14th international Senckenberg Conference North Sea 2000. Ed. by I. Kröncke, M. Türkay and J. Sündermann. Senckenbergiana maritime, 31(2): 245–254.
- Kerckhof, F. and Houziaux, J. S. 2003. Biodiversity of the Belgian marine areas. *In* Biodiversity in Belgium, pp. 350–385. Ed. by M. Peeters, A. Franklin, and J. Van Goethem. Royal Belgian Institute of Natural Sciences: Brussels, Belgium