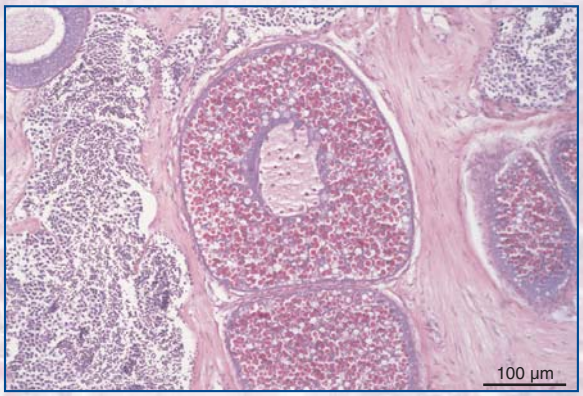
OESTROGENIC ENDOCRINE DISRUPTION IN UK FLOUNDER

[1]P. Matthiessen, [1]Y. Allen, [2]S. Feist and [3]A. Scott

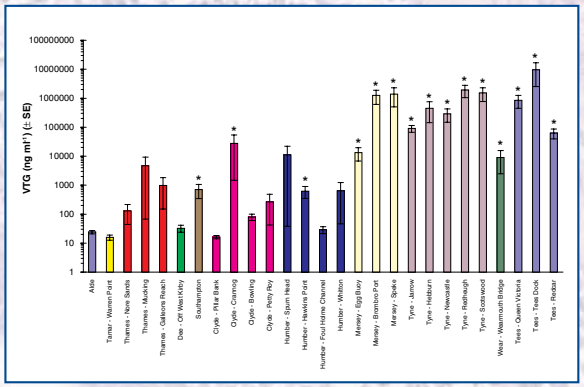
This project investigated the presence of oestrogenic (feminising) compounds in UK marine waters. The major markers of oestrogenic exposure used in this survey were induction of yolk precursor protein (vitellogenin) in male flounder, and the presence of egg cells in their testes.

A specimen of the flounder Platichthys flesus *(L.)*

Location of the estuaries (●) and offshore sites (▲) sampled for flounder between September 1996 and December 1997



Testis from intersex male flounder – eggs in centre, testis tissue on left



Yolk protein (vitellogenin) *is present in male flounder from most estuaries.*
** denotes significantly different from the Alde reference site.*

Major findings

In the industrialised Mersey and Tyne estuaries, male fish contain as much yolk precursor protein as females, and up to 18% are intersex, with egg cells in their testes. Effects in most other estuaries are less severe.

Conclusions

Unidentified oestrogenic contaminants are present in most UK estuaries, and causing severe feminisation of flounder in some industrialised localities. The causes and implications of this are being studied by CEFAS and others under the EDMAR programme (co-funded by MAFF).

[1]CEFAS, Burnham Laboratory, Remembrance Avenue, Burnham on Crouch, Essex, CM0 8HA, UK
[2]CEFAS, Weymouth Laboratory, The Nothe, Barrack Road, Weymouth, Dorset, DT4 8UB, UK
[3]CEFAS, Lowestoft Laboratory, Pakefield Road, Lowestoft, Suffolk, NR33 0HT, UK

http://www.cefas.co.uk

CEFAS
The Centre for Environment, Fisheries & Aquaculture Science