

Using fish behaviour to separate fish from *Nephrops* in a horizontally divided codend in the mixed trawl fishery

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A major challenge in mixed fisheries is to obtain acceptable size selectivity of the species caught, which may vary in size, shape and behaviour, e.g. *Nephrops* (*Nephrops norvegicus*) and cod (*Gadus morhua*). Horizontally divided trawls create the opportunity of having different selective properties in upper and lower compartments. To obtain full selective effect, fish have to be caught in the upper compartment and *Nephrops* in the lower. Based on knowledge of vertical distribution of fish in trawls, a horizontally divided codend with small square meshes (40 mm) was tested for its ability to separate seven commercial fish species from *Nephrops*. A simple frame was inserted at the entrance to the lower compartment to stimulate fish to swim into the upper compartment. A significant length dependent distribution where small individuals were caught in the lower compartment and large ones in the upper was found for cod and whiting (*Merlangius merlangus*). Haddock (*Melanogrammus aeglefinus*) and saithe (*Pollachius virens*) had a significant preference for the upper compartment while the same was true for hake (*Merluccius merluccius*), plaice (*Pleuronectes platessa*), witch flounder (*Glyptocephalus cynoglossus*) and *Nephrops* for the lower compartment. These results demonstrate that it is possible separate the majority of ga-

doids in from the vast majority of *Nephrops*. Thus, there is a potential of improving size selectivity in mixed fisheries considerable using a vertically divided codend.