



HAL
open science

Investigating trophic level variability in Celtic Sea fish predators

Emmanuel Chassot, Tristan Rouyer, Verena M. Trenkel, Didier D. Gascuel

► **To cite this version:**

Emmanuel Chassot, Tristan Rouyer, Verena M. Trenkel, Didier D. Gascuel. Investigating trophic level variability in Celtic Sea fish predators. *Journal of Fish Biology*, 2008, 73 (4), pp.763-781. 10.1111/j.1095-8649.2008.01938.x . ird-00548995

HAL Id: ird-00548995

<https://ird.hal.science/ird-00548995>

Submitted on 21 Dec 2010

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Figure captions

Figure 1. Location of the ICES subdivisions (VIII f,g,h,j) of the Celtic Sea

Figure 2. Density histograms for all individual trophic levels (T_L) analysed of the Celtic Sea fish predators

Figure 3. Comparison of trophic level for the five species of interest as estimated in the present study (■), derived from stable isotopes of nitrogen in the celtic Sea (◻) and the North Sea (◼), and extracted from the FishBase database (◻). Cod = Atlantic cod; Had = Haddock; Hke = Hake; Meg = Megrin; Whg = Whiting. Vertical lines indicate standard deviation when available

Figure 4. Comparison of trophic levels (mean \pm standard deviation) estimated for the Celtic Sea fish predators: (a) Different levels of taxonomic resolution for the prey: high resolution in abscissa and low resolution (broad taxonomic group) in ordinate; (b) Different sources of prey T_L s: prey T_L s derived from stable isotopes in abscissa and extracted from the FishBase database in ordinate. Cod = Atlantic cod; Had = Haddock; Hke = Hake; Meg = Megrin; Whg = Whiting

Figure 5. Trophic level (T_L) as a function of length (generalized additive model GAM, gaussian family, identity link function). No significant effect of length on the T_L of haddock was detected. Whiskers on the abscissa axis indicate data presence

Figure 6. Boxplots for all individual omnivory indices (O_i) analysed of the Celtic Sea fish predators