

south-subtropical, notal, and eurythermic wide-tropical species. 3. South of the SSC some notal- and sub-antarctic species occurred, though both south-subtropical and notal *Gonatus antarcticus* and *Brachioteuthis riisei* were still dominating (more than 60 % of the larvae sampled in the open waters of the Argentina Basin).

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Hydrographic changes push European common squid *Alloteuthis subulata* into Kiel Bay, western Baltic Sea, its easternmost area of distribution

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The European common squid *Alloteuthis subulata* is by far the most abundant cephalopod in the North Sea and the adjacent Skagerrak where the animals form dense aggregations over sandy and muddy bottom in shallow areas. Mature specimens appear in March/April and spawning peaks in the summer months (June/July); a second spawning season occurs in September. In autumn and early winter the juvenile animals leave the North Sea, migrating to the Atlantic via the English Channel. There is much speculation about the easternmost distribution of *A. subulata*. Though not abundant, it is regularly reported from the Kattegat area, whereas recordings from the Baltic Sea are sparse and mostly anecdotic. We review the reports of *A. subulata* in the Kattegat area and the western Baltic Sea which is believed to be its easternmost range of distribution. We further describe a collection of 18 specimens which were sampled in January 2001 in Kiel Bay during an influx period of Kattegat water into Kiel Bay which caused an unusual increase of salinity (25 psu). This uncommon hydrographic event was probably responsible for the sudden occurrence of *A. subulata* in the western Baltic Sea.

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Environmental and behavioural influences on vessel efficiency in the Falkland Islands *Loligo gahi* fishery: implications for stock assessment

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Falkland Islands *Loligo gahi* is the focus of a major industrial fishery. Experimental fishing confirmed that there are two major cohorts which are resident at different times of the year. Stocks are assessed using depletion methods with the assumption that vessel catch per unit effort (CPUE) is proportional to stock biomass. Other potential influences on CPUE were investigated. It was necessary to standardise CPUEs to account for between-vessel differences in efficiency and changes in biomass over time. Daily average wind speeds greater than 10 ms⁻¹ were associated with low CPUEs, suggesting a direct effect of environmental conditions on vessel efficiency. There was a negative relationship between haul duration and CPUE, indicating that catch rates fall over the course of a haul and that fishers attempt to maximise catch rather than CPUE. Vessels fishing alone achieved higher CPUEs than vessels fishing as part of a fleet, which implies that the negative effects of competition outweigh the positive effects of cooperation. Changing environmental conditions and vessel behaviour have direct effects on the validity of assessment assumptions. There is, therefore, a need to account for the influence of these factors on CPUE when preparing data sets for stock assessments.

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Recruitment strength forecast in the shortfin squid, *Illex argentinus* (Cephalopoda: Ommastrephidae), based on satellite SST data, and some consideration on the species' population structure

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