Distribution, abundance, age and growth of larval cod in Icelandic waters in relation to variable environmental condition.

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Ocean physics play an important role in the retention or dispersal of progeny to favorable nursery grounds and habitats directly influencing year-class strength and subsequent recruitment success. In Iceland, recruitment of cod has been correlated with zooplankton abundance and the strength of the coastal current. As such, the coastal current has been shown to influence the spatial distribution, abundance, size and spawning origins of pelagic juvenile cod. Accordingly, the west- and northward flowing coastal current off Iceland, induced by freshwater runoff provides a transport mechanism for pelagic eggs and larvae derived from the main spawning grounds off the southwest coast to the main nursery grounds off the north and east coasts. In the present study, dispersal, abundance, growth and condition of larvae and juvenile cod were recorded during a series of cruises conducted along the drift route southwest and west of Iceland in 1998-2001. A total of three cruises were conducted in April-June each year. The first cruise each year was timed so as to coincide with the beginning of the spawning season. The second cruise was conducted in May during peak time of hatching and the third one was conducted in mid June to provide information on 2-4 week old larvae along the drift route. Larvae at each station were aged and the daily growth, condition and distribution of larvae were correlated with abundance and distribution of zooplankton and physical oceanographic features including temperature and salinity.