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Nursery ground processes for juvenile plaice (*Pleuronectes platessa*) in Icelandic waters.

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Sandy shore ecosystems are essential nursery grounds for flatfish species where both the quality and quantity of habitat can control the recruitment processes. Juvenile plaice (*Pleuronectes platessa*) can be found in high densities on the spatially restricted sandy-bottom beaches all around Iceland. The objective was to analyse the distinctive features of a highly fertile nursery ground. The interannual variability in settlement, density and growth of juvenile plaice was examined bi-weekly from spring to fall at a highly fertile nursery ground (Helguvík in Álftanes) in SW-Iceland from 2005 to present. Newly settled individuals were first observed in the end of May to early June and settlement lasted until mid-July and densities peaked in early July. Both growth rates and densities varied highly between years. The size structure of the population varied during the season in response to settlement and mortality. Over the study period, population density was on three occasions high enough to reach the site specific self-thinning line, indicating that the population approached the carrying capacity of the nursery ground. Since the onset of sampling, the summer of 2012 had the highest plaice density, which was among the highest reported for this species. The inter-annual variability in density and growth of juvenile plaice on the nursery ground and the subsequent year-class strength derived from survey of nearby important fishing ground is discussed.

Keywords: Plaice, *Pleuronectes platessa*, juvenile, nurseries, growth, self-thinning.

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