

Annual and seasonal dynamics of fish in the brackish – water
Matsalu Bay, Estonia

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Abstract – Matsalu Bay in the Vainameri (West- Estonian Archipelago Sea) is a relatively shallow but large bay. It is the only real delta estuary in the northern Baltic Sea. The fish fauna is strongly dominated by fresh water species such as perch *Perca fluviatilis*, roach *Rutilus rutilus*, white bream *Blicca bjoerkna* and rudd *Scardinius erythrophthalmus*. The study presents CPUE data describing annual and seasonal variations in the species composition, abundance and spatial distribution, based on 1 year of monthly samplings from August 2001 to August 2002 and routine coastal monitoring (in late July –early August) between 1994 and 2003. The bay can be divided into three rather distinct parts. The fish fauna of the inner part (salinity 0–2 p.p.t.) is different from two open parts and resembles that of fresh water lakes. In the open most part (salinity usually 4–6 p.p.t.) some marine species, such as herring *Clupea harengus membras*, flounder *Platichthys flesus* and eelpout *Zoarces viviparous* may seasonally be abundant. Species composition and abundance of most species varies seasonally and interannually. Only the abundance of few species such as pike *Esox lucius* and pikeperch *Stizostedion lucioperca* was not impacted by seasonality. The most dynamic period in the bay is spring, when several species (some of them very rare in summer, such as herring and smelt *Osmerus eperlanus*) enter the bay for spawning.