

P6.

**Habitat value of a developing estuarine brackish marsh****H. Hampel<sup>1</sup>, A. Cattrijsse and M. Vincx**<sup>1</sup> *University Gent, Biology Department, Marine Biology Section*

Marsh creation receives worldwide attention in mitigating loss of coastal wetlands and in management retreat of estuaries. In the Westerschelde, the former Selena Polder, south of "Het Verdronken Land van Saeftinghe", evolved into the Sieperda marsh after several dyke breaches. Soon after the tides regained access to the polder, a tidal creek was formed. Ten years after, a developing marsh system is found close to a mature marsh system. This situation offered the rare and unique opportunity to compare under similar circumstances the utilisation by nekton species of a natural mature marsh with a recently created developing marsh.

Between April and October 1999 both the mature Saeftinghe marsh and the developing Sieperda marsh were sampled every six weeks on two consecutive days. Each sampling occasion covered the whole tidal cycle.

The most important environmental parameters (water height, temperature, salinity, turbidity and dissolved oxygen) were similar in both marsh creeks.

A distinct difference in nekton community structure between the two marshes was observed. Total biomass and densities of nekton species were remarkably higher in Saeftinghe.

In Saeftinghe, a density peak occurred in July and was mainly due to large numbers of the mysids *Neomysis integer*. In Sieperda, peak densities in September were caused by high abundances of the mysids *Mesopodopsis slabberi*. This difference in species dominance was observed during all sampling occasions.

Biomass peaked in July in the mature marsh and in October in the developing marsh. Mysid shrimp (*Neomysis integer*) and fish (mainly *Pomatoschistus microps*) were the main contributors to the biomass in the natural marsh. Herring, sprat (Clupeidae) and shore crab (*Carcinus maenas*) were more important in Sieperda. For *Pomatoschistus microps*, distinct differences in length-frequency distributions were noted between both marshes.

While creek morphology plays an important role, the development stage of a marsh is believed to be a prime factor in determining the habitat function of creek systems of developing and mature marshes.