

components. This material may be extracted and separated into EDTA-soluble (0.04 % to 0.12 % w/w of the stereom) and EDTA-insoluble (0.09 % to 0.11 %) fractions. These two fractions are composed of proteins (72 to 87 %) and carbohydrates (13 to 28 %). Gel filtration HPLC of the soluble fraction shows the unusual elution profiles typical of organic matrices of mineralization. The morphology of abiotic calcite crystals grown in the presence of the soluble fraction of *A. rubens* IOM is strongly modified. Some of the modified crystals mimic crystallites naturally observed within the stereom. This suggests that the IOM of *A. rubens* may act as a true organic matrix of mineralization.

26 REPRODUCTION IN A POPULATION OF SHORE CRABS *CARCINUS MAENAS* (LINNAEUS, 1758) IN THE SOUTHERN NORTH SEA. *C. d'Udekem d'Acoz* - Facultés Universitaires Notre-Dame de la Paix, Namur.

The reproductive structure of a population of *Carcinus maenas* is studied at Ostend (Belgian Coast). The crabs mate from April to November but mainly from June to October. The smallest intertidal mating male was 27 mm across, but about 85 % of the copulating males were larger than 44 mm. Small copulating males seem slightly more common after July. Indirect estimations suggests that each male of 44-56 mm would mate yearly with about 3 females. Females reach the puberty (capability to mate) between 23 and 45 mm with a mean of 33 mm. Part of the females that pass through the puberty moult in early summer exuviate once again in the following months before breeding. The females probably reach puberty at a smaller size in autumn than in summer. It is estimated that about 2 % of the females of first puberal intermoult would survive up to a sixth puberal intermoult. Most females that have already bred, mate before August, while most virgin females mate from August onwards. Most large females breed in winter. Part of them have a second or a third brood in the same intermoult during the spring or in the first half of the summer (the probability to have more than one brood by intermoult sharply rises with the breadth of the female). Most small puberal females breed only once in the spring. The number of eggs by brood is proportionnal to the third power of the female breadth. Females of the third puberal intermoult would be the crab category that produces the biggest percentage of larvae. It appears that the reproductive strategies of *C. maenas* are extremely complex, and are optimised for liberating a maximum of viable larvae.