LA ROCHELLE 24-27 JUIN 2003

Pôle sciences et technologies de l'Université

IIIe CONGRES INTERNATIONAL DES SOCIETES EUROPEENNES DE MALACOLOGIE

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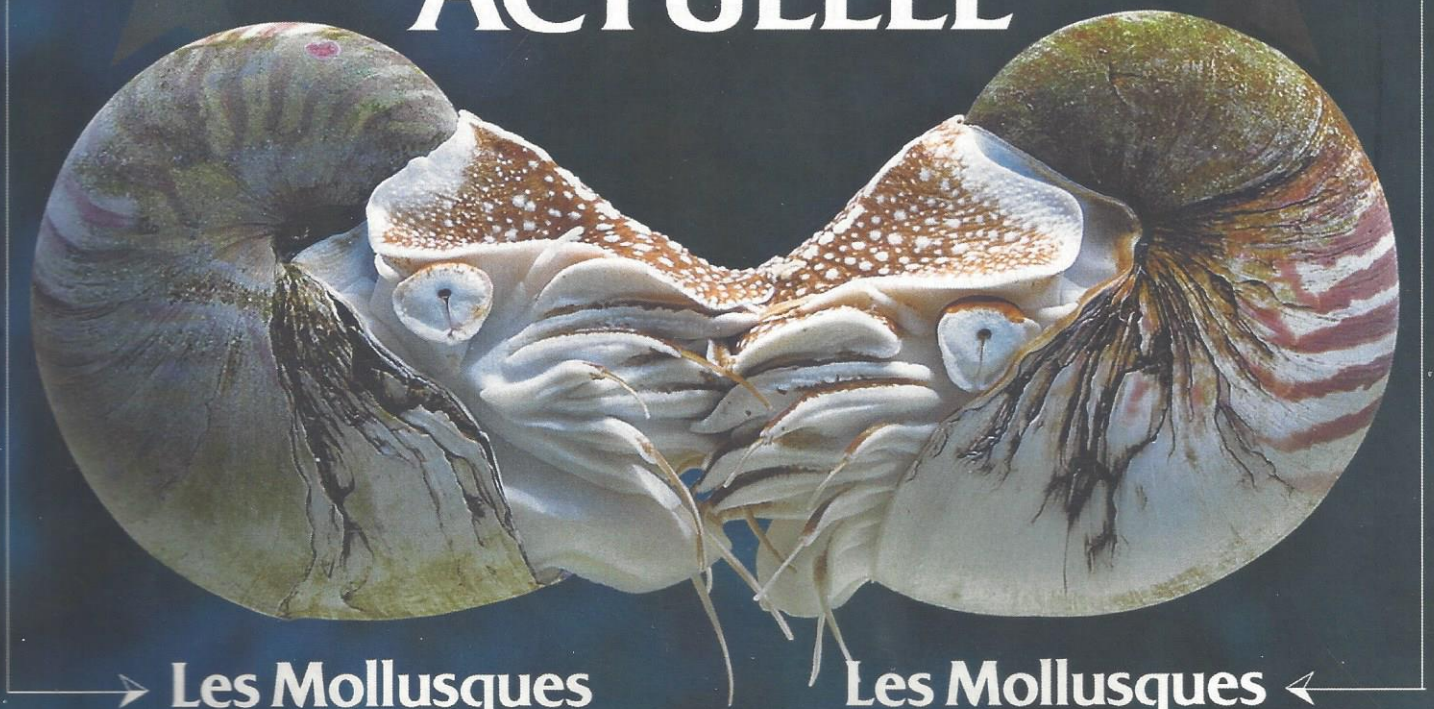
IIe CONGRES
DE LA SOCIETE PORTUGAISE DE MALACOLOGIE

LES MOLLUSQUES DANS LA RECHERCHE ACTUELLE



Bob Source La Rochelle - Photo : Lanceau-Labat

Les Mollusques comme bio-indicateurs

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- Paléo-environnement
- Mollusques et santé

Les Mollusques et leurs ressources

- Pêche et aquaculture
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Informations complémentaires sur le site web : http://www.univ-lr/labo/lbem/sfm/sfm.htm

Bioaccumulation of vanadium and its possible effects on Na-K-ATPase in *Octopus vulgaris*

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Vanadium can act as an inhibitor of Na-K-ATPase in some vertebrates. This enzyme is dependent on the levels of rubidium and potassium.

The levels of vanadium, rubidium, and potassium were determined in Octopus vulgaris caught during commercial fishing at three locations in Portugal (Cascais, Santa Luzia, and Viana do Castelo) during autumn and summer. We analyzed the concentration of these elements in the digestive gland and branchial heart of both male and female octopuses. At least five males and five females were assessed for each season. Elemental concentrations were determined using Particle Induced X-ray Emission (PIXE).

The concentration of vanadium was not correlated with the total weight, total length, or mantle length. There were no differences observed between genders.

Significant differences were found in the quantities of vanadium accumulated in the digestive gland between autumn and spring samples from Cascais and Santa Luzia. In the branchial heart, significant differences in vanadium concentrations were observed in autumn between Viana do Castelo and both Cascais and Santa Luzia.

A significant relationship was found between the concentration of vanadium and the concentrations of potassium and rubidium. These results suggest that vanadium may have a negative influence on the common octopus.