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P3.17

The red algal genus *Scinaia* (Nemaliales; Rhodophyta) on the Azores Archipelago: a molecular approach with morphological and anatomical observations.

León-Cisneros K, Neto AI, Fredericq S, Gabriel D, Riosmena-Rodríguez R

Two species of *Scinaia* that have been reported to co-exist in the Azores, *S. furcellata* and *S. interrupta*, are commonly confused with one another. In the present study, recently collected specimens from the Azorean Archipelago and historical vouchers housed in The Natural History Museum (BM) and Conservatoire et Jardin Botanique de la Ville de Genève (G) were investigated. Chloroplast-encoded rbcL sequence analysis was conducted from silica gel-preserved specimens belonging to different populations. The morphologic and anatomical analyses confirmed the occurrence in the Azores of *S. furcellata* and *S. interrupta* and two non-identified species. The available molecular data supported the morphological interpretation. Molecular characterization of *S. furcellata* is still in progress. Species biodiversity were higher than reported suggesting the need of further monographic work in the Azorean flora.

P3.18

Morphological and anatomical observations on the genus *Scinaia* (Nemaliales; Rhodophyta) from the Gulf of California, Mexico.

León-Cisneros K, Riosmena-Rodríguez R, Neto AI

Four species of Scinaia: *S. complanata*, *S. confusa*, *S. johnstoniae*, and *S. latifrons* have been reported from the Gulf of California. Due to incomplete descriptions of any of these species, their segregation inside their morphologic-evolutionary group (sensu Huisman 1986) is difficult and many taxonomic controversies have been reported. In the present study, recently collected specimens from the Gulf of California and historical vouchers housed in several herbaria (BM, CMMEX, FBCS, LAM, LD, MICH, NY and UC) were investigated. The analyses of morphological, anatomical and reproductive characters confirmed the occurrence of *S. confusa*, *S. johnstoniae*, and *S. latifrons*; the misidentification of *S. johnstoniae* as *S. complanata* in historical records and the new addition of *S. interrupta*. A new development pattern of the cystocarp fusion cell, involving the pericarp cells, was found in *S. latifrons*.

P3.19

Cetacean photo-identification at CIRN: present status and future developments

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Photo-identification is an important tool in studies where individual information is needed and where tagging, branding or other forms of artificial marking are not possible. This is particularly the case of the cetaceans, given their large size, high mobility and the heavy logistics required for their observation in the field. We hereby briefly describe the protocol developed over the past year to store, process and analyse images and their associated information (incl. species determination, dates, geographical coordinates,

behaviours. The CIRN catalogue presently contains mainly four species: common dolphin (*Delphinus delphis*), Atlantic spotted dolphin (*Stenella frontalis*), bottlenose dolphin (*Tursiops truncatus*) and spermwhale (*Physeter macrocephalus*). A preliminary analysis confirms previously published information from Pico Island regarding the degree of persistence of the bottlenose dolphin population, and suggests that at least a substantial proportion of the locally seasonal Atlantic spotted dolphin population returns to the Azores every summer, perhaps to the same island. The full use of the photo-identification potential in the Azores requires that some way must be found to share information between the different research teams, and also with those from nearby areas. A single catalogue for each species in the area would be a particularly useful tool in this context. The involvement of the general public in this task could tap on the huge observational effort going on through the whale watching business.

P3.20

Past, present and future of albacore tagging in the Mediterranean Sea

Megalofonou P, De Metrio G

Albacore, *Thunnus alalunga*, are known to undergo seasonal migrations affecting the fisheries of many nations in the Atlantic Ocean and Mediterranean Sea. Conventional tagging data in the north Atlantic and the western Mediterranean Sea have revealed long distance transoceanic migrations and the possibility of an interchange between the Atlantic and Mediterranean albacore. In the present study tagging experiments carried out in the eastern Mediterranean Sea using conventional tagging are described since 1985. Moreover, recent tagging experiments carried out in the same area using electronic devices (Mk9 archival tag) are assessed. Our scope is to re-evaluate the conventional tagging in the light of information obtained from the tagging experiments using electronic archival tags and discus the future opportunities in the albacore tagging research. The Greek Ministry of Development and the Italian Ministry for Foreign Affairs funded this study in the frame of the Joint Research and Technology Programmes 2005-2007.

P3.21

Antitumour activity of extracts from Azorean macroalgae

Mendonça EA, Barreto MC, Neto AI, Gouveia VF

The ocean is at present the most promising source of bioactive substances, with a high number of new compounds discovered every year. The Azores archipelago is a rich environment concerning the ecology of algal communities. The aim of the present study was to evaluate the antiproliferative activity of 15 extracts from 5 representative seaweed species from São Miguel: *Ulva compressa*, *Gelidium microdon*, *Osmundea pinnatifida*, *Fucus spiralis* and *Cystoseira abies-marina*. Methanolic (ME), dichloromethane (DE) and hexane (HE) extract fractions were prepared from these five algae species and tested, using the MTT assay, to measure the in vitro inhibition of cancer cell growth. Human cervix cancer cell line (HeLa) and African green monkey kidney cell line (Vero) were used in the assays. Overall, the best results were obtained for the DE extracts (except for