

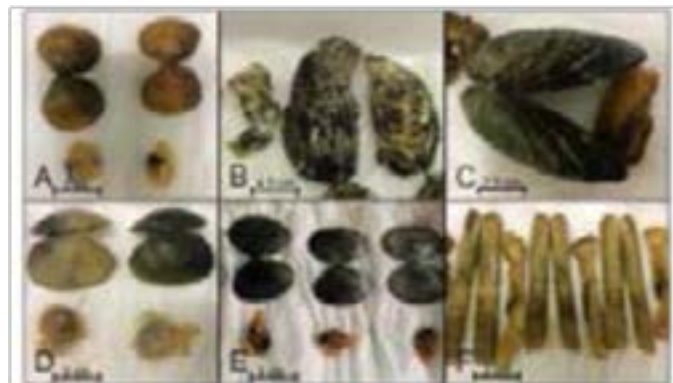
Biochemical Characterization of Six Commercially Marine Bivalves' Species from the Portuguese coast - Ana Marta dos Santos Mendes Goncalves - University of Coimbra, Portugal

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Marine bivalves are highly appreciated by humans, representing important economic value with an increasing demand. Aquaculture is a promising solution to overcome this demand. Aquaculture development has a stronger manifestation in some Asiatic, American, and European countries, like Portugal. In this study, six commercially important species (*Cerastoderma edule* (A), *Crassostrea gigas* (B), *Mytilus galloprovincialis* (C), *Ruditapes decussatus* (D), *Scrobicularia plana* (E) and *Solen marginatus* (F)) were sampled in areas of harvest and established aquaculture production in Portugal, the Mondego estuary and the Ria Formosa lagoon, in winter 2016 and summer 2017. These samples were used to: 1) determine the biochemical composition for total protein content, fatty acid (FA) and carbohydrate profiles 2) identify potential spatial and seasonal variations in the biochemical composition, and 3) assess feeding behaviour of the bivalve species in both seasons and study areas. All species presented higher total protein content, followed by diverse FA content, specially DHA and EPA, and glucose and glycogen as the main sugar and polysaccharide, respectively. Omnivory was confirmed in all bivalve species, with only *S. marginatus* presenting an exclusive herbivorous behaviour in summer. *M. galloprovincialis* and *R. decussatus* showed the highest nutritional value in the Mondego estuary, more noticeable in winter. In Ria Formosa, *C. edule* and *R. decussatus* presented the highest nutritional value, while *C. gigas* exhibited higher nutritive value in summer. These species are pointed out as the best choices

for a healthy human diet and confirmed as a reliable choice for harvesting and production in aquacultures.



Note: This work was presented in 2nd International Conference on Aquaculture & Marine Biology, which was scheduled in March 25-26, 2019 at Paris, France.