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Nationality: Portuguese

Orientation: Sustainable Use of Marine Resources
Specialization Area: Management and Use of Resources
Research Line: 2.3 Assessment of fish and shellfish resources

PhD project: *Palaemon serratus* fishery and population dynamics in Northern Portugal

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Summary: The common prawn, *Palaemon serratus*, is a resource of high commercial value on some European small fishing communities. This species occurs in the Mediterranean and Northeast Atlantic Ocean coastal areas where it is commercially exploited (e.g. Mediterranean, Portugal, Spain, France, UK and Ireland). In Portugal, the common prawn is commercially exploited in the North and central coast sand in some estuaries, and is targeted by the small scale fleet using different fishing gears like “sombreira” liftnet, beamtrawl and “bombos” traps. These fishing gear capture a wide variety and amount of bycatch species with small dimensions and its impact on these populations is unknown. The rapid growth and the relatively short life cycle, associated with high commercial value, make this species an important economic resource. Despite its small size, when compared to Penaeid shrimps this species has a high market value (15 to 50 Euros/kg). For proper management and sustainable exploitation of this resource, the studies about biology and ecology of the species are essential. The study of aspects of population biology is critical to understanding phenomena that lead to the renewal of stocks. The exploitation of these should take into account, in addition to abundance, aspects such as growth, reproduction time and size at first maturity for proper management. In Portugal, the management of *P. serratus* fishing, as well as other small scale fisheries, face a series of difficulties as inaccurately values of landings and the implementation of preventive management measures many times with lack of important aspects of the species biology. On the Portuguese coast, data on the biology and ecology of this species are scarce; Felício et al. (2000; 2002) contributed some preliminary results on their reproductive activity on the north coast of Portugal, but the geographical coverage as well as the study period were limited and should be extended to the work now proposed. The present work is intended to achieve the following objectives: 1. Characterization of fishing activity directed to *P. Serratus*; 2. Characterization of the target species catches from the “sombreira” liftnet, beamtrawl , and “bombos” traps; 3. Characterization and comparison of the rejections of fishing gear; 4. Study the biometry and the reproductive cycle of *P. serratus* in the Portuguese Coast; 5. Study of the abundance and distribution of *P. serratus* in the Portuguese Coast; 6. Study of *P. serratus* growth.