# Analysis of genetic stock structure and connectivity of the sea snail *Thaisella chocolata* (Duclos, 1832) along the Peruvian coast for sustainable fisheries management

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*Thaisella chocolata* (or 'caracol negro' in Peru, 'caracol locate' in Chili) is considered in Peru as a species of commercial importance. For the period January/February 2018, *T. chocolata* represented 32.5 % of the total invertebrate landing at the harbour of Callao (Lima). Despite this, not much is known about the state of its populations. The analysis of the genetic connectivity among those can be a first step to manage the stock efficiently. In this study the mitochondrial DNA COI and perhaps microsatellites will be applied on populations from four sampling locations along the Peruvian coast. *Thaisella chocolata* is a mollusc of the family of the Muricidae, living on rocky substrate along the Peruvian and the Chilean coast. The species has a long pelagic larval phase and the Humboldt current could facilitate long-distance dispersal. Nevertheless, there are different possible threats to the Peruvian populations, such as fisheries, El Niño southern oscillation and pollution. These impacts can reduce the effective population size and genetic diversity. Therefore, even with a good theoretical connectivity the population could be endangered.

Keywords: Thaisella chocolate; Muricidae; Peru; Population genetics; Fisheries management