INTRODUCTION

The Cávado estuary acts as a nursery for several fish species, some of them important as commercial species (e.g. eel and lamprey), and others as part of the food web [1,2]. The knowledge of estuarine biodiversity and its dynamics is an important tool for the proper management of these resources and their habitat, which is included in the Natural Park of the North Coast and is a source of income for the local fishermen (Figure 1). The knowledge about this system is limited and regular monitoring programs should be implemented to follow evolution over time. Our team studied this estuary in 2003/2004 and in the absence of a proper monitoring, we decided to compare old data with new data.

RESULTS AND DISCUSSION

In 2003/2004 we found 62 individuals per sampling effort distributed by 19 taxa and in 2009/2010 we found 139 individuals per sampling effort distributed by 17 taxa (Table 1).

During the first sampling period Pomatoschistus microps dominated in abundance with 74% of total gathered followed by Atherina boyeri (6%) and Liza aurata (5%). In second sampling period A. boyeri dominated (45%), followed by L. aurata (26%) and P. microps (18%). In what respects the biomass, P. microps dominated (38%), followed by A. boyeri (15%) and L. aurata (12%) in 2003/2004. Six years later A. boyeri dominated (39%) followed by L. aurata (31%) and Pomatoschistus microps (12%).

After 6 years, the abundance per sampling effort for A. boyeri and L. aurata increased 9 - 13 and 6 - 34 respectively and for Pomatoschistus microps decreased 87 - 77 (Figure 2). Samples of 2003/2004 and 2009/2010 are not significantly different for the abundance per sampling effort or biomass per sampling effort (Table 2) considering all species together.

METHODS

The fish community of Cávado estuary was followed in one sampling station (Figure 2), in 2003/2004 and six years later, 2009/2010. The ichiofauna was collected by a small beach seine, 10 m mesh size. The sampling effort consists in a throw of the net; for a 10 meter path. In laboratory the fishes were identified to the lowest taxonomic level. All the individuals were measured and weighed. Diversity indices and species richness have been determined with application of the software PRIMER 6.02 [3]. Two-tailed test assuming unequal variances (neoresonoseaasii) was used to evaluate abundance, biomass and diversity differences between sampling effort.

AIM

Find what changes in ichiofauna abundance, biomass and diversity appeared (or not) after 6 years.

CONCLUSION

The fish community of Cávado estuary is stable, with minor fluctuations, that are normal in these dynamical systems.

Atherina boyeri, Liza aurata and Pomatoschistus microps are the dominant species.

After 6 years, the abundance for A. boyeri and L. aurata increased and decreased for P. microps.

Abundance of cyclical migratory species increased while of sedentary, migratory catadromous and occasional marine species are almost the same.

The Shannon diversity index is lower in Winter, increases in Spring and is higher in Summer.

BIBLIOGRAPHY


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