

Biodiversity of Echinoderms of the Gulf of Oran (Algerian west coast)

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INTRODUCTION

This present paper deals with the study of the benthic populations living on the marine deeps. In the western coast, in particular, very few works have been made (Pallary, 1900; Llabador, 1941; Vaissière and Fredj, 1963).

The analysis of the macrobenthic communities structure is a good method in the study of environmental modifications caused both by natural and anthropic perturbations. Some results show the response of the benthic communities to different disturbance sources in a simple way (Muxika et al, 2005). The main goal is the elaboration of a sedimentary map, and in a second approaches both the qualitative and the quantitative composition estimation of the benthic macrofauna (Echinodermata) in the gulf of Oran, north-western Algeria.

RESULTS

Five benthic Echinodermata communities were identified and characterized:

- **Communities of the gravel**

Amphiura chiajei
Amphiura mediterranea
Echinocyamus pusillus
Ophiopsila aranea
Ophiura albida

- **Communities on more or less muddy gravel**

Amphiura chiajei
Amphiura filiformis
Amphiura lacazei
Amphiura mediterranea
Astropecten irregularis

- **Communities of the muddy gravel**

Amphiura chiajei
Amphiura filiformis
Amphiura lacazei
Echinocyamus pusillus

- **Communities of the gravel**

Amphiura chiajei
Amphiura filiformis
Ophiura albida

- **Communities of fine sands**

Astropecten irregularis

MATERIALS AND METHODS

According to the bathymetry of this zone, it has been used 49 stations following eight radials, going from the coast to the open water. The nearest coast station is at -30 m depth and the most far is at -110 m depth, as described (fig.1). One machine type has been used, in occurrence the so called Aberdeen benne or Smith McIntyre, for the sediments and benthos sampling operations. This choice has been motivated by the nature of the present deeps. Two Benne hits have been made for every station giving 0.2 m² of taken area. The sieving is realized on board, giving remains fixed by the Formol and conserved in sight of a laboratory study. : The fauna is extracted by sieved sediment floating and is then identified.

STUDY AREA

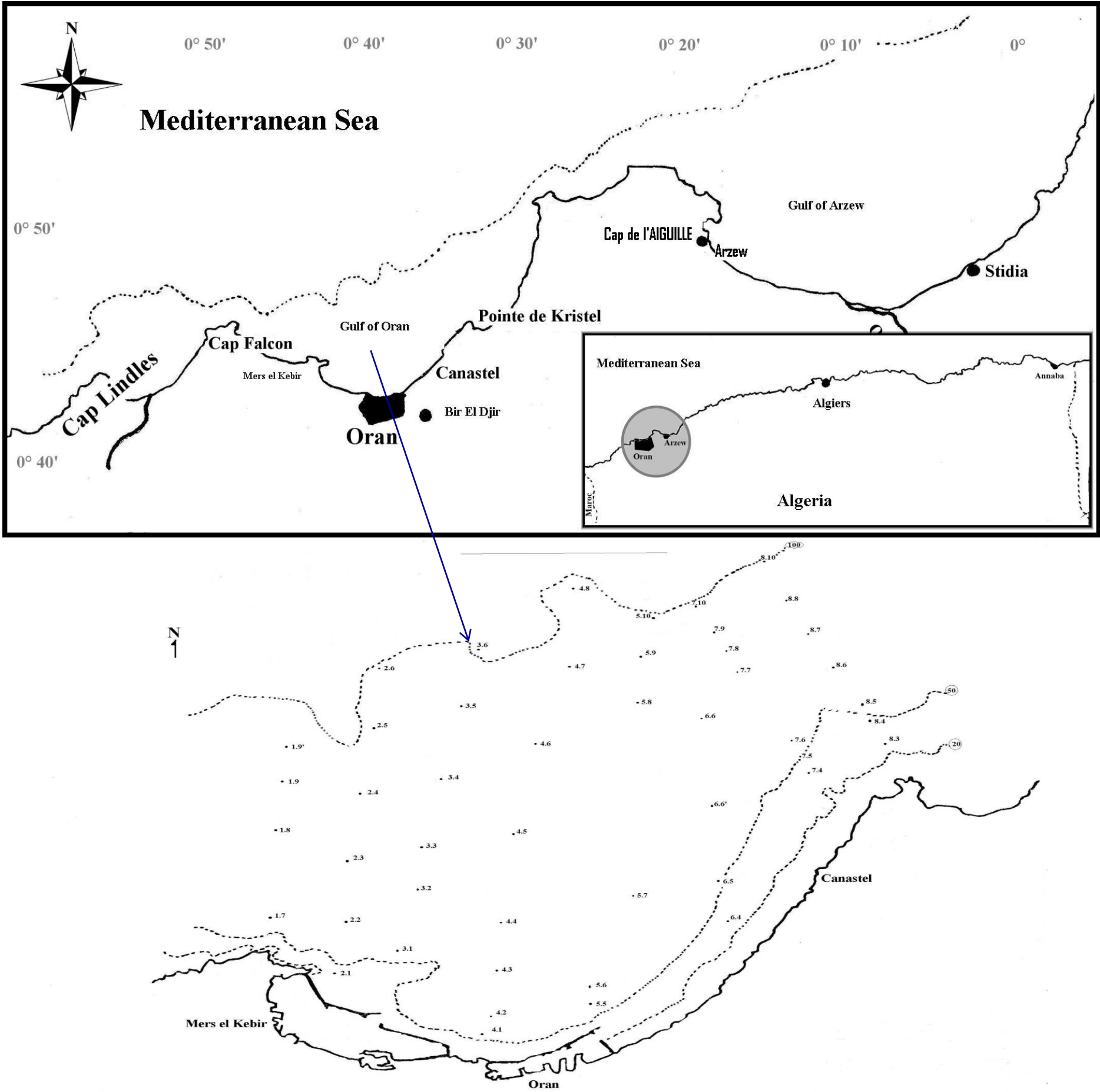


Fig. 1 : Study area and location of the sampling sites distributed over eight transect in the gulf of Oran



Amphiura chiajei



Amphiura mediterranea



Astropecten irregularis



Ophiopsila aranea



Amphiura lacazei



Ophiura albida



Echinocyamus pusillus



Amphiura filiformis

Abstract

The prospecting of about fifty stations of the continental shelf of the gulf of Oran, allowed the study of the nature of the sediments and the macrobenthic communities. Distributed according to bathymetry, the stations closest to the coast are with -30m and most distant with -110m. The distribution of Echinodermata on the sea-bottom of the Oran coast was the subject of a bionomic study which lies within the scope of a program of monitoring of this coastal environment subjected to strong anthropic actions. Around 49 stations were sampled covering the whole of the gulf of Oran. The absence of Echinodermata was observed in many stations. Only 8 species could be identified in this area of study. The faunistic and granulometric analysis offered to us interesting data concerning the existing relation between sedimentary echinodermata and texture on the one hand and highlights the principal species and principal dominant ecological stocks on the other hand.

Keywords: Echinodermata - Bionomic Study - Granulometric Analysis - Gulf of Oran