

## Alien marine species of Libya: first inventory and new records in El-Kouf National Park (Cyrenaica) and the neighbouring areas

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### Abstract

The presence of marine alien species in El-Kouf National Park and the neighbouring areas was assessed using a compilation of available information and observations, a field survey conducted in October 2010 within the framework of the MedMPAnet project and results of further monitoring during June and September 2012. A total of 9 alien species were reported: namely Rhodophyta *Asparagopsis taxiformis* (Delile) Trevisan de Saint-Léon, Chlorophyta *Caulerpa racemosa* var. *cylindracea* (Sonder) Verlaque, Huisman & Boudouresque, the crab *Percnon gibbesi* (H. Milne-Edwards, 1853) and the fishes *Fistularia commersonii* Rüppell, 1838, *Siganus luridus* (Rüppell, 1829), *Siganus rivulatus* Forsskål, 1775, *Pempheris vanicolensis* Cuvier, 1831, *Lagocephalus sceleratus* (Gmelin, 1789) and *Sphyræna flavicauda* Rüppell, 1838. Several of these species were until now unknown for the National Park. The list of alien marine species of Libya is updated and discussed. Until now 63 marine aliens species have been recorded along the Libyan coastline. These include 3 Foraminifera, 3 Ochrophyta, 5 Rhodophyta, 5 Chlorophyta, 1 Magnoliophyta, 11 Arthropoda, 13 Mollusca, 1 Echinodermata and 21 Chordata. Among these Non Indigenous Species, 43 are known as established along the Libyan coast including 8 invasive, 11 casual, 5 questionable, 3 cryptogenic and 1 unknown. An in-depth study of marine organisms would substantially increase the number of alien species occurring in Libya. Monitoring of marine assemblages of MPAs provides a valuable opportunity for delving further into the knowledge of native and introduced species.

**Keywords:** Marine aliens, marine protected area, Libya, Mediterranean Sea.