

# First record of *Discomedusa lobata* Claus, 1877 (Cnidaria: Scyphozoa) in the coast of Syria

Hani Durgham\*, Samar Ikhtiyar\*\*

\* Department of Biotechnology, Faculty of applied science university of Kalamoon, Syria. and Department of Marine Biology, High Institute of Marine Research, Tishreen University, Lattakia, Syria.

\*\*Department of Marine Biology, High Institute of Marine Research, Tishreen University, Lattakia, Syria.

## Abstract

This research led to the identification of the first record *Discomedusa lobata* Claus, 1877. One young of *Discomedusa lobata* specimen 6 cm in diameter, was caught in the coastal water of Lattakia, about 4 km in front of Lattakia port and Latakia Sports City on 9 May 2018.

**Keywords** *Discomedusa lobata* Coast of Syria, Invasive species, Ballast water

## I. INTRODUCTION

The study of zooplankton, including gelatinous species, mainly began in Syrian coastal water since 1990 ([1], [2], [3], [4]). Since 2010, more than 9 of gelatinous species (*Geryonia proboscidalis*, *Aequorea forskalea*, *Phyllorhiza punctata*, *Aequorea globosa*, *Cassiopea andromeda*, *Pelagia noctiluca*, *Marivagia stellate*, *Salpa maxima*, *Porpita porpita*) were recorded for the first time in Syrian coastal waters, most of them found near the Lattakia Port ([5], [6], [7], [8], [9], [10], [11]).

*Discomedusa lobata* is a mild-stinging species and therefore with little or no effect on humans ([12]). It has been recorded in the Mediterranean Sea and in the northeast Atlantic Ocean ([13]). It was sampled for the first time from Izmit Bay in March 2011. Two years later, an increase in the abundance of this

species was observed in the upper water of the Maremara Sea near the Princes' Islands ([14]). Not a very common species in the Mediterranean, although it has been frequently spotted since 2013 (along Spanish, Maltese and eastern Adriatic coasts) ([15]). Histological and cytological studies of *Discomedusa lobata* medusa recorded in Egyptian coastal water ([16], [17]).

## II. MATERIALS AND METHODS

Since 2010, surveys of the pelagic fauna have been carried out in the Lattakia Coastal region between Lattkia Port and the Ras-Ibn-Hani. Several hundred dives have been made down to 40 m depth. All the surface temperature and salinity are taken by WTW MULTYLIN P4. Phosphates, ammonia, nitrates and nitrites were also determined as described by ([18], [19], [20], [21]) respectively. Chlorophyll -a and Pheophytin was determined as described by ([22]). *Discomedusa lobata* was photographed, fixed in 4% formaldehyde, and stored at the zooplankton laboratory of the High Institute of Marine Research, Tishreen University (Syria), It was re-examined and confirmed the species in the Department of Biotechnology, Faculty of applied Science, University of Kalamoon.



Figure 1: *Discomedusa lobata* sampling station (Lattakia-SYRIA)

### III. RESULTS AND DISCUSSION

One young *Discomedusa lobata* specimen (Fig. 1), 6 cm in diameter, was caught in the coastal water of Lattakia, about 4 km in front of Lattakia port and Latakia Sports City (35°32'22.11" N, 35°43'48.47" E), on 9 May 2018 (Fig. 2). The temperature and salinity at the sampling time were 24.9°C and 38.3 ‰, respectively. This specimen was collected at depths of 10m by hand net.

The appearance of *Discomedusa lobata* is accompanied with a swarm of *Aequorea forskalea* by ratio equivalent to 1:10 respectively.

Except for the high nitrate value of 5.94 µmol /L, the concentrations of nitrogen and phosphorus did not exceed 0.01 µmol / L. The concentration of chlorophyll -a was 0.1 mg /m<sup>3</sup>, and the phaeophytin was under detection.

In the same period, a red tide was observed near the shore extend from the fishing port and surrounding areas with dominance of the two species (Raphidophytes *Chattonella spp.* and *Heterosigma akashiwo*) which were first recorded in the coastal area of Lattakia, corresponding to the High Institute of Marine Research ([23]).

A few species recorded for the first time in the Syrian coast, especially species (*Phyllorhiza punctata*, *Cassiopea Andromeda*) which observed in the water near the port of Lattakia. The abundances of these species increased obviously, this might be an indicator for a new successful settlement of a jellyfish species in the region and also that the species might play a more significant role in the pelagic food web in the near future by the possibility of their transformation into invasive species. We have pointed previously to the possibility of these species coming through the ballast water and it seems that continuous registration of new

species in this region makes this probability is the most correct even for the species *Discomedusa lobata*.

### IV. CONCLUSIONS

This research led to the identification of *Discomedusa lobata* Claus, 1877 as a first record in Syrian Coast. This species and other recorded for the first time in the same area indicate a strong interpretation that its transmission placed through ballast water.



Fig. 2 Preserved specimen of *Discomedusa lobata* Claus, 1877, diameter 60 mm (Image by H. Durgham)

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