



RESEARCH ARTICLE

FIRST RECORD OF THE *BURSATELLA LEACHII* DE BLAINVILLE, 1817 FROM CYPRUS

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ABSTRACT

Bursatella leachii de Blainville, 1817 is a lessepsian invasive species included in Black List of Marine Invasive Species and CIESM Atlas of Molluscs in Mediterranean Sea. Twenty-two individuals were discovered in a sheltered bay on the north coast of Cyprus. This is the first published record of *B. leachii* from Cyprus

Key words:

Bursatella leachii, Lessepsian migrant,
Invasive species, First record,
Cilician basin, Northern Cyprus, Cyprus

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INTRODUCTION

The ragged sea hare, *Bursatella leachii* de Blainville, 1817 is a circumtropical species found in warm temperate and tropical waters (Zenetos *et al.*, 2008) *B. leachii* is common in the oceans of the Indo-Pacific and Atlantic, however, during the last century it has become widely distributed throughout the Mediterranean Sea (Zakhama-Sraieb *et al.*, 2009; Zenetos *et al.*, 2012). *B. leachii* was one of the first Lessepsian invasive species in Mediterranean Sea, first recorded in 1940 from Palestine (O'Donoghue and White, 1940). Currently it is one of the most widespread Mediterranean Lessepsian invasive species (Zenetos *et al.*, 2010). Nowadays it is well established and a locally abundant across the Eastern Mediterranean Sea (Zenetos *et al.*, 2010). Other than Levantine Basin and East Mediterranean Sea, *B. leachii* is has become established in the coastal waters of the Central and Western Mediterranean Sea, with records from Turkey, Greece, Sicily, Italy, Slovenia, Malta, Sardinia, Spain and Tunisia (González-Wangüemert *et al.*, 2014). The western most record is from north-eastern coast of Spain (Turk and Furlan, 2011). *B. leachii* is included in the Black List of Marine Invasive Species (Otero *et al.*, 2013), 100

Worst Invasive Alien Species in Mediterranean List (Streftaris and Zenetos, 2006), and CIESM's Atlas of Exotic Molluscs in Mediterranean.

MATERIALS AND METHODS

We observed a total of twenty-two individuals of *B. leachii* on 16 August 2016, one hundred metres off the coast of Yavuz Cıkarma Plajı, Alsancak, Kyrenia, Turkish Republic of Northern Cyprus (35°20'866"N 033°14'127"E). The twenty-two *B. leachii* counted covered an area of approximately four square metres during 30 minutes of observation (17:45 LT and 18:15 LT (UTC+3)). The benthic substrate consisted of sandy mud at depths between 4 to 6 meters.

RESULTS AND DISCUSSION

Individuals ranged in length between 10 and 12 cm and were brown to yellowish brown in colour; this cryptic colouration enabled them to be well camouflaged against the seafloor. The mantle surface was covered with numerous, variably sized papillae and bright blue eye spots. They had broad head with short, sharp tail. The group exhibited different behaviours during the period of observation, with some gregariously grouped, some in pairs copulating, whilst others were single (Figure 1 and Figure 2). If individuals were touched or

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disturbed in any way, they would expel a purplish coloured ink-like secretion (Figure 1).



Figure 1. *Bursatella leachii* secreting a purplish coloured ink-like secretion when disturbed



Figure 2. Couple of *Bursatella leachii* socializing. (Photographs courtesy of Çigdem Çağlar)

Due to political, bureaucratic and economic reasons marine scientific research has received little attention in the waters of Northern Cyprus, particularly the field of marine invertebrates. This has probably led to a delay in discovering the presence of this species along the coast of Cyprus. Another reason is the previous lack of scientific research facilities, and the capabilities of the universities and governmental institutes in the country. Although for many years, it has been well established in East Mediterranean Sea and Levantine Basin, this is the first published record for the island of Cyprus. This may be due to the increasing scientific research capabilities, facilities and knowledge of local universities and governing bodies. To date, *Siganus luridus*, *Siganus rivulatus*, *Sargocentron rubrum*, *Lagocephalus sceleratus*, *Lagocephalus suezensis*, *Stephanolepis diaspros* and *Pempheris vanicolensis* are some well-known and established exotic invasive species in the area. All of which are included in the Black List of Marine Invasive Species (Otero *et al.*, 2013). *Pterois miles* along with *B. leachii* are relatively new exotic invasive species for North coast of Cyprus with the forma being first recorded in 2015 (Oray *et al.*, 2015). Further benthic surveys should be performed in order to determine the full distribution and abundance of *B. leachii* and other exotics around the coast of Cyprus.

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