







Determination of the Density of Mats Formed by the Non-native Seagrass *Halophila Stipulacea* in Mersin Bay (Akkum)

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Abstract

Halophila stipulacea is a seagrass species that was one of the first species to enter the Mediterranean Sea with the Lepsian migration, forming local beds as far away as the Caribbean. This species has a wide geographical distribution and its distribution is known to be influenced by many anthropogenic factors. The aim of this study was to determine the mat density of *H. stipulacea* in Akkum coast of Mersin Bay. The quadrat method was used for sampling. Biometric measurements were made on 100 samples randomly selected from six 1 m² stations in the sampling area. The average number of shoots was determined to be (488 shoots m⁻²). The average leaf length of the samples was 42.33±7.17 mm, leaf width was 5.82±0.92 mm, and the length between two nodes was 5.96±1.97 mm. Based on the field observations, it was found that the distribution of mats was denser up to a depth of 8 m, and this density decreased with depth.

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1. Introduction

Halophila stipulacea (Forsskål) is a dioecious species of seagrass belonging to in the family Hydrocharitaceae of the order Alismatales, native to the Red Sea, Indian Ocean. Due to its wide salinity and temperature tolerance, it can form dense and extensive beds in tropical and temperate waters in a very short time. The species was one of the first Lessepsian species to enter the Mediterranean and is now reported to be distributed as far as the Caribbean Islands (Scheibling et al., 1998; Gerakaris and Tsiamis, 2015; Winters et al., 2020; Toso and Musco, 2023). The first record from the

Mediterranean was given by Fritsch, (1895), and Politis (1926), Forti (1928), Aleem (1962), Lanfranco (1970), Lipkin (1975) reported new records of the species from the Levantine basin. The species gradually forms extensive beds in the northeastern Mediterranean and records from the western Mediterranean are given (Villari, 1988; Biliotti and Abdelahad, 1990; Rindi et al., 1999). The first Atlantic record was reported by Ruiz and Ballantine (2004) in Grenada in 2002, followed by records from Martinique, Dominica and St. Lucia in 2006-2008 (Willette and Ambrose, 2009; Maréchal et al., 2013). It has been reported that *H. stipulacea* continues

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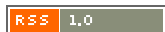
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