

**SPONGES OF ECONOMICAL INTEREST IN DODECANESE  
(AEGEAN SEA): A PRELIMINARY SURVEY**VOULTSIADOU E.<sup>1</sup>, VAFIDIS D.<sup>2</sup> & ANTONIADOU CH.<sup>1</sup>

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The recently decreased availability of bath sponges and the continuously increasing interest on species of biotechnological potential, bring up the need for stock assessment of economically interesting sponges in the Aegean Sea. The purpose of this paper was to investigate demosponge diversity and give a preliminary assessment of population density for certain species known as bath sponges or as sources of bioactive compounds, in the area of Dodecanese, a distinct sub-area of the Aegean Sea, traditionally harvested for sponges. Twenty stations of diverse orientation, substrate inclination and type of substratum, located on 7 islands, were surveyed and 36 demosponge species were found. The data, collected with a non-destructive method, were subjected to multivariate analysis which showed that sponge diversity was higher in areas with vertical cliffs. A considerable spatial variation was revealed by the formation of two groups of stations, according to sponge species presence/absence: one including vertical cliffs and a second one, including moderately inclined cliffs, Posidonia meadows and detritic biogenic bottoms. Bath sponges occurred in a restricted number of stations (mostly at 6 stations each) and in relatively low population densities, though increased in relation to previous assessments, thus revealing a sign of recovery after the devastating epidemic events. Relatively high stock availability was found for the majority of the biotechnologically promising species which were distributed all over the study area and in relatively high densities. The above results, although preliminary, are encouraging for a future sustainable stock exploitation and open a new perspective for sponge mariculture in the area.