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**Comparative growth of the Mediterranean mussel
(*Mytilus galloprovincialis* Lamarck, 1819) reared in three coastal areas of Sardinia**

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Mussel culture is the most important aquacultural activity in Sardinia (Italy). Small specimens (42.5 ± 3.1 mm shell length, 2.3 ± 0.6 g wet meat weight) of *Mytilus galloprovincialis* of the same origin (Taranto) were grown in suspended culture from April to October 2010 in three different Sardinian coastal lagoons: 1) Calich, 2) Porto Pozzo, and 3) Tortolì. Several morphometric variables (*i.e.*, shell length, shell height, wet shell weight, wet meat weight, and wet total weight) were measured monthly in 60 mussels from each of the experimental groups. During the same period, a number of hydrological variables (*i.e.*, temperature, salinity, pH, and dissolved oxygen) were monitored fortnightly at each lagoon, whereas chlorophyll *a* and seston content in the water column was determined monthly. A two-way analysis of variance was used to test for differences in mussel shell length and condition index ($CI = \text{wet meat weight} / \text{wet total weight} \times 100$) between ‘sites’ and ‘sampling periods’. *Post-hoc* multiple comparisons were performed using the Student-Newman-Keuls test. After six months, mussels grown in the Calich lagoon showed a significantly higher mean shell length (66.2 ± 4.7 mm; $F_{(2, 1062)} = 117.3$, $p < 0.001$) than those from Porto Pozzo (63.5 ± 3.2 mm) and Tortolì (61.6 ± 2.7 mm). Similarly, at the end of the trial, mean CI value was significantly higher in *M. galloprovincialis* specimens from the Calich lagoon (60.9 ± 5.3 ; $F_{(2, 1062)} = 847.5$, $p < 0.001$) than in those from Porto Pozzo (51.4 ± 3.9) and Tortolì (49.4 ± 4.4). Significant differences due to ‘sampling period’ and interaction ‘site \times sampling period’ were also detected. The influence of the abiotic variables on mussel growth is reported and discussed.