Byssogenesis of Invasive Marine Mussels *Perna viridis* and *Perna perna:* Implications for their Invasion Race

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The green mussel *Perna viridis* (Linnaeus) and the brown mussel *Perna perna* (Linnaeus) often co-exist with each other and recently invaded new geographical regions probably through international shipping, either as adults attached to ship hulls or as larvae in ballast water tanks. *P. viridis* and *P. perna* were also introduced to the different parts of the world for culture purpose. *P. perna* is a subtropical-tropical mussel that colonized Caribbean Sea several decades ago. In recent times, *P. viridis* is replacing *P. perna* from its natural beds. Mussels attach with any substratum by means of byssus threads. Temperature and salinity are among the most important environmental factors affecting the byssus thread production and byssus attachment strength of mussels. These factors affect their metabolic rates which may be reflected in their activity level. For that reason, a study has been carried out to determine whether *P. viridis* has a higher tolerance and adaptability than *P. perna,* in terms of byssus thread production under different salinity, temperature, mechanical agitation and light conditions. Our results on byssus thread production under different environmental conditions clearly indicate that *P. viridis* has wider tolerance limits than *P. perna*. This may explain why *P. perna* has been displaced by *P. viridis* in various locations in the world.

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