1   **Blue mussels *Mytilus edulis* L. and *M. trossulus* Gould in sympatry: assessment of ecological**

2   **niche divergence using species distribution modeling**

3   **Running page head: "*Blue mussels niche divergence*"**

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13   *Abstract*

14   Species distribution models (SDMs) describing the relationship between species occurrence and

15   environmental parameters can be used to assess the ecological niche of a species. Usually applied to

16   morphologically distinct species, SDMs are also a promising tool for describing niche partitioning in

17   coexisting cryptic species. An example of the latter in the marine realm are blue mussels *Mytilus edulis*

18   (*ME*) and *M. trossulus* (*MT*). Despite considerable research effort, little is known about how they share

19   space and resources in sympatry anywhere except the Baltic Sea. Salinity, substrate, surf and proximity

20   to harbors have been suggested as candidate factors of segregation but no conclusion has been made.