



## **Some issues having to do with the origins and evolution of the Black Sea – and some new ideas that need to be tested**

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The Black Sea is generally thought to be a back-arc basin with active extension occurring in Early to middle Cretaceous times. Nevertheless, fundamental issues such as the presence or absence of a related magmatic arc and the orientation of the related, driving, subduction zone remain vaguely defined at best. A vigorous debate also goes on about the relative ages of western and eastern Black Sea basins. What this means for the geometry of extension and mechanism(s) of rifting in terms of the broader plate configuration and kinematics are poorly defined. The situation is further complicated by probable overprinting relationships with earlier extensional events in the Jurassic (and earlier, at least to the Permian and probably to the Devonian). In the course of preparing a new set of paleotectonic maps for MEBE, we have tried to rethink the evolution of the Black Sea, in particular by considering what the attributes of younger analogues in the Tethyan Belt might imply. In this context, we present some new ideas about the evolution of the Black Sea. Although, in the absence of some critical diagnostic datasets, some of these ideas are “model-driven”, none of them violate the data as we know them.