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## Singular sector of Benney hierarchy and moduli of degenerate critical points

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Singular sector of the hierarchy of the one-dimensional Benney system is studied. It is observed that the hodograph equations for this hierarchy have the form of vanishing gradient of certain function which obeys the Euler-Poisson-Darboux system. This fact allows to describe completely the stratification of the singular sector. It is shown that the deformations of the hyperelliptic curves which arise in strata are described by integrable hierarchies of hydrodynamical type equations. It is demonstrated that these hidden Benney hierarchies provide us with the description of moduli of classes of degenerated critical points of certain functions.