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The talk will discuss the recent result on asymptotic linear stability of two-dimensional solitary waves on water. It is assumed that the fluid is bounded by a free surface and a rigid horizontal bottom. The solitary wave is moving under the gravity and the surface tension is ignored. It was known that the fully nonlinear Euler equations have a solitary-wave solution. In this talk, we will show that the linear operator arising from linearizing the Euler equations around the solitary-wave solution has no spectrum points lying on the right half of the complex plane. Moreover, the solutions of the linearized equations decay at an exponential rate in an energy norm with an exponential weight, under the condition that the solutions have no component in the two-dimensional neutral-mode space arising from the solitary waves. (Received March 07, 2011)