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Wenjie Ni* (wenjienix1@gmail.com), 1326 S Mount Vernon Ave. Apt.G, Williamsburg, VA 23185, and **Mingxin Wang**. *Dynamics and patterns of a diffusive Leslie-Gower prey-predator model with strong Allee effect in prey.*

This paper is devoted to study the dynamical properties and stationary patterns of a diffusive Leslie-Gower prey-predator model with strong Allee effect in the prey population. We first analyze the nonnegative constant equilibrium solutions and their stabilities, and then study the dynamical properties of time-dependent solutions. Moreover, we investigate the stationary patterns induced by diffusions (Turing pattern). Our results show that the impact of the strong Allee effect essentially increases the system spatiotemporal complexity. (Received September 06, 2016)