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**Modelling a predator-prey system with infected prey in polluted environment.** (English)

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Summary: A predator-prey model with logistic growth in prey is modified by introducing an SIS parasite infection in the prey. We have studied the combined effect of environmental toxicant and disease on prey-predator system. It is assumed in this paper that the environmental toxicant affects both prey and predator population and the infected prey is assumed to be more vulnerable to the toxicant and predation compared to the sound prey individuals. Thresholds are identified which determine when system persists and disease remains endemic.

**MSC:**

34C11 Growth and boundedness of solutions to ordinary differential equations

Cited in 26 Documents

92D25 Population dynamics (general)

92D30 Epidemiology

**Keywords:**

predator; prey; SIS model; disease; toxicant; persistence

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**References:**

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