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The paradox of enrichment in ratio-dependent ecoepidemic models

Recently experimental and theoretical ecologists have shown a renewed interest toward ratio-dependent models. Specific questions are raised by the occurrence of the paradox of enrichment in such systems. In the present study we investigate a recent eco-epidemiological model, with an underlying predator-prey demographics. Contrary to a widely accepted opinion, our extensive numerical simulations reveal that in the presence of infection the paradox of enrichment may also occur in ratio-dependent ecosystems.

This is a joint work with Prof. Ezio Venturino from Dipartimento di Matematica, Università di Torino.