

Two species competition and edge-mediated effects

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The term edge-mediated effects is used to describe changes in ecological processes that result in some way from the juxtaposition of disparate habitat types. In this talk we explore edge-mediated effects in the context of two-species reaction-diffusion competition models in bounded spatial habitats. Our models highlight the following general classes of mechanisms through which ecological edges can alter species interactions in fundamental ways:

1. Edges can change species interactions by altering species' movement patterns.
2. Edges can change community dynamics by differentially inducing species' mortality.
3. Edges can alter species interactions through cross-boundary subsidies.
4. Edges can create new opportunities for species interactions.

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