

Alleghenian-Illinoian mammal province (in southeastern Canada). We use estimates of the minimum reserve size predicted to contain historic mammal species richness for this region as an a priori constraint in the design of a hypothetical reserve network. We find that the minimum percentage ranges from 2-58%, depending on the algorithm used to select reserves and how the target for achieving representation is defined. These results suggest that a more appropriate target for achieving conservation goals may be the number of protected areas that meet minimum size criteria, rather than a fixed percent within an ecologically defined region.

THE BIG PICTURE, 2002: IDENTIFYING KEY NATURAL AREAS AND LINKAGES IN SOUTHERN ONTARIO

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Abstract

The Big Picture, 2002 is a Geographic Information System (GIS)-based landscape analysis, aimed at identifying the key natural heritage areas in southern Ontario and the most promising linkages between them. The maps produced through this project are intended to help guide conservation efforts such as restoration, land securement and land-use planning. Numerous digital data layers covering southern Ontario plus a portion of the Canadian Shield were compiled for the analysis. These layers included evaluated wetlands, forest cover, old growth forest, rare species and communities, waterbodies and water-courses, parks and protected areas, Areas of Natural and Scientific Interest (ANSIs) and others. The data layers were overlain in a GIS system and points assigned to the features in each layer according to their conservation value. Core natural areas were identified by a combination of minimum size and a minimum point score per pixel. Potential linkages between these cores were computed by assigning scores to the landscape surrounding the cores based on the probable resistance to wildlife movement.

USING PROMETHEUS TO MODEL FIRE IN ALGONQUIN PROVINCIAL PARK

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Abstract

Park planners and resource managers are often challenged by the paradoxical nature of forest fires. Allowing fire to perform its ecological role, while balanc-