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Literature Review: Effects of Chronic Soil Calcium Decline and Soil Acidification on Terrestrial Forest Crustaceans and Mollusks

While there has been little research, the studies make it clear that snails and isopods respond negatively to acidification and positively to enriched calcium availability – both through natural calciumrich soil and experimental liming. Calcium rich soil or litter results in a greater number, distribution and more species of snails and isopods.

Calcium depletion can be harmful to birds with impacts such as negative effects on eggshell formation. Calcium availability appears to be a strong driver of forest communities at multiple trophic levels but other factors, including soil and litter moisture, availability of other elements, and forest type and age, likely interact with and influence the importance of calcium levels.

More research is needed to better understand the effects of soil acidification and calcium decline on terrestrial forest biota, particularly in forests of eastern Canada.





