

Rove beetles act as warning signs for clear-cutting consequences

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New research from the University of Alberta and the Canadian Forest Service has revealed the humble rove beetle may actually have a lot to tell us about the effects of harvesting on forests species.

Rove beetles can be used as indicators of clear-cut harvesting and regeneration practices and can be used as an example as to how species react to harvesting. It has been found that after an area of forest was harvested, the many forest species, including rove beetles, decreased dramatically. As the forest regenerated, it never fully replicated the full characteristics of the older forest it replaced.

As insects are the most abundant animal species in forests, they have enormous potential as indicators of habitat change and recovery and are increasingly being used in conservation studies.

“We felt beetles were excellent candidates for this study because they are abundant and diverse, easily sampled, inhabit a variety of niches and are very sensitive to habitat change,” said John Spence, professor of Renewable Resources at the University of Alberta.

A total of 13, 978 rove beetles were collected and 98 species were identified during this study.

Once the forest was harvested the overall abundance of rove beetles declined while the diversity of species increased. Also most mature forest-dwelling species became much less abundant or disappeared

completely immediately after harvest. Even the low amount of mature forest beetles that survived the initial harvest would eventually die out or migrate elsewhere within a few years of harvest.

“The more forests are harvested, the more mature forest species, such as the rove beetle, become threatened by fragmentation and loss of habitat. This study is significant because it indicates a new forest will not hold the same biota as an old forest, so we must ensure that forest managers conserve adequate patches of old forests or make adequate long term plans for their full recovery,” said Spence.

Source: University of Alberta

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