

Caribou Response to Wildfires

Geneviève Degré-Timmons and Emmanuelle Gendron

This artistic creation has emerged from an unexpected collaboration between a PhD candidate, Geneviève Degré-Timmons and a professional artist, Emmanuelle Gendron, where they explored the synergies between natural science and visual art to translate complex ideas into a cohesive science-inspired painting. This artistic pursuit represented an opportunity to help develop scientific imagination and to explore ways to enrich science communication.



In the Northwest Territories (NT; Denendeh), it appears that caribou (*Rangifer tarandus caribou*; ȩd̩zi in Tłı̄ch̩o Yatı̄ and mbedzih in Dene Zhatı̄e) are selecting recently burned areas (1-10 years post-fire) and avoiding older (11-30 years) regenerating forests in the summer ¹. This raises the questions: Why are caribou using these early post-fire habitats; why and when do they cease to them; and does it increase their vulnerability to predation? To illustrate these research questions, Degré-Timmons and Gendron drew inspiration from photos taken during multiple field sampling campaigns (Figure 1A-C) and research outputs aimed at assessing post-fire caribou habitat recovery in the southern NT^{2,3,4}, as well as from discussions of their shared experiences and connections to the Canadian boreal forest. Both partners were involved in all stages of the creation process; from jointly designing this artwork to producing it (Figure 1A-G).



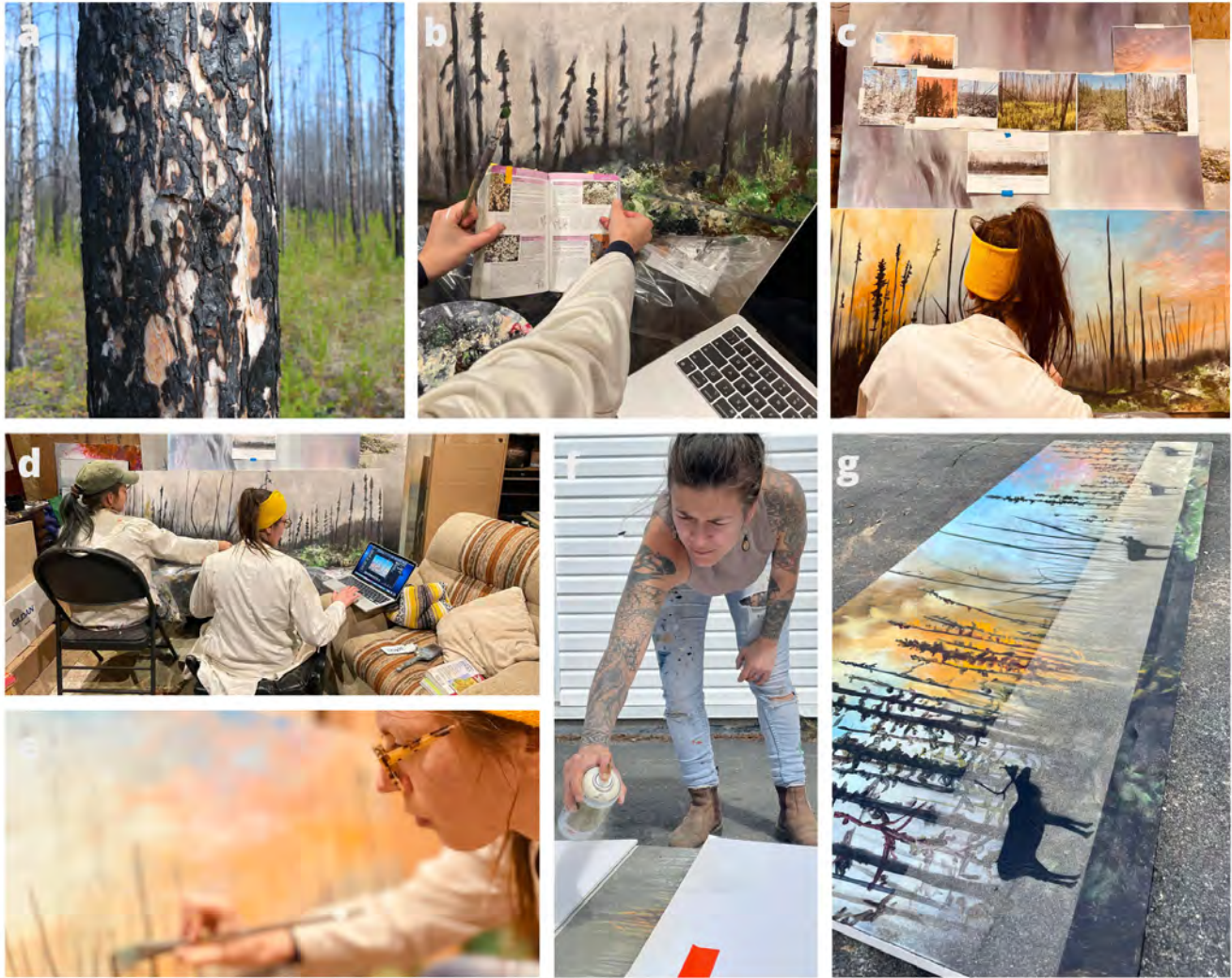


FIGURE 1

A) Drawing inspiration from photos taken in a regenerating burn (Photo credit: G. Degré-Timmons); B) Ensuring that the color palette is realistic (Photo credit: S. Hébert); C) Creating a forest succession timeline from photos (Photo credit: E. Gendron); D) Co-producing the painting (Photo credit: S. Hébert); E) Challenging each other to work beyond their usual disciplines (Photo credit: E. Gendron); F) Using mixed media techniques to create a contrasting effect (Photo credit: G. Degré-Timmons); G) Illustrating how wildfires may influence caribou behavior (Photo credit: G. Degré-Timmons).

The painting depicts the post-fire forest regeneration process in relation to caribou habitat use (Figure 1G). Through this art-science partnership, they blurred the boundaries between science and art to co-produce a unique painting about expected caribou response to wildfires (Figure 1D). By gaining insight into the ecological process, Gendron was able to capture the mood and atmosphere of a landscape disturbed by wildfires, while also integrating more complicated concepts in her artistic practice as she guided Degré-Timmons (Figure 1D-F). By collaborating together, they challenged each other to work beyond their disciplines to generate this non-conventional research output (Figure 1E). They also used this opportunity to critically reflect on how working across disciplines can enhance learning and to encourage knowledge sharing. They view art as a useful tool to create emotional connections and convey the complexity of environmental change.

Geneviève Degré-Timmons (she/her/elle) is a white settler who is grateful for the opportunity to conduct research and to participate with on-the-land camps in the southern Northwest Territories. She recognizes the importance of reciprocal and meaningful knowledge sharing. She lives in the Eeyou Istchee/Bay James regions (Québec), where she is pursuing her graduate studies remotely. Geneviève has a BSc. in Biology from the Université du Québec à Rimouski, a short graduate certificate in Geomatics from Université Laval and is currently pursuing a PhD in Forest Science at Université Laval.

Emmanuelle Gendron (she/her/elle) is a visual artist native of Longueuil (Québec). She currently resides in Chibougamau (Eeyou Istchee/Bay James regions), Québec. She describes herself as an artist-educator as she believes in the arts as a means of communication for a healthy society. She was recently awarded the Conseil des arts et des lettres du Québec – Artist of the year in Northern Quebec prize.

REFERENCES

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