

# Rapport - Article scientifique

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lepidopteres | communautés | variation temporelle | variation spatiale

## A. Nos questions de recherche.

**A.1. Question principale** : Quels sont les changements dans la biodiversité des espèces de lépidoptères dans le temps et dans l'espace au Québec ?

### Questions spécifiques (1 sur la variation temporelle et 2 sur la variation temporelle+spatiale) : ### **Variation temporelle** : Comment la diversité des espèces de lépidoptères a-t-elle évolué au fil des années?

### **Variation temporelle et spatiale** : -Comment la répartition des espèces de lépidoptères varie dans le temps? carte avec différentes couleurs pour chaque bloc de 25 ans ou 50 ans avec différentes textures (4 cartes dans une avec heat map) -Comment la répartition de *Papilio canadensis* change dans le temps et l'espace?

Note: please start your introduction without including the word "Introduction" as a section heading; this heading is implied in the first paragraphs.

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Fig. 1. Photo de *Papilio canadensis* observé dans son habitat naturel.

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**Language-Editing Services.** ![Variation du nombre d'espèces de lépidoptères au Québec en fonction du temps.] #ajouter une png ou jpg de notre graphique

![Répartition de *Papilio canadensis* au Québec au fil des années.] #ajouter une png ou jpg de notre figure obtenue

Dans cette section, nous analysons l'évolution de la biodiversité des lépidoptères au fil du temps à travers plusieurs visualisations. Nous allons créer des cartes et des graphiques pour observer les variations et tendances.

**B. Visualisation des données.** Les graphiques ci-dessous montrent l'évolution de la biodiversité des lépidoptères pour différentes périodes et critères. Nous avons créé six graphiques pour illustrer les tendances dans les données des lépidoptères.

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Authors must submit a 120-word maximum statement about the significance of their research paper written at a level understandable to an undergraduate educated scientist outside their field of speciality. The primary goal of the Significance Statement is to explain the relevance of the work in broad context to a broad readership. The Significance Statement appears in the paper itself and is required for all research papers.

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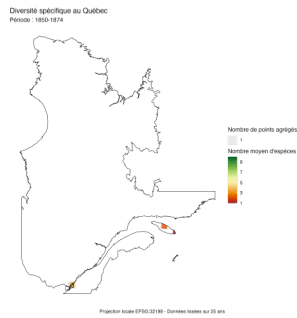


Fig. 2. Variation des espèces de lépidoptères au Québec au fil des années.

### C. Fusionner les cartes :

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*fig : frog*

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$$\begin{aligned}(x+y)^3 &= (x+y)(x+y)^2 \\ &= (x+y)(x^2+2xy+y^2) \\ &= x^3+3x^2y+3xy^2+y^3.\end{aligned}$$

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**ACKNOWLEDGMENTS.** Please include your acknowledgments here, set in a single paragraph. Please do not include any acknowledgments in the Supporting Information, or anywhere else in the manuscript.

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