URBAN TREE POLLENS
A step forward to better predict identity and concentrations
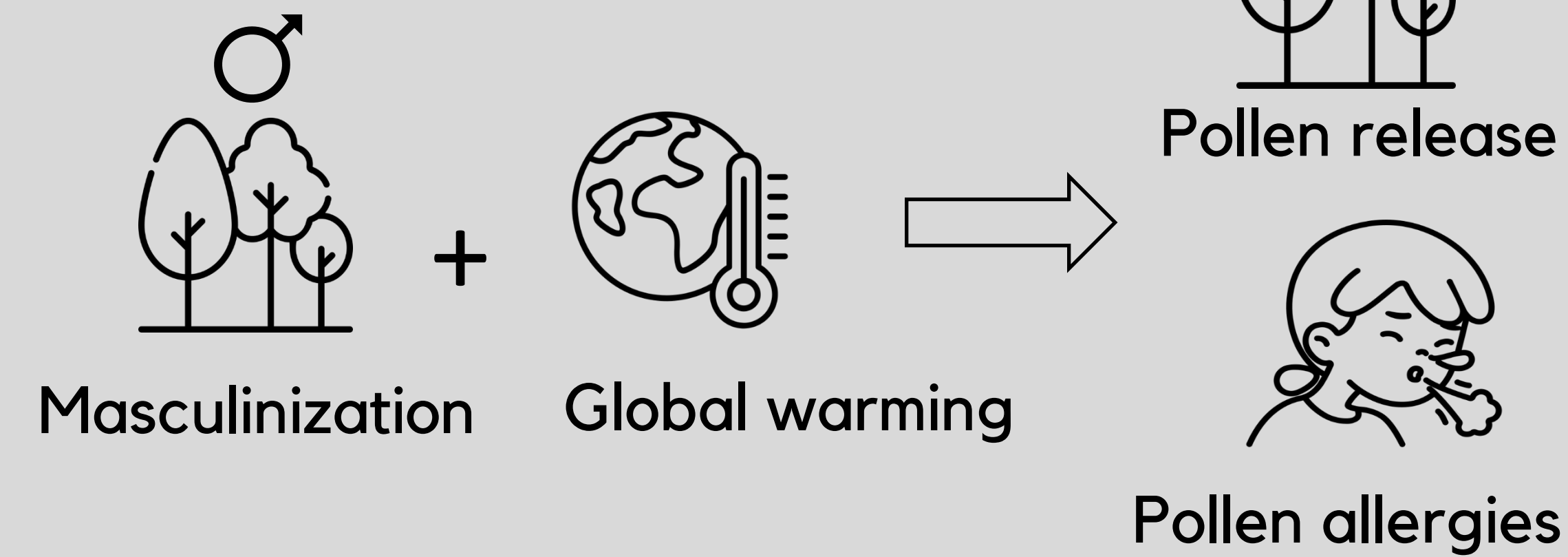
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Sarah Tardif

CONTEXT

Masculinization + Global warming → Pollen release / Pollen allergies

Poor knowledge of pollen distribution

QUESTIONS

Where and when are each type of pollen found?

Is there a link between the severity of symptoms and pollen concentrations?

METHODS

POLLEN SAMPLING AND ANALYSING

25 samplers distributed spatially according to a gradient of vegetation cover, population density and average household income.

Microscopy — Genus level ID & concentrations

Molecular analyses — Species level ID

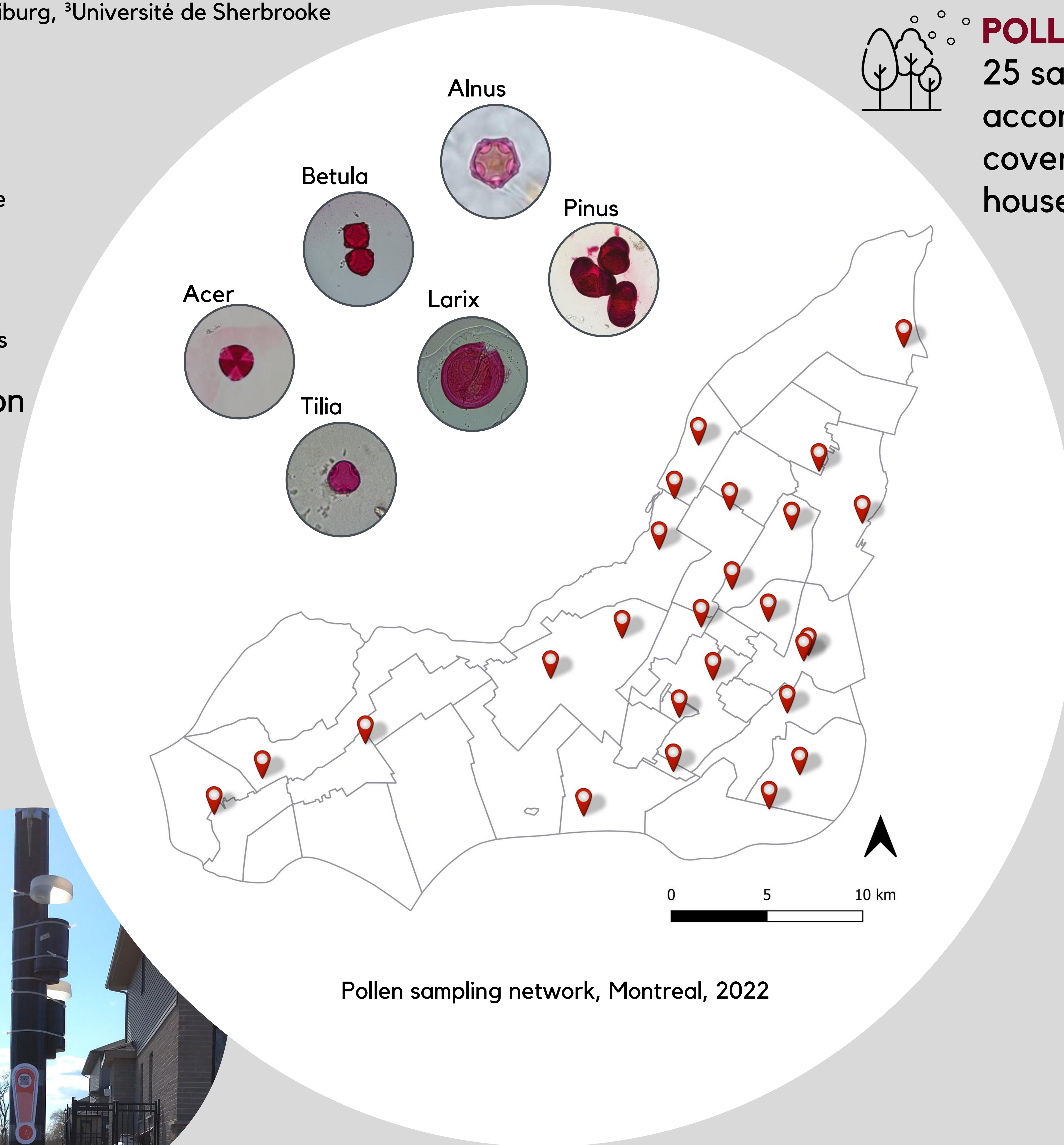Flow cytometry (NEW) — Species level ID & concentrations

SURVEY

- When and where does one experience allergic symptoms ?
- What are the symptoms?

The road so far:
- 140 participants
- ~ 7 answers/participant over 20 weeks

Pollen sampling network, Montreal, 2022

0 5 10 km

Gravimetric pollen sampler

What's next?

Develop spatial and temporal models to characterize pollen exposures based on the collected pollen data and environmental predictors, such as land use and land cover variables, vegetation composition, flowering time, and meteorological parameters relevant to pollen release and dispersal.