



# Population genetics of *Rangifer* : a circumpolar approach

**Steeve D. Côté**, Glenn Yannic, Joaquin Ortego, Louis Bernatchez  
and many other collaborators



## A group of reindeer running across a snowy field. The reindeer are silhouetted against a bright, hazy background, creating long shadows on the snow. They are moving from left to right in a loose formation.



Québec



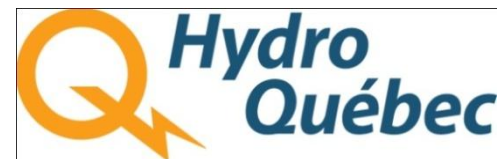
technologies  
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**Conférence régionale  
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Fondation canadienne pour l'innovation  
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Fondation de la faune du Québec




**IPY-API**  
 International Polar Year  
 Année polaire internationale  
 2007-2008

# RESEARCH QUESTIONS

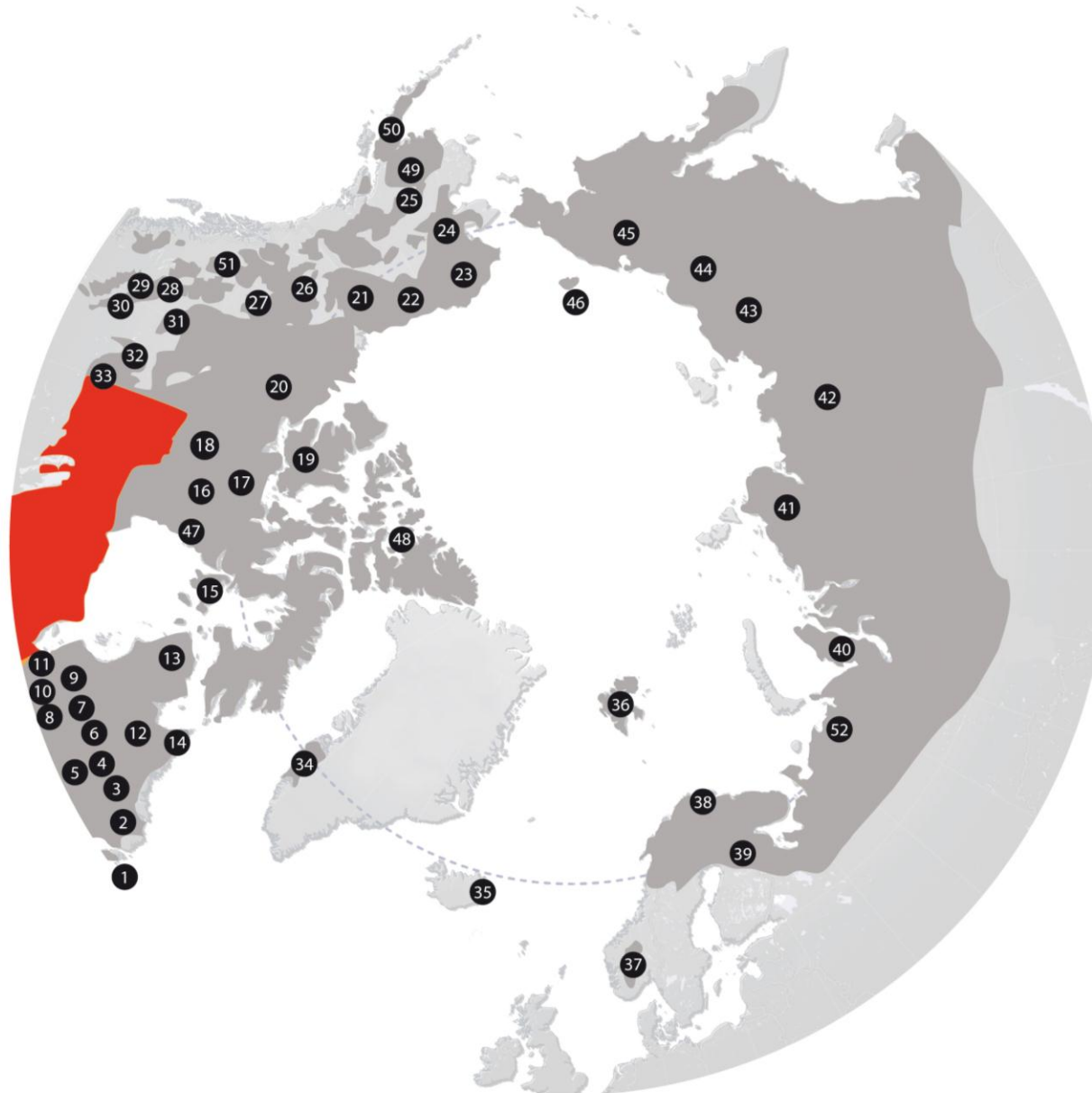


- How many 'groups' of Rangifer are revealed by genetic clustering analyses?
- Which regions at the circumpolar scale represent a challenge for conservation based on genetic origin and diversity?
- Where are located the most important genetic differences among large regions? What is the connectivity between herds?
- Could we localize *Rangifer* glacial refugia ?
- What is the temporal dynamic of genetic differentiation between reindeer and caribou ?

# SAMPLING / GENOTYPING

- **> 50 herds over the world**
- **20 individuals / herd**
- **a) 16 microsatellites**
- **b) 470-bp of the control region**

# SAMPLING



- |                         |                     |
|-------------------------|---------------------|
| 1 NewFounland           | 28 Chinchaga        |
| 2 Mealy Mountain        | 29 Narraway         |
| 3 RedWine               | 30 A La Peche       |
| 4 Lake Joseph           | 31 Caribou Mountain |
| 5 Gaspésie              | 32 Red Earth        |
| 7 Portneuf              | 33 Cold Lake        |
| 6 Manicouagan           | 34 Greenland        |
| 9 Jamésie               | 35 Iceland          |
| 8 Charlevoix            | 36 Svalbard         |
| 10 Val-d'Or             | 37 Hardangervidda   |
| 11 La Sarre             | 38 Varanger         |
| 12 Rivière-George       | 39 Finland          |
| 13 Rivière-aux-Feuilles | 40 Yamal            |
| 14 Torngat              | 41 Taymir           |
| 15 Southampton          | 42 Lena-Olenyk      |
| 16 Beverly              | 43 Yana Indigurka   |
| 17 Ahiak                | 44 Sudrunskaya      |
| 18 Bathurst             | 45 Chutkotka        |
| 19 Dolphin and Union    | 46 Wrangel          |
| 20 Bluenose East        | 47 Qamanirjuaq      |
| 21 Porcupine            | 48 Bathurst Island  |
| 22 Central Arctic       | 49 Alaska Peninsula |
| 23 Teshekpuk            | 50 Interior Alaska  |
| 24 Western Arctic       | 51 Northern BC      |
| 25 Denali               | 52 Nenetsky         |
| 26 Tay River            |                     |
| 27 South Nahanni        |                     |
-  No samples yet