

Introduction

-*C.brenneri* and *C.remani* are closely related nematodes inhabiting distinct geographic areas.

-They are reported as being reproductively isolated in the literature, but clear hybrids have been produced in the lab.

-**This study tested whether reproductive isolation is affected by temperature.**

-Our predictions:

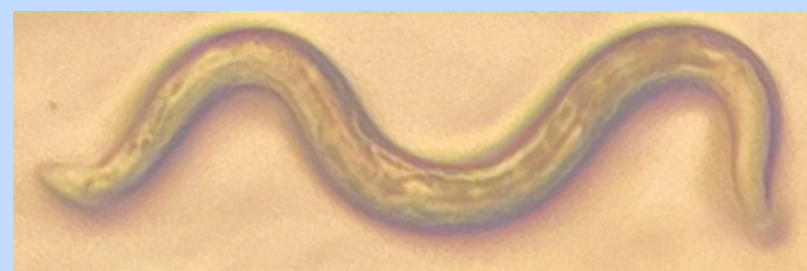
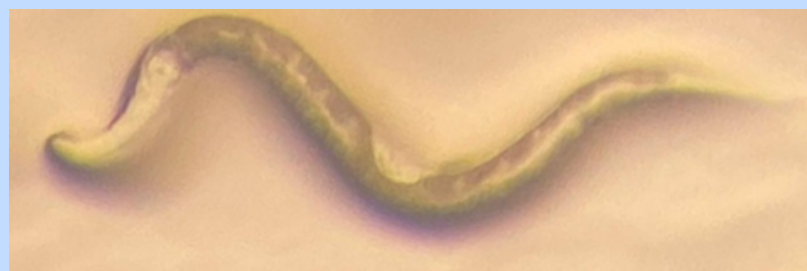
- 1.Interspecific crosses produce fewer viable F₁ offspring than intraspecific crosses.
- 2.Higher temperature reduces F₁ offspring production.
- 3.F₁ hybrid males are sterile, consistent with Haldane's rule.

Materials and Methods

-Worms from different species and strains were grown on NGM plates under two different temperatures. Each plate contain one **female** virgin with 3 **males**.

-We measured for each plate :

- Number of **eggs**
- Number of **F1**
- **Males** and **females**



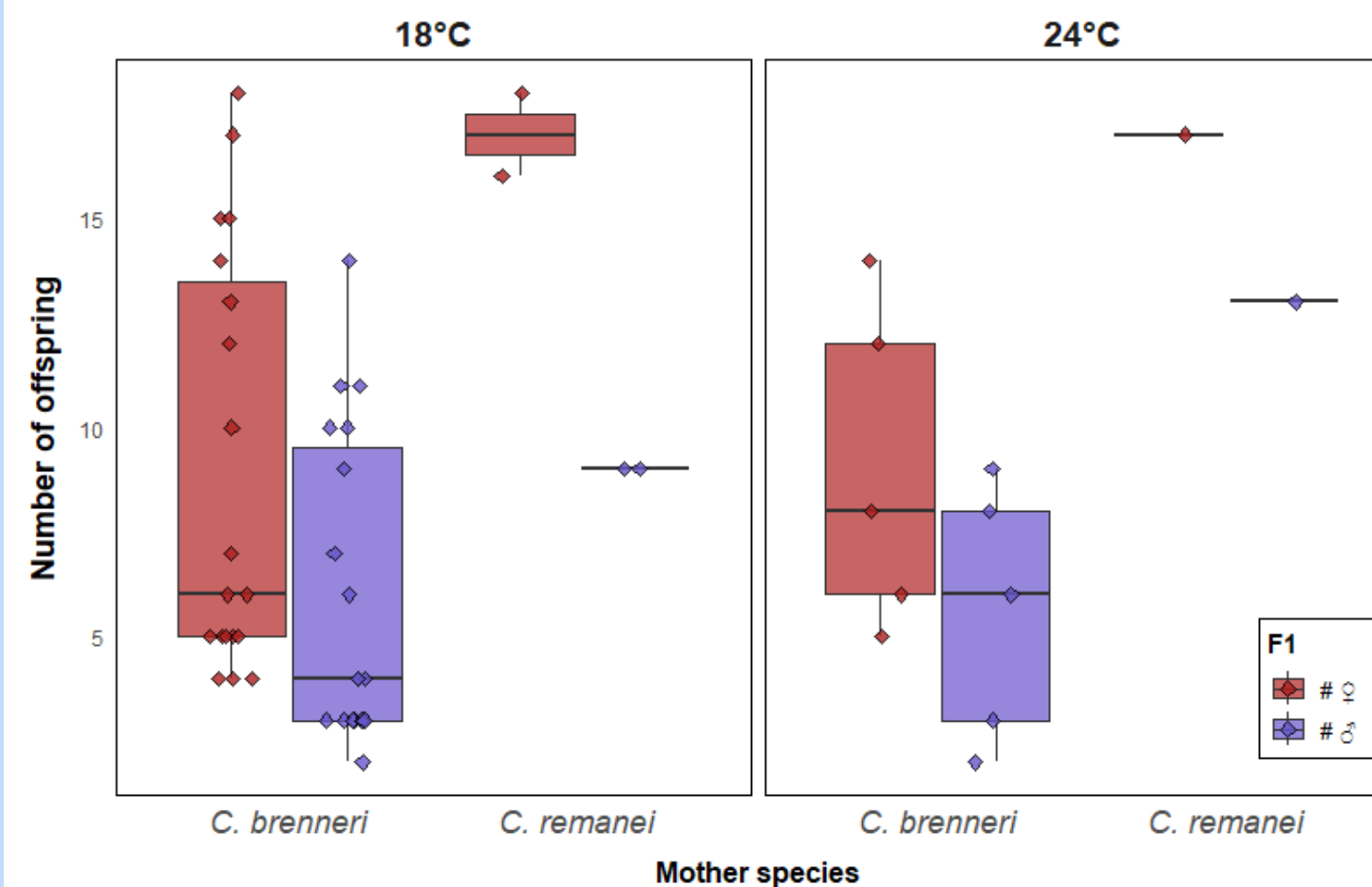
Results

Egg and offspring counts were analyzed using negative binomial models.

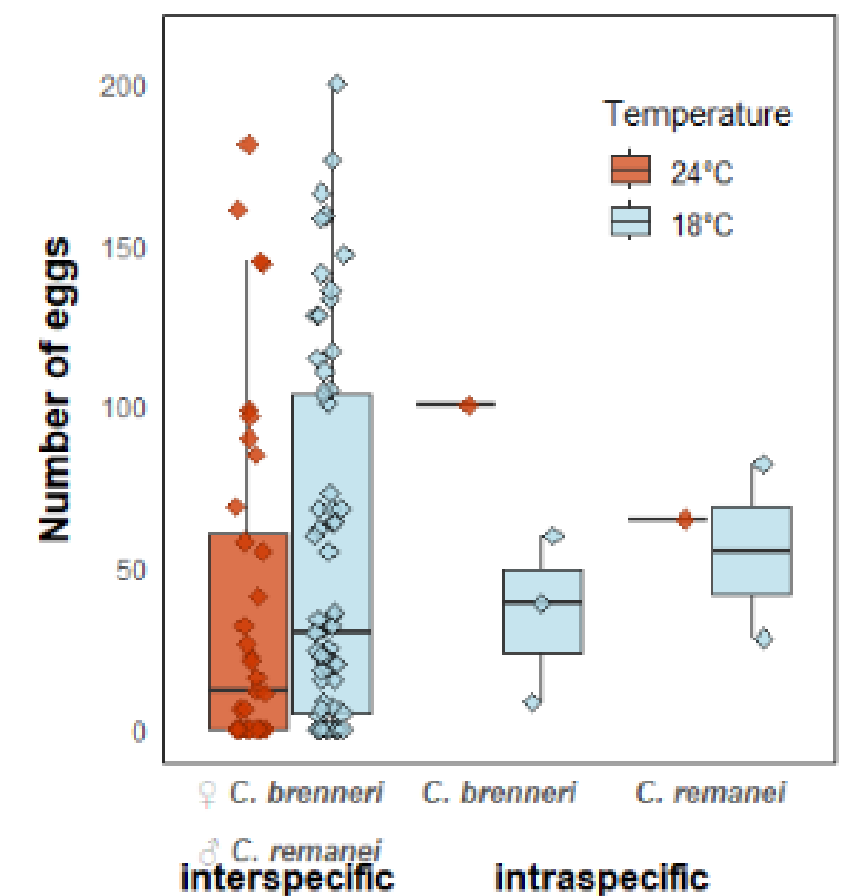
Egg production showed no significant effect between temperatures or cross types

Low temperature produced **significantly more** hatched than through high temperature

Adults



Eggs



A normal binomial model was used for the sex ratio, we found **no significant effect** of temperature on the sex ratio.

F₁ hybrid **females** remained fertile, whereas F₁ hybrid **males** were sterile, consistent with **Haldane's rule**.

Conclusions

***C. brenneri* and *C. remanei* show strong but incomplete reproductive isolation.**

Interspecific crosses can produce F₁ offspring, but fewer are produced at higher temperature.

F₁ hybrid males appear sterile while females are fertile, supporting Haldane's rule.

Improvements ?

- larger, balanced sample sizes at 18°C and 24°C.
- Standardize timing, worms develop faster at higher temperature.
- Reduce technical failures by improving picking consistency and plate quality.