

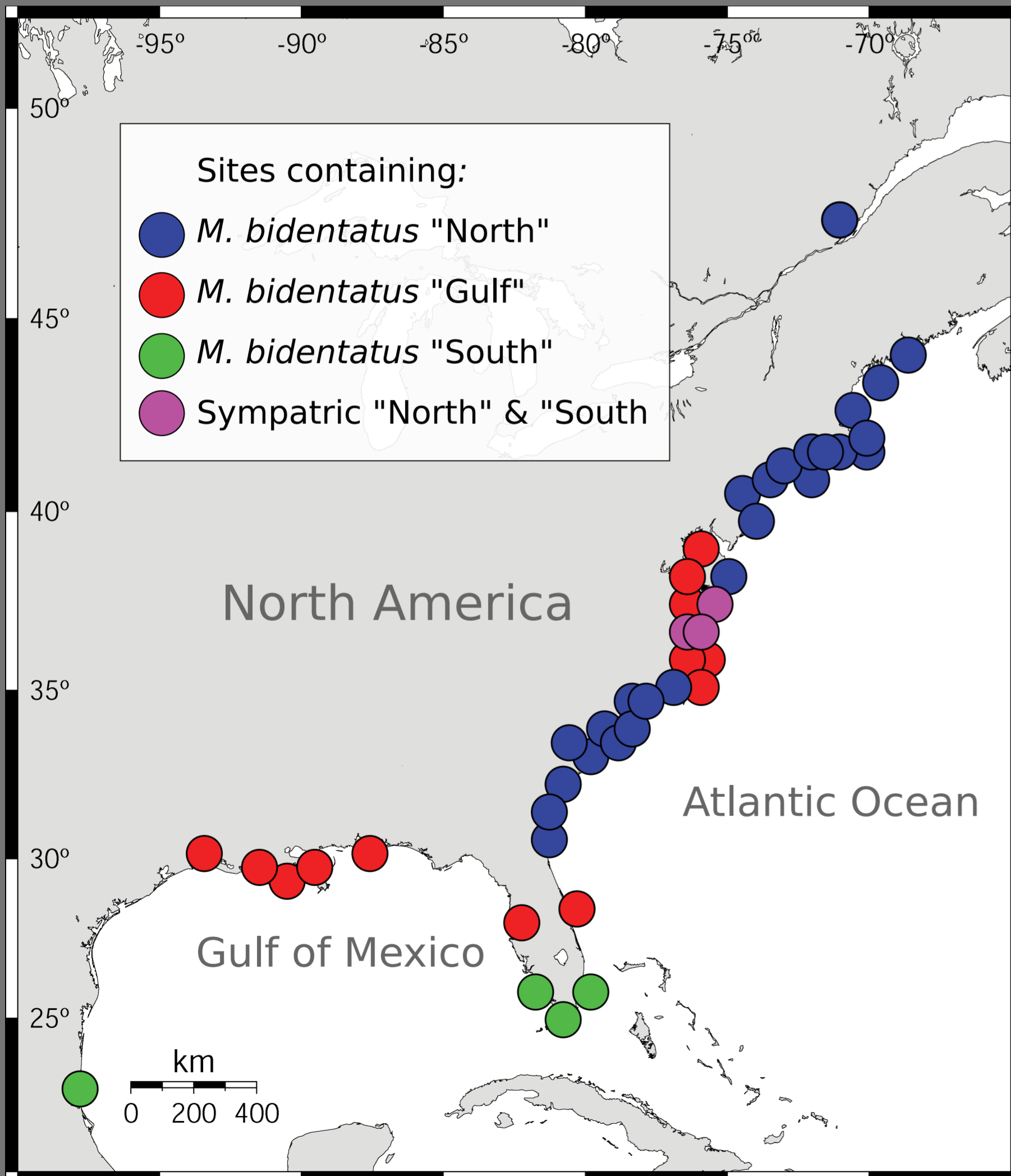
# Physiological and genomic variation among cryptic species of a marsh snail (*Melampus bidentatus*)

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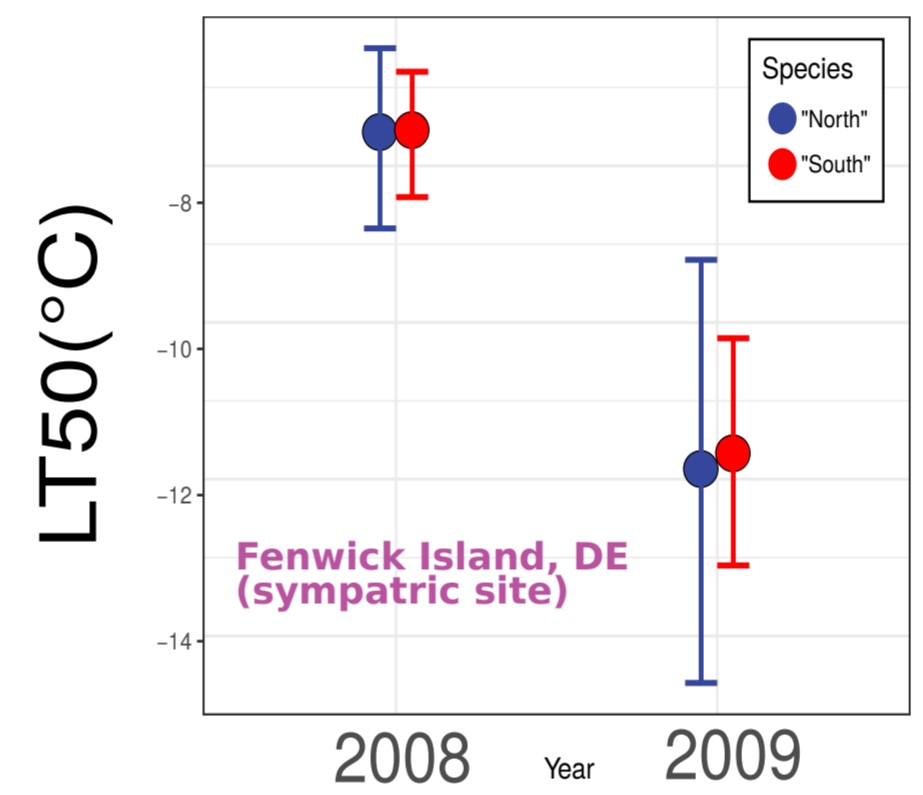


Cryptic species complex with differing range extents

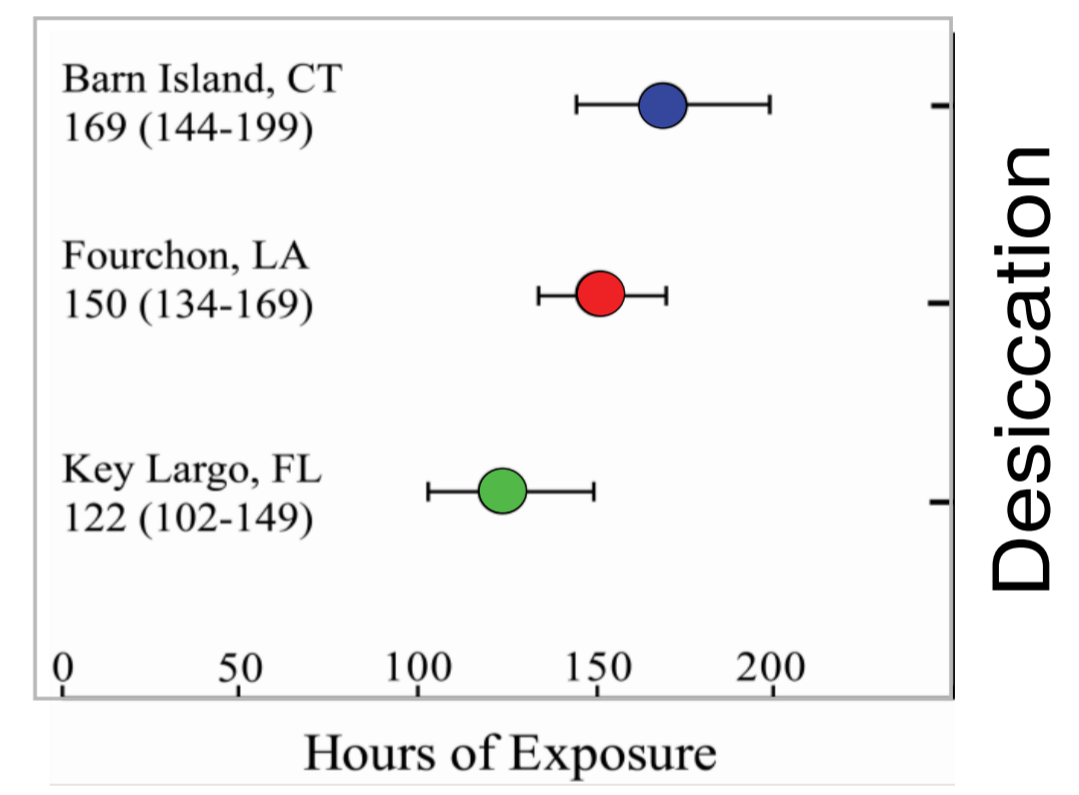
High dispersal via planktonic larvae  
**Why different range extents?**



## Physiological differences among species?



Tests of freeze tolerance: variation between years, but not species.



Preliminary desiccation trials: non-significant trend

## Genomic basis of differences?

- \* Illumina-only sequencing (ca. 100x coverage) cannot reconstruct long contigs. PacBio HiFi in progress!
- \* In 2021: transcriptomics of temperature and salinity/ desiccation

## Structural genomic differences?

Work in 1966 did not know cryptic species, but identified different karyotypes in Georgia (n=38) and in Virginia (n=36)

