

The Use of DNA Barcoding for Arachnida Theraphosidae Molt Skins



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Abstract

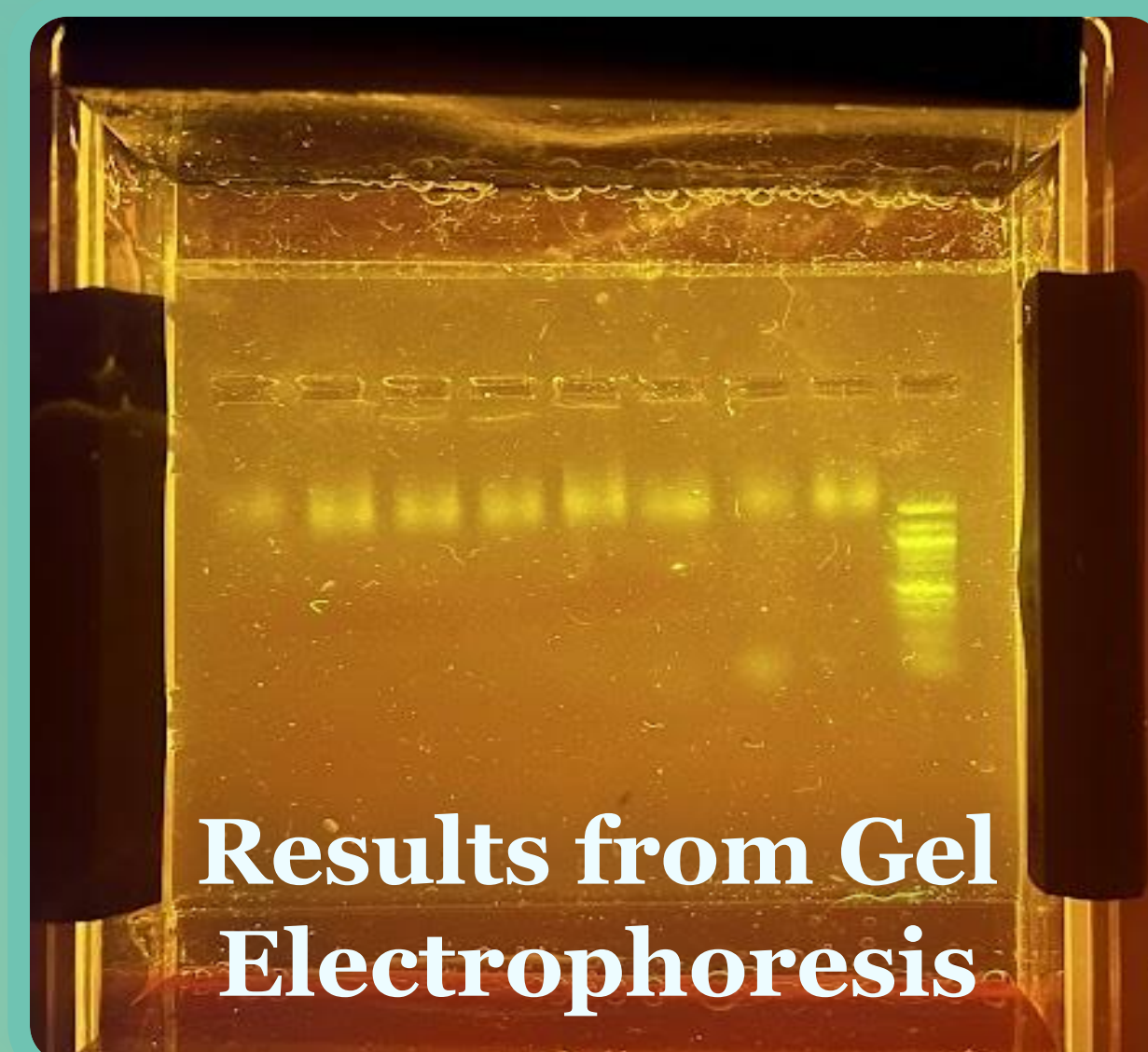
The substantial taxonomic difficulties in the Theraphosidae family are the driving force behind this study. There is what some taxonomists have referred to as a "nomenclatural and taxonomic nightmare" as a result of the inadequacy of traditional physical appearance-based classification for tarantulas.



Introduction

Tarantulas are the largest spiders, with some species growing to over 10 inches in leg span. Most are brown or black, but some are brightly colored. Their average lifespan in the wild is up to 30 years.

For tarantulas that are endangered or raised in captivity, this project aids in species verification because barcoding makes it easier to identify the species and processes tarantulas' DNA more quickly.



Results from Gel Electrophoresis

Acknowledgments

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Materials & Methods

- This year, we have used Silica DNA Extraction to obtain what we needed from our tarantula samples. This method involves using silica resin to absorb and collect DNA from the supernatant.
- During the extraction process, test tubes were labeled by our initials and number of the sample to prevent mix-ups.
- On gel electrophoresis, we calculated and measured the amount of gel needed for all samples. We did our best to be precise when pipetting the DNA into the wells.

References

Here are the references used for our research, all packed into this QR code!



Results & Discussion

Through these results, we see tarantula DSF-002 and DSF-004 have identical DNA with some minor differences in the sequence as we see 2 black lines and red line don't match.

Although the rest aren't exactly the same, they have similar shared genes. We can see this in DSF-001 and DSF-009, they have similar sequences although not exactly all the time. Through these DNA results, we can analyze the DNA sequence of a species of a tarantula that already exists, or we could testify if we've found a new species.

