

DETERMINING THE PHYLOGENIC RELATIONSHIPS AMONG ESOGIFORMES, SALMONIFORMES, CLUEPIFORMES AND AN OUTGROUP.

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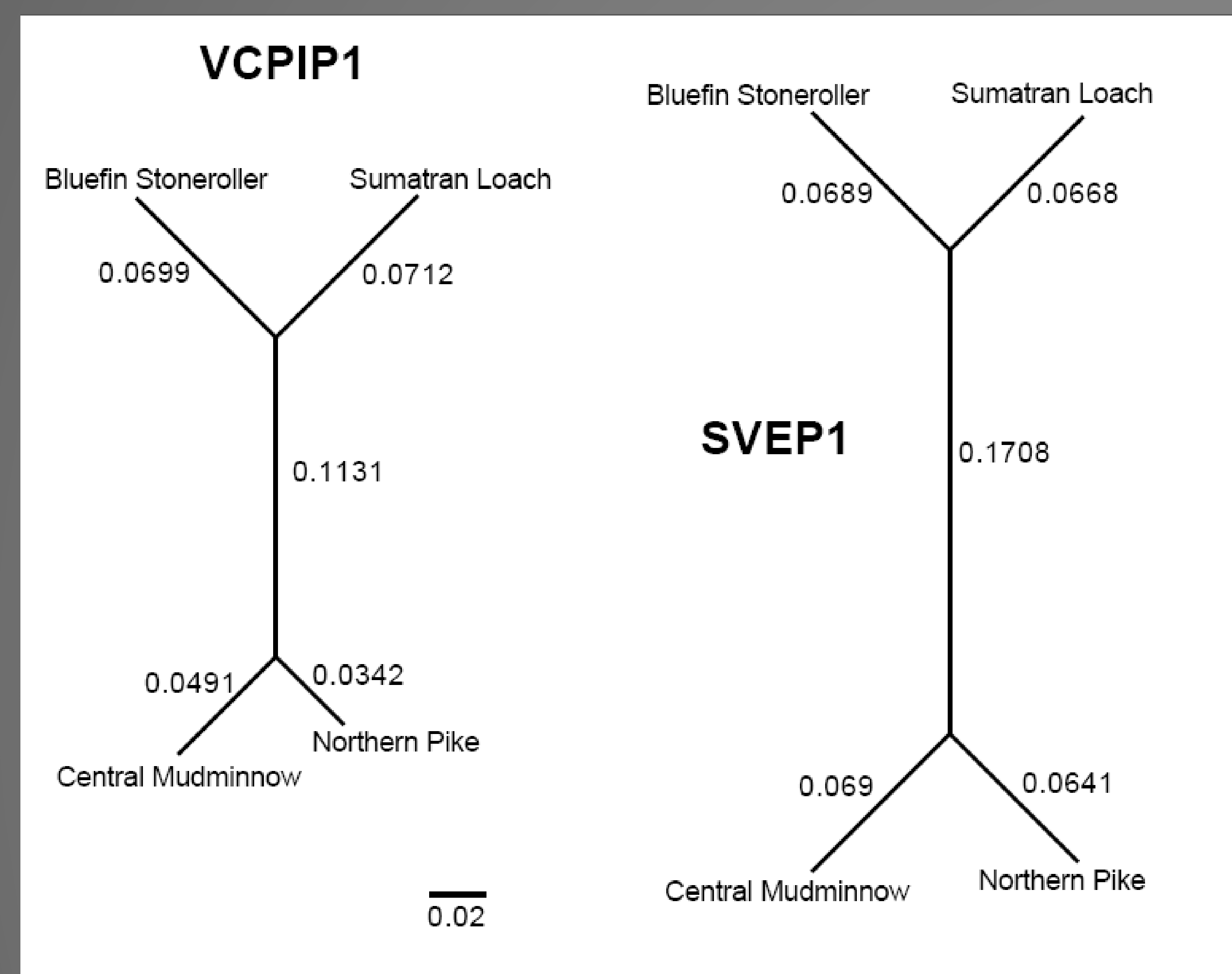
INTRODUCTION

The gene I have used for my part of this experiment is VCPIP₁. VCPIP₁ stands for “similar to valosin-containing protein (p97/p47 complex-interacting protein p135”.

I also going to look at the molecular evolution in the species.

In this experiment I investigated the similarities and differences between VCPIP₁ and SVEP₁. Also will the two genes give the same answer for the fish species?

TABLES AND GRAPHS



GROUPS OF FISH

Salmon: - Arctic Char
- Chinook Salmon
- Arctic Graying
- Arctic Cisco

Smelt: - Rainbow Smelt
- Capelin

Pike: - Amur Pike
- Alaska Blackfish
- Olympic Mudminnow
- Central Mudminnow

Out-group: - Pacific Herring
- Gafftopsail Catfish
- Bluefin Stoneroller
- Sumatran Loach

We tested these groups to find the differences and to see if they are related.

METHODS

Throughout this experiment I used four main methods. They are:

- DNA Extraction: The first method I broke down a fish fin and extracted the DNA.

- PCR: During the second method I amplified a specific sequence from the DNA, which is adding a primer.

- Electrophoresis: Then for the third method, I ran the DNA through an Agarose Gel with a loading dye.

- DNA Sequencing: For this last method I preformed, I ran the DNA and got a result of all the nucleotides in the strand.

RESULTS

For my first hypothesis: they did have the same results other than how 4 samples of VCPIP₁ did not work, as I started out with 11. Also the results did show the relationship between the groups and how closely they are related to each other on their family trees. My results came back with a length of 0.1131 and some mutations. The results also came back with Northern Pike being more related to the Central Muddminnow, and the Bluefin stonroller My being more related to The Sumatran Loach.

Acknowledgments

"The project described was supported by Award Numbers P20RR016466 and R25RR024282 from the National Center for Research Resources, a part of the National Institutes of Health. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Center for Research Resources or the National Institutes of Health."

I would like to say a big thank you to RAHI 2 for letting my into this program and giving me one of the best experiences ever. I enjoyed it. Thank you to Andres Lopez and Robert Marcotte for giving me such a fun and informational host lab. I would also love to give a personal thank you to my mother, father, brother and the best teacher ever, Mrs. Latzel. Thank you all, I couldn't have done it without you.

