



Illinois Wesleyan University
Digital Commons @ IWU

John Wesley Powell Student Research
Conference

2008, 19th Annual JWP Conference

Apr 12th, 2:35 PM - 3:35 PM

Comparison of Ceratohyal Development in *Danio Rerio* and *Hemigrammus Erythrozonus*

Sudil Mahendra
Illinois Wesleyan University

Brian Walter, Faculty Advisor
Illinois Wesleyan University

Follow this and additional works at: <https://digitalcommons.iwu.edu/jwprc>

Mahendra, Sudil and Walter, Faculty Advisor, Brian, "Comparison of Ceratohyal Development in *Danio Rerio* and *Hemigrammus Erythrozonus*" (2008). *John Wesley Powell Student Research Conference*. 15.

<https://digitalcommons.iwu.edu/jwprc/2008/posters2/15>

This Event is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

Poster Presentation P30

**COMPARISON OF CERATOHYAL DEVELOPMENT IN *DANIO RERIO* AND
*HEMIGRAMMUS ERYTHROZONUS***

Sudil Mahendra and Brian Walter*

Biology Department, Illinois Wesleyan University

Although the tetra *Hemigrammus erythrozonus* and the zebrafish *Danio rerio* are both considered Ostariophysian fishes, they exhibit different bone and cartilage growth patterns during development. Utilizing whole mount alcian blue and alizarin red staining, we examined the pattern of growth of the ceratohyal cartilage in *Hemigrammus erythrozonus* and *Danio rerio*. Comparisons were made between these two fishes in regard to overall size and length of the ceratohyal as well as the patterns of ossification. Our data revealed that *Hemigrammus* possesses a larger ceratohyal, morphologically distinct from that of *Danio*. Moreover, the growth and subsequent ossification occurs more rapidly in *Hemigrammus*. The differences observed may correlate with discrete predatory and/or behavioral niches occupied by these fishes in their respective environments. These initial data provide a basis for further studies, including a more detailed analysis of the development of the ceratohyal cartilage and a determination of how skeletogenic genes are differentially expressed between these two species.