

Abstract Submitted
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Stress-strain measurements of aquatic snake lenses NISHA LAMA, DR. CLIFF FONTENOT, DR. DAVID NORWOOD, DR. RHETT ALLAIN, Southeastern Louisiana Univ — Snakes may accommodate refractive error by lenticular displacement and deformation. The latter may be particularly useful for high refractive error, such as when semi-aquatic snakes dive, where refractive power of the cornea is lost because of refractive index similarity to water. We assessed the mechanical properties of snake lenses and how this might affect their ability to deform the lens and thus alter the lens power. We will present data taken with a force sensor and a rotary motion sensor to measure, in one shot, force versus displacement, from which we estimate the mechanical properties of stress and strain of the eye lens of a water snake. We will compare the results from lenses freshly removed from a snake to the lenses that were refrigerated 1-3 days before removal from the eye. We also compare results from semi-aquatic snakes to terrestrial snakes.

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