

Abstract Submitted  
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**Structural Colors of Birds**<sup>1</sup> CECILIA HALL, NATALIA DUSHKINA,  
None — Structural colors create iridescent colors in bird feathers. The goal is to understand why structural colors act the way they do in certain situations. The research conducted over the course of the fall semester was to understand the optical phenomenon producing colors in individual barbules. Through the use of a polarizing optical microscope, certain hypotheses were built to explain certain phenomenon. Using a dark field illumination involving light acting at wide angles in microscopy, the barbules were not affected by polarization. So it can be suggested that the barbules have certain characteristics, possibly internal, which prevents wide-angle polarization. More recently, it was found that the barbules, when stacked upon one another, create a discoloration at the cross over point. It can be suggested that the barbules act as thin films and create a situation of thin film interference. More data will be taken using the Scanning Electron Microscope as well as getting cross sectional data to help understand the internal characteristics of the barbules.

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None

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