

## Communicating Through Colour Chemistry

## Abstract

Studies of animal communication aim to understand the way animals interact in a variety of scenarios from competition for resources to selection of mates. Animals can communicate across a range of sensory modalities including vocalizations, chemical communication, and visual signals. In birds, the patterns and colours that define plumage can be essential signals for advertising an individual's social status, condition, or quality to potential competitors or mates. My research seeks to better understand how chemical pigments deposited in bird feathers generate plumage colour, and to integrate this chemical information with behavioural and ecological traits that have been linked to colouration in the American redstart. Specifically, I am interested in whether the orange/red colouration in redstarts, which should be dependent on the bird's underlying condition, honestly signals individual quality and how this colour signal varies with deposited carotenoid pigments.

## Committee

Dr. K. Donkor (supervisor)

Dr. M. Reudink (supervisor)

Dr. C. Ross-Friedman

Dr. P. Tsigaris