



# Vancouver Avian Research Centre

*Research - Conservation - Education*

**Thermal Imaging – a collaborative project between the Vancouver Avian Research Centre (VARC) and Delta Farmland and Wildlife Trust (DFWT) to access the abundance and diversity of birds using agricultural set-aside fields in Delta for nighttime roosting using thermal imaging technology.**

Delta Farmland and Wildlife Trust (DFWT), works with farmers to address two of today's most pressing environmental issues: food security and disappearing wildlife habitat. Their programs, research and cost-sharing initiatives help farmers in the Fraser River delta and the Fraser Valley to a) Improve their soil health and crop yields through sustainable farming practices and b) Preserve and create wildlife habitat on farms.

This project in collaboration with DFWT intends to use thermal imaging for studying nocturnal roosting birds, providing researchers with a non-invasive method to observe and monitor their abundance and behavior in low-light conditions.

Some of the ways thermal imaging will be utilized in this context are as follows:

- Identification and Counting:

Thermal imaging cameras can detect the heat emitted by living organisms, making it easier to identify and count roosting birds even in complete darkness. This is particularly useful for species that are difficult to observe with traditional methods during the night.

- Behavioral Studies:

Thermal imaging allows researchers to study the behavior of roosting birds without disturbing them. Observing the temperature patterns and movements of birds within the roost can provide insights into their social structure, interactions, and preferred roosting locations.

- Habitat Analysis:

Thermal imaging can be employed to analyze the thermal properties of the roosting habitat. This information is crucial for understanding the environmental factors influencing the selection of specific roosting sites by different bird species.

- Monitoring Health:

Changes in body temperature can be indicative of the health of individual birds. Thermal imaging enables researchers to identify potential health issues by observing variations in body temperature or abnormal thermal patterns.

- Conservation and Management:

Monitoring roosting sites with thermal imaging can contribute to the conservation and management of bird populations. Understanding the roosting behavior and patterns of different species helps in developing effective conservation strategies and habitat management plans.

- Predator Detection:

Thermal imaging can assist in identifying potential predators that may threaten roosting birds during the night. This information is valuable for assessing and mitigating risks to bird populations.

- Migration Studies:

Studying the thermal behavior of roosting birds during migration can provide insights into their energy expenditure and help researchers understand the challenges they face during long-distance journeys.

- Non-Invasive Research:

Thermal imaging is a non-invasive method, allowing researchers to collect data without disrupting the natural behavior of the birds. This is crucial for obtaining accurate information on roosting habits and social dynamics.

In summary, thermal imaging is a powerful tool for nocturnal roosting bird research, providing valuable data on their behavior, health, and habitat preferences without causing disturbance to the birds.