

Cooper' Hawk in the City

Thanks you for you participation!

Objective

As top predators, raptors are often the first species to be affected by a range of environmental pressures, such as habitat availability and quality, prey populations, pollutants, and human disturbance. Raptors can provide a cost-effective and sensitive means of detecting environmental change, as was so successfully demonstrated through pioneering UK research on the response of birds of prey to pesticides in the environment. In the UK, a long term data set spanning over 50 years, has been established and continues. This data included population abundances and reproductive success of raptors and environmental pollution concentrations and land use change over time. WildResearch is modelling the Cooper's Hawk in the City project after the UK's successful program.

Protocol

New Station Coordinates

In order for routes to be surveyed at the same stations in subsequent years. Ideally, location coordinates should be submitted as latitude and longitude in **decimal degrees** (NOT degrees minutes seconds) to six digits (e.g., 49.884128 N, 119.496301 E). There are several ways to obtain the coordinates for your new station locations:

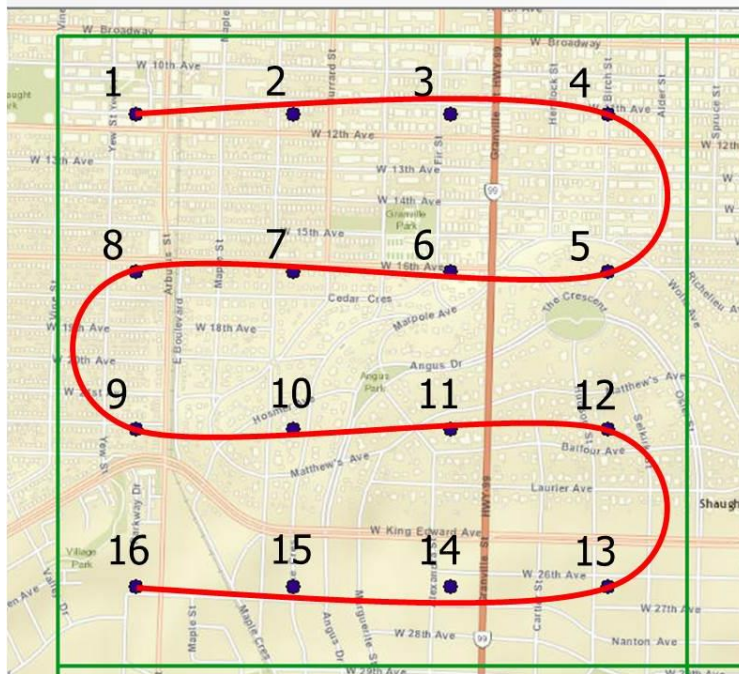
1. Use a handheld GPS and take waypoints at each of your stations.
2. Locate coordinates after survey completion in Google Earth.
3. There are many excellent GPS apps available for smartphones. If you have an iPhone, Android, or BlackBerry, you can turn it into a handheld GPS. Here are a few app options:
 - MotionX-GPS for iPhone (\$1.99)
 - Free GPS for iPhone (Free)
 - GPS Test for Android (Free)
 - GPS Maps Location Finder for BlackBerry (Free)

Survey Stations

Surveys are conducted during the month of April, when Cooper's hawks are most territorial. In one day, the surveyors will use call playback at each stations (16) within their quadrat (quadrats below).



Stations within each quadrat are 500m apart and are labeled numerically, starting in the north-western corner. Follow this pattern when conducting the surveys.



Call-Playback Surveys

When you arrive at the station, fill out Start Time (2400), Cloud Cover (see below), Wind (see below), and Noise (see below). Take 2 minutes before beginning call-playbacks and look around you for any Cooper's hawks. If you do see one, there is no need to conduct the call-playback survey at this station. If you do not see a Cooper's hawk, proceed with the survey.

Use the portable speaker and your MP3 player or Phone to conduct the call-playback. Turn up the volume! Play the Cooper's hawk territorial call for ~**20 sec**, pause for **40 sec** and look and listen for any approaching or calling Cooper's hawk. Play the call again for 20 secs and pause again for 40 secs. Repeat one more time to complete the Call-playback survey period (**three sets of 20sec call-playbacks and 40sec pauses**), always looking for an approaching Cooper's hawk. The whole playback period at each station will only be about 3 minutes. After the 3 minutes of playbacks are complete, look around for a couple minutes for a Cooper's hawk. Fill out the data form and proceed to the next station and repeat. You have now completed the station's survey!

Equipment

Essential

Car or Bike to travel between stations

Data form

Protocol

Map of Station Locations

Pens/pencils

MP3 Player/Smartphone (for saved recording of Cooper's hawk call)

Speaker (provided)

Compass (provided, if needed)

Watch or other device with timer (e.g. Smartphone)

Recommended

Clipboard

Safety vest

Questions

Contact Jay Brogan jbrogan@wildresearch.ca

