

ACTIVE BITTERN MONITORING



PHOTO JOHN GRITSHAM

A COMMUNITY WORKBOOK FOR PARTICIPATING IN
THE GREAT
MATUKU-HŪREPO MUSTER

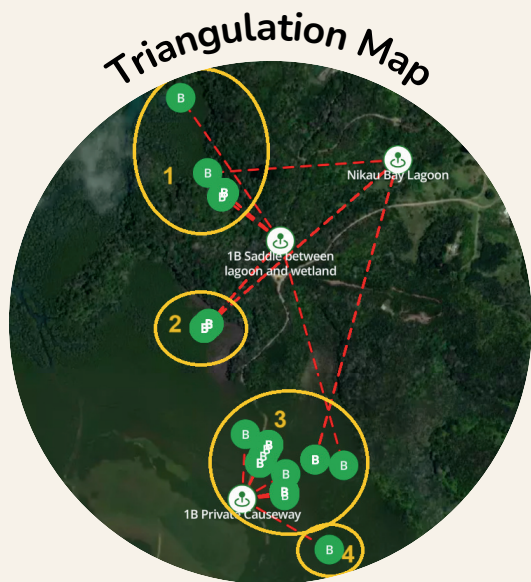


TABLE OF CONTENTS

- 02. What is Active Monitoring
- 03. Where to set stations
- 04. Timing
- 05. Planning
- 06. Recording options
- 07. On the day
- 08. Recording booms
- 09. Supplementary information
- 10. Collating the results

WHAT IS ACTIVE MONITORING

Groups use active monitoring/listening or triangulation to estimate the number of individual booming males in a wetland.



What is triangulation?

Mapping the position of the bird (green circles above), using three reference points 1) the listeners location (pins above), as well as the 2) bearing and 3) distance recorded.

Ideal for wetland areas where you have:

- safe access to the wetland in the dark.
- at least two listening locations (stations) 500m apart.
- a team (minimum 2 people) of volunteers who can listen on the same day and time i.e at dawn or dusk for 60-90 minutes
- a clear weather window to repeat the counts for three days during the listening window (date range).

WHERE TO SET STATIONS

What is a station

A station is a listening location that is selected to carry out repeat monitoring.



Set your station s

Set your station in the app before you head out, by giving it a name and using the latitude/longitude to indicate the exact spot your listening from.

Selecting your site

Male bittern may have a home territory which they will defend by booming to keep other males away or protect or attract (more) females.

These sites aren't necessarily the same place as they are seen foraging.

Look for a site with a large undisturbed area of dense reeds or rushes over permanent water
eg. oioi salt-marsh, raupo fringed lake, reed/rush/sedge dominated freshwater wetland

Pre-qualify the site by placing acoustic recorders out, or listening before dawn or after dusk before monitoring.

Safety first!

Make sure you can get to and from the site safely in the dark without disturbing the bittern!

ACTIVE MONITORING TIMING



Active listening survey's are usually carried out at dawn, at dusk or both - over 3 days during peak booming season aligned with the full moon in September, October and November

- **At Dawn** - one hour before your local sunrise
- **At Dusk** for 60-90 minutes after your local sunset.

OUR PLAN

As a team we will target ..

Days between (give a range of days, or dates)

Listening at (eg At Dusk)

Evenings tend to be a more practical time for volunteers, this way you can walk in during daylight and get set-up before it gets dark.

If you are familiar with your listening locations (stations), dawn is still an option or both dawn and dusk if you're really keen!

Your 3 days don't have to be consecutive days, but try to listen on the same dates and time as the rest of your team.

ACTIVE MONITORING PLANNING

Weather Contingency

Heavy rain or strong winds can stop us from hearing calls effectively. You can listen 3 days before or after the published muster weekend dates. Its a good idea to set alternate dates so your team is ready to be deployed sooner or later.

You will be notified by

Our back-up dates are

Health & Safety

- Dress for unpredictable spring weather
- Know your route to and from your listening station
- Take a fully charged mobile phone
- Take something to drink and quiet snacks
- Tell a buddy or someone at home where you are and when you'll be back.

I understand the risks and

- ☐ accept responsibility
- ☐ will ask for help if unsure

Gear Checklist

- ☐ Torch
- ☐ Fully charged mobile phone
- ☐ Datasheets &/or app open
- ☐ Pencils
- ☐ Warm Clothing

• Optional / as required

- ☐ Rain Jacket
- ☐ Gumboots *
- ☐ GPS*
- ☐ Chair *
- ☐ Binoculars *

ACTIVE MONITORING RECORDING OPTIONS

Using the app

Test the app a day or two before

If you are using The Conservation Hub app, please log in and test how to enter and save the data. This will also load your station and maps in case you go offline.

Practise and raise any questions at least a day before!

Your station is

Your Coordinator is

Open the app before you go

If you go offline it will all be loaded and revert to offline mode.



Manual Forms

Even if your using the app take manual forms as back up.

Review the instructions and forms and practise recording using them before you go.

Here's a tip!

Give each person a printed map so they can mark where they think the call came from as well.

ACTIVE MONITORING ON THE DAY

Check and go

Check the weather before you go,
check your gear

Check for any updates.

Leave for the site in plenty of
time to get set-up ready to record
at the designated time.

Get to know your site

Get familiar with the site,
landmarks and features that you
can use to judge where a bird is
calling from.

If your using the app you only
need to drop a pin where the bird
is calling from and the bearing
and distance calculates for you.

If your using a manual form you
will need to be able to identify
where north is and judge the
bearing and distance.

Be consistent

Always record from the same
spot



Site / session details

Fill in the site details/session data
in the app before you begin.

Note anything else that you think
might be valuable information or
if anything changes.

Take photos if you can!

Do's and don'ts

Avoid making unnecessary noises
and dont mimic or play bittern
booms or calls of any other
animals.

Use your torch as little as
possible.

ACTIVE MONITORING RECORDING BOOMS

Key information

When you hear a bittern boom record:

- time (select current time in the app) the sequence starts
- position on map in the app
OR
 - bearing -direction the call came from (N, SW, NE)
 - distance away estimated in metres
- How many booms in a sequence?

The male bittern inhales then booms in a string of 'whoom's' then pauses - this is a sequence.

Dont count the inhale in the number of booms.

Do count a croaky, hiccupy attempt and make a note!

Only the male bittern booms. A boom is a resonant sound more like a 'whoom' and is similar to the noise that is made when you blow over the top of a glass bottle amplified! Early in the season or if the male is more juvenile it can sound more like a hiccup or a croak.



SUPPLEMENTARY INFORMATION

ACTIVE MONITORING

1. Record your session data

In the app or on the form record the session data (your observations about weather, noises etc) and save it as a draft.

Update your session data at any point as weather, noises or other observations change.

2. Identify individuals, where you can

If you think you are hearing two or more males booming use the ID to mark them Male 1, Male 2 and so on,

If you suspect one of your bittern has moved please make a note so we can use this information to help determine the number of individuals,

3. Notes - record other activity

Record any other bittern activity that you see like another bittern flying in towards a male booming, a bittern foraging, flying away etc

Any other notes about what you hear or see that impact the survey should be recorded as well. eg. presence of a Harrier Hawk or other disturbances.

COLLATING THE GREAT MATUKU-HÜREPO MUSTER RESULTS

Coordinator Verification

Your coordinator will review and verify your groups records

If you dont have a coordinator your results can be sent straight to the Love Bittern Project National Coordinator -

lovebittern@gmail.com

Your coordinator is responsible for sharing the detailed results with your group.

Privacy

We recognise your data may be sensitive or you want to keep it private.

If this is the case let us know, only your total number of sites, total number of participants and total number of individual male bittern heard will be shared as part of the rolled up regional results.

Publishing Results

Interim results are published in January and final results, when all data is in by the end of February.

You can help by getting your results and summary to us as soon as possible.

Example of how data is published



Thank you for helping record Bittern in

THE GREAT MATUKU-HŪREPO MUSTER

your participation is key to the success of this
citizen-science project!



www.lovebittern.com
lovebittern@gmail.com