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## Pine marten monitoring

Regular monitoring is an important part of pine marten conservation, particularly as populations expand into new areas, as it can help inform and prioritise conservation activities.

**Trail cameras** can be used to monitor feeder boxes throughout the year to establish the presence of pine martens and may also be used to help identify individuals from their unique bib patterns and other physical characteristics. Trail camera footage is then viewed on a computer and the survey data submitted online to Marten Map — the National Pine Marten Monitoring Programme.

## Trail camera settings

Set up the trail camera settings before you head outside. Recommended settings for the Browning HP5 trail camera are in the table below, but these can be adjusted for your camera and set up.

Setting	Selected option
Set up date/time	UK Format if available. Otherwise US format — Month/Day/Year
Operation mode	Video
Video length	20-30 seconds
Video quality	High (Ultra will add to battery demand)
Photo delay	1 or 5 seconds (monitor how quickly the SD card fills up)
Temperature unit	Celsius
Camera name	eg, MotM (+camera number). This helps if you have more than one camera set up
Image data strip	On
Motion detection	Long range, especially if 8m from feeder box
Battery type	NIMH (rechargeable) or Lithium (change as required)
Trigger speed	Fast
IR flash power	Long range
Multi shot mode	Off
HDR	Off
Motion test	Use it when camera set up on tree to ensure target area is in view
Default settings	No
Delete all	Use this to remove videos taken during set up before you leave.
Smart IR video	Off
SD management	Off
Capture timer	Off

## Choosing a site and installing your feeder box and trail camera

**Please make sure you have permission from the landowner before setting up the feeder box and camera!**

- Think like a pine marten! Feeders are best installed in woodlands – choose a quiet area with good canopy cover, and away from public footpaths.
- Identify the feeder tree – one with lots of branches or rough bark.
- Identify a suitable camera tree at the same time – this should be 3-5m from the feeder box.
- In some parts of Britain pine martens visit gardens – choose a quiet area near to features that provide safety and a means of aerial escape, eg, trees. Don't install feeder boxes in gardens with pets.
- Don't install a feeder box in a location near to roads or a location that would encourage a pine marten to cross a road to reach it.

## How to install the camera

- Install the camera 3-5m away from the feeder tree, focused centrally on the feeder box (the centre of the frame is best for maximising the chance of the motion sensor triggering correctly).
- The feeder should be pointing face on to the camera, or side on if that is not possible. If your camera has a live screen, use it to check the position of the feeder in the image.
- Trail cameras trigger with movement - check for foliage in view of the camera that might trigger it (eg, when blowing in the wind). Prune twigs and small branches if needed.
- Avoid facing the camera into early morning or late evening sun as this can cause over-exposed videos/photos.
- Secure the camera tightly to the tree using the strap and tuck the excess strap away.
- Publicly accessible land: keep the feeder box and camera well-hidden and don't point the camera towards public footpaths. Delete all images and videos of people as required by General Data Protection Regulation (GDPR).

## How to install the feeder

- Install the feeder 5ft/1.5m high on the tree, out of reach of badgers and foxes.
- Use garden wire around the feeder and tree, or attach with two nails, at the top and bottom of the feeder.

## How to bait the feeder

- Bait your feeder with peanuts, mixed with a small amount of dried fruit such as apricots and cranberries, with an occasional hen's egg for a treat.
- If adding seeded fruit think about its provenance – pine marten scat is an efficient seed disperser and it is best to use fruit that is native to Britain.
- On first installation, bait and monitor the feeder for up to six weeks to give time for pine martens to find it.
- We recommend baiting the feeder for a couple of weeks in each season. Avoid baiting all year round as this may create a dependency on the feeder.
- Change the bait weekly, especially in damp weather as bait will go mouldy and may cause illness.

## Biosecurity

Feeders can be a hotspot for mould, bacteria, parasites and viruses, all of which can be harmful or even deadly to animals. It is therefore very important that feeders are regularly emptied and cleaned – weekly at least – to prevent the accumulation of **mould, bacteria and parasites**. **Always wear gloves when cleaning a feeder box.**

Use a clean brush to remove remaining food from the corners of the box. At least once a month, or if mould has been detected in the box, feeders should be cleaned with hot soapy water and a brush that reaches all the corners of the box. If there is an inaccessible accumulation of food particles or mould in any corner or crevice of the box, the box should be dismantled and the parts soaked in hot soapy water for 15 minutes and scrubbed clean.

**Always let the feeder box air dry before refilling with food.**

**Viruses** pose a significant risk to our native wildlife. In Britain, squirrelpox, avian influenza (bird flu) and adeno viruses are of particular concern. **Squirrelpox virus** is carried by non-native grey squirrels and is fatal to native red squirrels; **bird flu** is a highly contagious viral infection that can affect wild birds; **adeno viruses** infect all groups of vertebrates, including mammals and birds, and cause a wide range of illnesses particularly in the respiratory and gastrointestinal systems.

Cleaning feeders thoroughly with hot soapy water for five minutes will kill bird flu and adeno viruses. **This will not however kill the squirrelpox virus. Where both red and grey squirrels are present in the landscape, feeder boxes must also be sprayed regularly (at least weekly) with a virucide (a chemical or physical agent that deactivates or destroys viruses).** Virkon S is a DEFRA-approved virucidal disinfectant that is safe for use on equipment used by animals. Virkon S should be sprayed on all surfaces once they have been cleaned, both inside and out, and allowed to dry before adding new bait. Always follow the instructions for use carefully. See the Safe Use of Virkon guide for further information – [Virkon-S-msds-UK-issue-08.12.2022.pdf](https://www.virkon.com/safety-and-health/safe-use-of-virkon-s-msds-uk-issue-08.12.2022.pdf)