Ranger Moth Trap

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Contents:

1 x cloth base unit
1 x light-source fitting ring
4 x cone shaper bars
1 x white cloth cone
1 x small silver ring (with LN180/55mm cone only)
4 x 16mm screw & nuts to connect shaper bars
4 x long legs with notched rubber tips

General Assembly

1. Twist the fitting ring into the central hem in the middle of the cloth cone and the plain silver ring (LN180/55 cone only) into the bottom of the cone, making sure that the sharp edges are covered.
2. Insert each of the shaper bars into the hems at outer edges of the cone, and connect using screws and nuts. The nut should be on the top face of the cone, and the screw on the bottom face. Any additional material from the cone hem should be carefully eased over the screw-head.
3. Rest the cone on the base unit.

To stand the trap on the ground, or a table:

4a. Clip the support legs onto each corner of the trap. It is easiest to start with diagonally opposite corners. Slight adjustments to the length of the legs can be made by pushing or pulling the rubber tip – remove the legs from the trap before doing this. On slightly uneven surfaces the trap may be secured by passing the hanging tape under the trap and placing tent pegs through the split rings. If needed, the Ranger can be ground tethered using tent pegs (not supplied).

To hang the trap:

4b. There is no need to use the support legs. Hang on a suitable hook or branch using the tape or split-rings.

Rainshield Contents (If Purchased):

1 x rainshield (remove protective plastic before use)
4 x short legs – 8 x anchors, 4 x washers, 4 x 12mm domed screws

5. To fit the shield, remove the anchors from the ends of the legs without the washers and dome-headed screws. Then, one-by-one, unscrew the nuts from the cloth cone corners, replacing them with the removed anchors. Tighten by hand only.
6. Remove the dome-headed screws and washers from the other end of the legs. Place each screw through the rainshield, then through the washer, then through the anchor which remains on the rainshield legs. Tighten by hand only.
7. Replace the assembled rainshield unit on the cone anchor studs and rest the cone on the base unit.
8. Although complete disassembly is highly recommended, after use the legs may simply be pulled out of the anchors leaving these in place. When packing, make sure that the anchors face away from the net base unit to avoid rubbing the netting.

Lighting Options:

- The Ento Nets LED Podlight can be supported in the cone of the trap using the 40mm Podlight fitting ring option. Do not use the Podlight with a 38mm fitting ring. Other brands of lightweight LED lighting unit can be placed inside the trap, directly on top of the geotextile base.
- A traditional 38mm (Edison screw) lampholder can be secured in the cone of the trap using the 38mm ES fitting ring option and shade rings, allowing the use of compact blacklight and blacklight-blue lamps of up to 25W. For Mercury Blended Tungsten (MBT) bulbs, you may use up to 160W. Do not use a 38mm lampholder with a 40mm fitting ring.
- Long or short straight actinic tubes and circlines can be mounted vertically. To mount long tubes vertically you will need a steady bar. (See page 2.) Note: you will not be able to use the rain-shield with a long vertically mounted tube.
- Straight or circular actinic tubes can be placed horizontally on the cone, or in the trap on the geotextile base. (See page 2.)
- All cables must either be run out through the zip (which can then be closed), or between the cloth cone and the black base unit. They should never be run up through the centre of the cone. If you are hanging the trap, clip the electrical leads onto the hanging cords and over the trap, to stop the weight of the leads tipping the trap.

E27 Lighting Basic Safety Considerations:

a. MBT lamps run hot and must not be operated a) uncovered in rain or damp conditions, or b) with the shield in conditions of wind-blown slanting rain. Raindrops are likely to cause the bulb to crack or explode, with risk of personal injury.
b. All electrical components, including lamps/lights must be protected against rain/damp to prevent electric shock.
c. Place cables and extension leads sensibly, to avoid the risk of slips, trips, and falls
d. Check traps and all electrical equipment before each use. Do not use them if they are damaged or unsafe.
e. Never look directly into UV lights. Use of UV protective glasses is recommended.
f. **The above list is not comprehensive. Before using any form of moth trap lighting ensure you have read and complied with the lighting manufacturer's fitting and operational advice, and electrical safety advice.**

Assembly: For Actinic Vane Units

Actinic tube lights usually perform best if mounted vertically, especially in open locations where moths are likely to be attracted from the side. The simplest way to achieve a vertical mount is to fit a "Heath" type folding vane unit. This type of unit may also help trapping, as moths can be knocked down by the vanes. Not all vane units will fit the Ranger Trap, and unfortunately we cannot advise on this matter.

- Assemble the trap as per instructions 1 – 4 above but without the fitting-ring.
- Rest the cone on the base unit. The actinic vane then simply sits snugly in the cone.

Assembly: For Vertical Actinic Tubes (Using Optional Steady Bar)

Vertical mounting of single and multiple actinic tubes can be made using a Ranger steady bar, which is fixed across the cone. Steady bars are not included with the Ranger and must be ordered as an optional extra. A steady bar and the Ranger rainshield cannot be used at the same time.

Steady Bar Contents:

1 x steady bar
1 x hook & loop tape
1 x plastic blanking plug

Double Steady Bar Contents:

2 x steady bars
2 x hook & loop tapes
1 x plastic blanking plug
2 x short bars – 4 x anchor studs – 2 x domed screws

Assembly: Single Steady Bar

- Assemble the cone as per general assembly instructions above.
- Remove two nuts, place the steady bar on top of the screws and re-secure the corners of the cone using the nuts.
- The hook & loop tape should be roughly central over the cone base. If it is not, slightly distort the steady bar to give the required fit.

Assembly: Double Steady Bar (for longer tubes, or extra stability)

- Assemble the cone as per general assembly instructions above and connect the first steady bar. At the opposite corners to the steady bar already attached, remove the nuts from the cone shaper bars and screw on the anchor stud & short bar assembly.
- Remove the domed screws from the other end of the short bars. Place the screws through the second steady bar and replace them on the studs.
- The hook & loop tape should be roughly central over the cone base. If it is not, slightly distort the steady bar to give the required fit.

Securing the tube or tubes:

- Place the cone on the base unit.
- Insert the vertical tube light so that its base rests on the centre of the fitting ring.
- Note that fitting ring should take the weight of the tube to hold it stable. If the light tube is thin and falls through the fitting ring, use the plastic plug to block off the central hole.
- Tighten the hook & loop tape(s) around the tube.
- Adjust the position of the tube to be approximately vertical, gently bending the steady bar(s) if necessary.
- Circular clips (supplied with some tube units), or rubber bands set around the tube, may be used to set the tube at different heights. In some instances, this may mean the tube is less steady.
- Setting the tube low down may require removal of the fitting ring.

Assembly: For Actinic Circlines and Horizontally Mounted Tubes

Straight, single, or multiple actinic tubes can be held horizontally across the top of the cone, or a 22W ring tube may be held vertically or horizontally. The horizontal tube arrangement throws light upwards, which may attract moths from trees above.

- Assemble the trap and rest the cone on the base unit. Using the hook-and-loop straps, attach your actinic tube or ring. Loosen the straps if you wish the ring to sit horizontally.

Fluorescent Actinic Tube Lighting Basic Safety Considerations:

a. Whilst actinic tubes run cool and should not be damaged by rain, it is important to ensure that all electrical components, including lamps/lights are equipped in such conditions to prevent personal electric shock. In addition, where possible, action should be taken to protect tubes from rain which will greatly extend their life.

b. Points b, c, d, e, and f of "E27 Lighting Basic Safety Considerations" on the previous page also apply. Please ensure you have read these.

Care of the Trap

- When not in use disassemble and store in a cool, dry, dark place; this will maximise the life of your product. Ensure all parts are clean and dry before packing away.
- The product may be hand washed in warm (not hot) water with a mild detergent. Ensure it is thoroughly rinsed after washing. To sterilise against disease, use sterilising tablets or liquid (for example Milton®) prepared and used as per the manufacturer's instructions. Afterwards, rinse thoroughly with clean water. Repeated sterilisation may cause some minor bleaching of black net over time. Allow to air dry. Do not tumble dry. Do not iron.
- Some chemicals including phenols, alkalis, iodine and acids are likely to damage our products. This is not an exhaustive list, so if you plan to use any chemicals with our products we recommend you check a sample with the test netting we have enclosed with your order. Chemical damage can sometimes take significant take time to develop and may not be immediately obvious to the naked eye.
- Predatory or aggressive species may be encountered which are capable of chewing, biting, tearing or otherwise damaging the textile(s) of which this product is made. Wherever possible, site to minimise or remove this risk.
- If small holes are accidentally made in the fabric, a temporary repair may be made in-situ using adhesive tape pressed onto both sides of the hole. Minor damage can be repaired later by hand darning. More significant damage will require patching.
- Every care is taken to ensure the trap legs and shield are smooth. However before use we recommend that you check the plastic coated surface and rubber tips, and edges of the shield. If necessary, any rough areas can easily be smoothed down with fine-grade sandpaper or an emery board.