Detailed Instructions for Making Yellow Pan Traps

Note: Please read through our EAB Biological Control Recovery Guidelines below to find detailed instructions about materials needed and where and when to place yellow pan traps.

How to create the top (collection) bowl

The top bowls needs holes for drainage so that rain events don't wash out your sample. These holes should be covered with no-see-um mesh to prevent any small insects from draining out of the holes.

1. Using a one-hole punch, punch 6 holes into your top bowl close to the top of the bowl. If you place your holes directly under the ridge that runs along the lip of the bowl, you'll be able have enough spacing above the holes and before the lip to securely glue your mesh.

2. Leave about ⅛ inch between each hole so that there is enough plastic between the holes that it won't break.

3. Cut a large enough strip of mesh that it covers the holes and leaves at least ¼ inch around the holes so that you can easily hot glue the mesh to the bowl.
4. **Note:** The mesh is glued to the inside of the bowl, so there are no gaps between the holes and the mesh in which insects can get stuck.

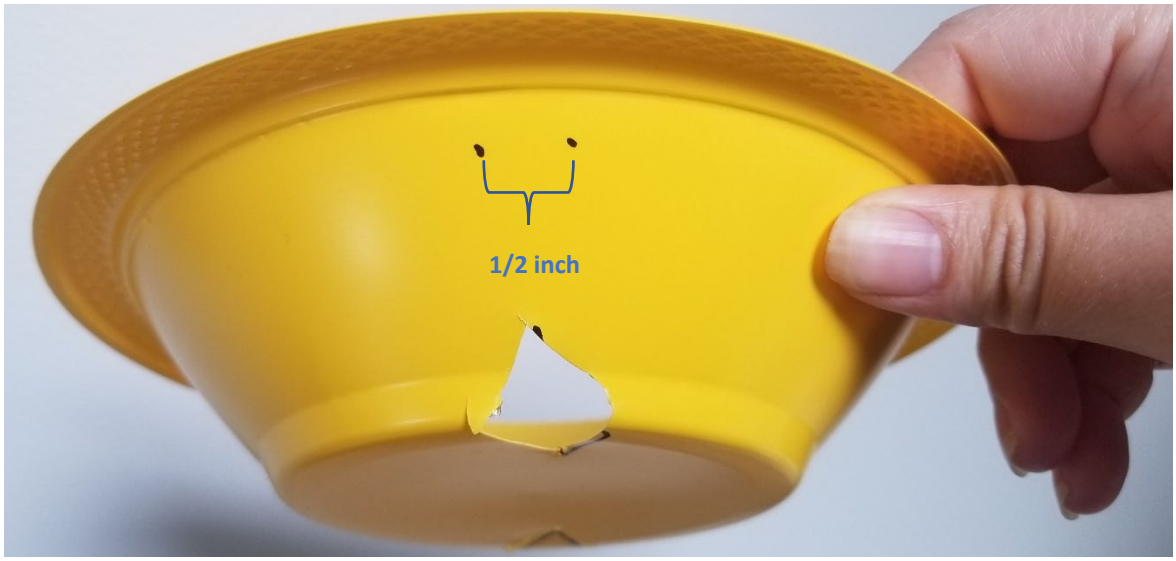
5. Find a method of securely gluing on the mesh that works for you. I like to lay down a thin layer of hot glue, gently press the mesh down on top of the glue using nitrile gloves and then apply another layer of hot glue over the mesh to really secure it into place.
6. Let the hot glue dry completely before using the bowl or stacking the bowls. Once the glue is dry you can use a small pair of scissors to cut away excess mesh.

How to create the bottom (holding) bowl

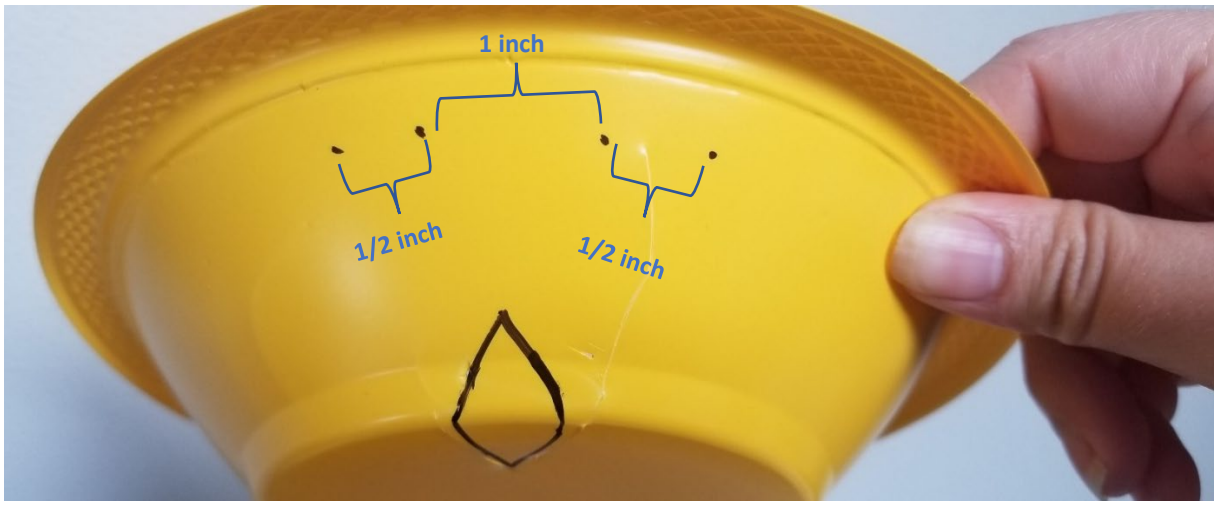
The bottom bowls will have two slots at the bottom for excess water to drain out. It will also have 3 sets of holes for securing the bowl to the shelf bracket using zip ties.

1. Draw two diamond patterns opposite each other on the bottom of the bowl to serve as the drainage holes. They do not need mesh, as this bowl is just to hold the top collection bowl securely to the tree. The holes should be about 1 inch in length.
2. Use a box cutter to cut out your diamonds. It's easiest to cut out the diamonds if the bottom of the bowl is flush against a surface of cardboard or another material that you can cut into. If you try to cut the bowl with the bottom of the bowl facing up, the pressure can crack the plastic.

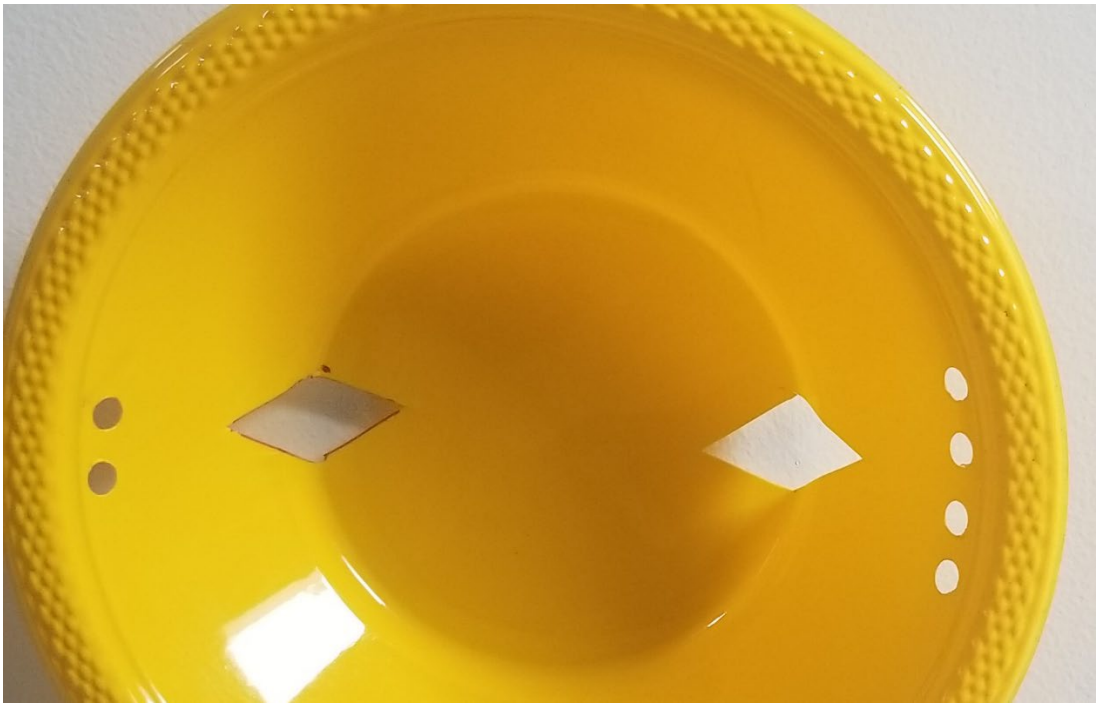
3. Above one drainage diamond, draw dots ½ an inch apart to mark the holes for the front zip tie. The holes should be placed within the top 1/4th of the bowl, approximately 1.5 inches from the bottom or 0.5 inches from the top lip.



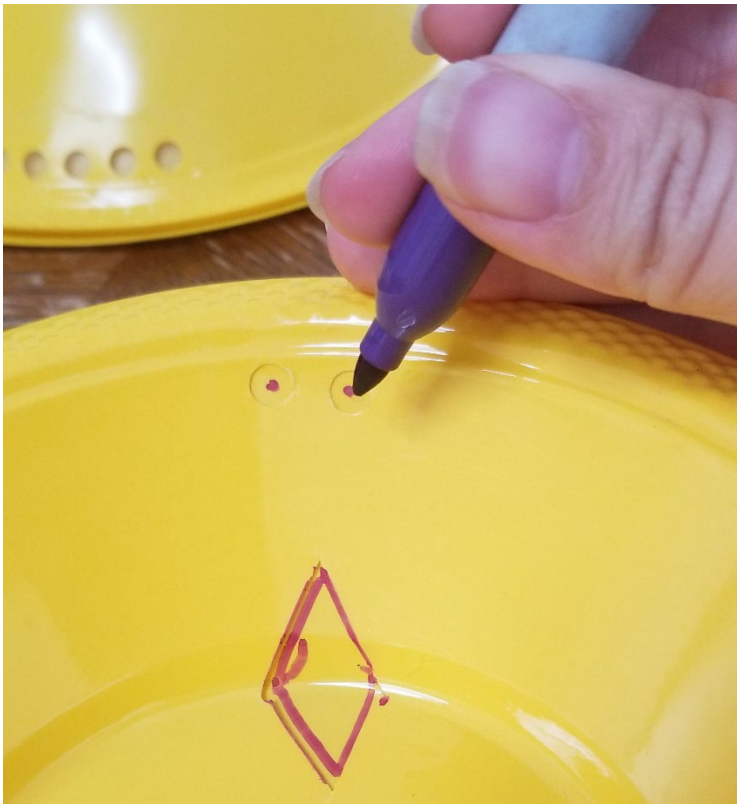
4. On the other side, draw two sets of dots on either side of the drainage diamond. The dots should again be ½ an inch apart from each other and the two sets should be about 1 inch apart.



5. Using your one-hole punch, punch over the dots you created to make the holes to hold the zip ties. Make sure you are leaving at least a ¼ inch gap between the holes so that when you secure the bowl with a zip tie the plastic section between the holes won't break.



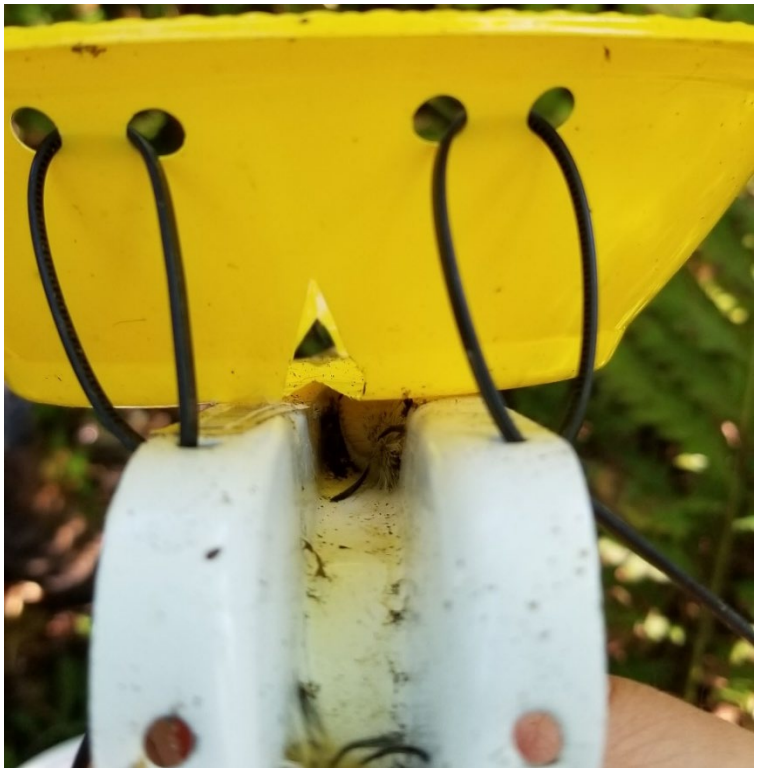
6. One you have made a bottom or top bowl you can place it over a new bowl and use it as a template for drawing your drainage holes and hole punches on a new bowl.



Securing the bowl to the bracket

1. The top part of the 8” x 6” bracket will have 3 holes. You will secure the bottom bowl to the 8” side as the 6” side is too short to properly hold the bowl.
2. Place a zip tie through the front hole of the shelf bracket and then into the bottom bowl on the side that has one set of holes, as shown below. When placing the zip ties, make sure the head of the zip tie is outside of the bowl and facing down towards the bracket. If the head is inside of the bowl or facing up towards the top bowl, the head and/or the tail of the zip tie will prevent the top bowl from lying flat.

3. You will then loop a zip tie into each of the back two holes of the 8” side of the bracket. Loop each zip tie into one of the two sets of holes on the other side of the bottom bowl as shown below.



4. You can gently pull the zip ties tighter so that the bowl is secure on the bracket, but **do not pull the zip ties too tight or you will warp the bowl so that it no longer sits flat.**

Securing the bowl to the tree

1. Secure the yellow pan trap onto the south, west, or southwest side of the tree so it is on the sunnier side of the tree where you are more likely to find EAB and thus EAB parasitoids. Between these options there may be one part of the tree that is straighter and easier to hang a trap onto.
2. Attach the bracket ~4.5 to 5 feet above the ground. Once the bottom bowl is attached to the bracket you can secure the bracket to the tree using the 3 holes on the shorter 6" side of the bracket. Place the bowl so it is level and use a wood screw and the electric drill to secure the bottom of the bracket to the tree. You don't need to screw it all the way down.

3. Then, again making sure the bowl is level, add two more wood screws to the top two holes. Screw these into the tree until the trap is firmly secured to the tree.
4. You may find you need to tighten or loosen some of the screws to make sure the bowl is level, if the tree is tilted then tightening the bottom screw but leaving the top two screws only partially screwed might help the bowl stay more level.
5. Finally, once the bowl is secured to the tree add the top bowl and two mini binder clips to secure the top bowl to the bottom bowl. You can just use one clip, but two clips will secure it better if there is wind.

6. Once the bowl is secured you can fill it with your propylene glycol mixture. If the bowl is slightly tilted, position the drainage holes towards the lower side of the trap so that all water spilling over spills through the drainage holes and not over the edge of the bowl.