

# HOW TO:

## BUILD NETS TO CATCH AND PRESERVE STREAM INSECTS

### SIMPLE PROJECTS FOR CONSERVATION

The genius of the League's Save Our Streams program lies in its simplicity. Armed with just nets and field guides, regular citizens can collect insects from local streams and use them to determine water quality.

One reason why such biological monitoring is well suited for nonprofit volunteers is that it's relatively inexpensive. With some basic materials, anyone can build nets that will work in just about any stream. It's a great activity for kids and adults alike. The nets can even be used for other purposes, such as exploring streams for fun or catching your own bait minnows or hellgrammites.

Once you catch insects, you can use a copy of the League's laminated field guide, *A Volunteer Monitor's Field Guide to Aquatic Macroinvertebrates*, to identify them. You can also use our more in-depth *Guide to Aquatic Insects and Crustaceans*. Both publications are sold by McDonald & Woodward Publishing Company, [www.mwpubco.com](http://www.mwpubco.com). Finally, you can preserve some of the insects to use in educational activities. Like building nets, preserving insects requires just a handful of inexpensive materials.

## KICK-SEINE NETS

Kick-seine nets are for use in streams with rocky bottoms and riffles, where water bubbles over cobble-sized stones.

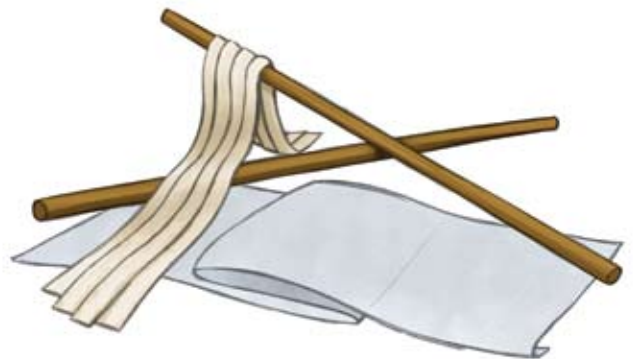
### Instructions

1. Fold the nylon screen in half (so that it's 3' x 3'), then fold the edges of the canvas strips under, 1/2", and press with an iron.

2. Sew two of the heavy canvas strips onto the top and bottom, and then use the other two strips to make casings for the broom handles or dowels on the left and right sides.

3. Insert the broom handles or dowels into the casings and secure with heavy tacks or staples.

The final size of the net should be 3' x 3'.



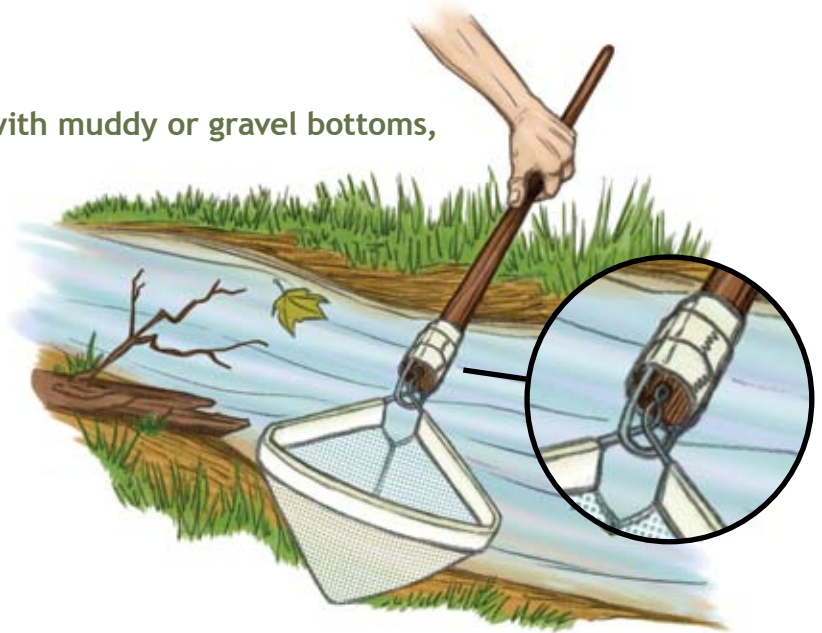
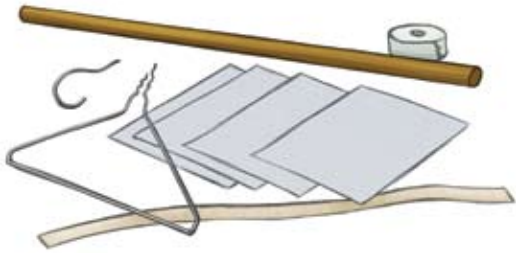
### Materials

- 3' x 6' nylon screening or netting (1/16" mesh)
- Four 6" x 36" strips of heavy canvas
- Two 4' broom handles or wooden dowels for handles
- Heavy tacks and a hammer, or heavy staples and staple gun
- Sewing machine and thread
- Iron and ironing board

ILLUSTRATIONS BY BOB DRY/[WWW.DRYSPOND.COM](http://WWW.DRYSPOND.COM)

## D-FRAME NETS

D-frame nets can be used for streams with muddy or gravel bottoms, where no riffles are present.



### Materials

- Four 10" x 12" rectangular pieces of finely meshed nylon netting (1/25" mesh)
- 1" wide bias tape or equivalent fabric scrap, 40" long
- Sewing machine and thread
- Scissors
- Wire coat hanger and wire cutters
- Drill with 1/4" wood bit
- 4' long broom handle or wooden dowel
- Pliers and duct tape

### Instructions

1. Cut the rectangular netting into four triangular pieces (10" high with 12" bases) and sew together.
2. Use 40" strip of bias tape or fabric to make casing and sew onto net opening, leaving casing open to insert wire frame.
3. Untwist the wire coat hanger, slip it into the net casing, and re-twist.
4. With wire cutters, cut the stem of the hanger to 2". Drill a hole in a broom handle and insert the stem.
5. Using pliers, bend one of the remaining pieces of the coat hanger into a U-shape. Slip it through the hole at the base of the net's frame. Drill holes in the sides of the handle and push the two ends into the holes. Wrap with duct tape to secure.

## BUG PRESERVATION

Use the collection for educational displays, identification practice for volunteers, and identification quizzes at events, among other things.



### Instructions

1. Ethyl alcohol, glycerin, and eyedroppers can be purchased at pharmacies. Funnels and glass vials can be purchased from kitchen supply stores or [www.carolina.com](http://www.carolina.com).
2. Fill vial 2/3 full with alcohol.
3. Add bug specimen to vial.
4. Using an eyedropper, add several drops of glycerin to keep your specimen from becoming brittle. (2 to 3 drops for small vials and 4 to 5 for medium vials.)
5. Seal lid.
6. Label specimen jar using permanent marker and adhesive labels.
7. Make another label on paper with pencil and insert into the jar in case the outside label gets lost.

### Materials

- Glass vials with screw caps
- Ethyl alcohol
- Glycerin
- Eyedropper
- Small funnel
- Adhesive labels
- Permanent marker
- Paper
- Pencil