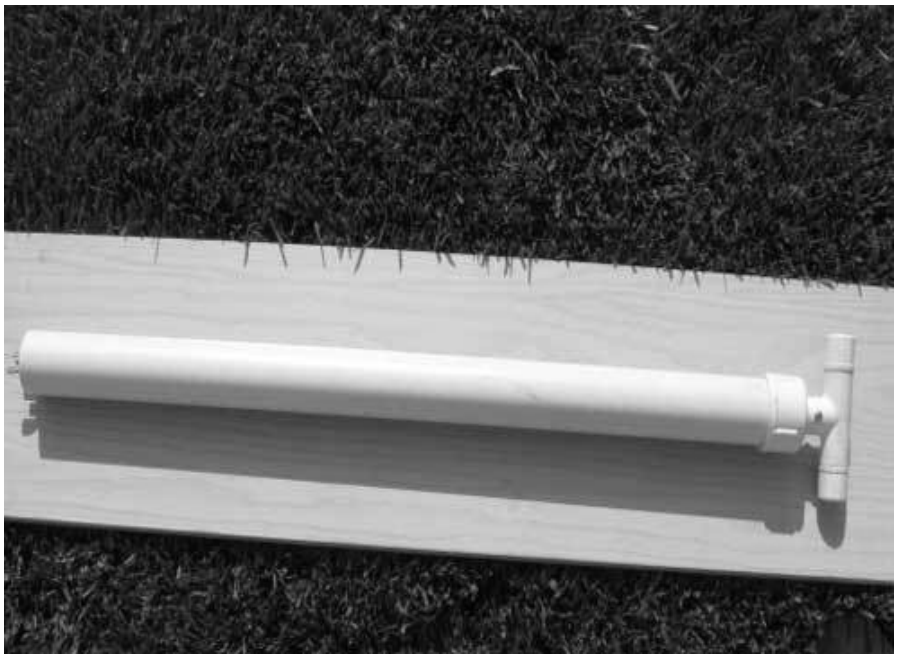
Appendix II

How to build your own Ghost Shrimp Pump
("Slurp Gun")

By Dana Rea



Ghost Shrimp can be found in many places along the Southern California coastline. Adult Ghost Shrimp grow to about 4 ½ inches long and the males tend to have one claw that is considerably larger than the other.

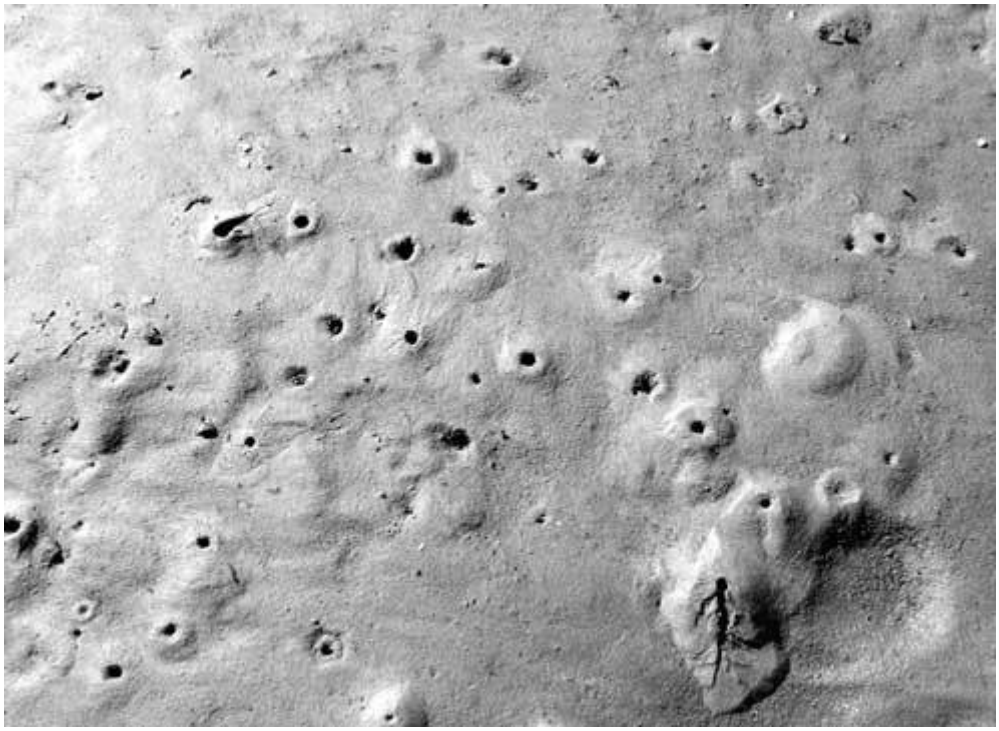
The color of a Ghost Shrimp will range from being pure white to a deep rich orange or even a combination of both colors.

Ghost Shrimp live in sandy and muddy intertidal zones, bays and estuaries. They dig burrows often shared with other fish and invertebrates. They eat plankton and “detritus”, which consists of small pieces of organic plant and animal waste.

The best place to find shrimp is along beaches and bays that have exposed mud flats during low tides. I’ve found that low tide is a must to finding Ghost Shrimp in quantity. A negative low tide is best, but not absolutely critical.

You'll know a good location by the number of burrows.

Take a look at the photo below to see a good example of what these burrows look like and what you’ll be looking for:



The best burrows for collecting are in "wet zones" of any mud flat. The mud should still be saturated with water, as this will also make

your pumping a lot easier.

Ghost Shrimp make fantastic bait for fishing off the beaches of Southern California so why not catch your own!

All sorts of surf fish species including corbina, surfperch, halibut, sargo, spotfin and yellowfin croaker can be caught while using this easily obtained surf fishing “candy” bait!

One of the best ways to do this is with a Ghost Shrimp Pump also known as a “Slurp Gun”.

Basically, this gun is nothing more than a suction device that produces a vacuum when the handle is pulled.

When the bottom of the Ghost Shrimp Pump is placed over the hole of the Ghost Shrimp burrow and the handle is pulled up, all the sand is sucked up and hopefully the ghost shrimp is sucked up as well!

When the contents are expelled the angler searches through the discarded mud or sand for ghost shrimp. It’s as simple as that!

Place your pump over the center of the burrow and pull the handle. This will cause the pump to dig into the mud while pulling the burrow's contents into the chamber.

In one swift motion pull the pump out, aim it to the side and push the handle down. This will expel the contents.

Repeat a few times in the same hole as needed. Most ghost shrimp burrows have multiple entrances and exits. If you haven’t found shrimp in three or four pumps move on.

Be sure to have a container to carry your shrimp in (for example, a waist bait bucket). And don't forget to rinse them off thoroughly before leaving the bay.

Be sure to go back and check the holes you pumped a few minutes before, as sometimes ghost shrimp are easily missed in the mud and occasionally come to the surface if their burrow has collapsed.

Remember that these little guys are a vital part of the ecosystem so don't wipe out every burrow in a small area and never take more than you need for that day.

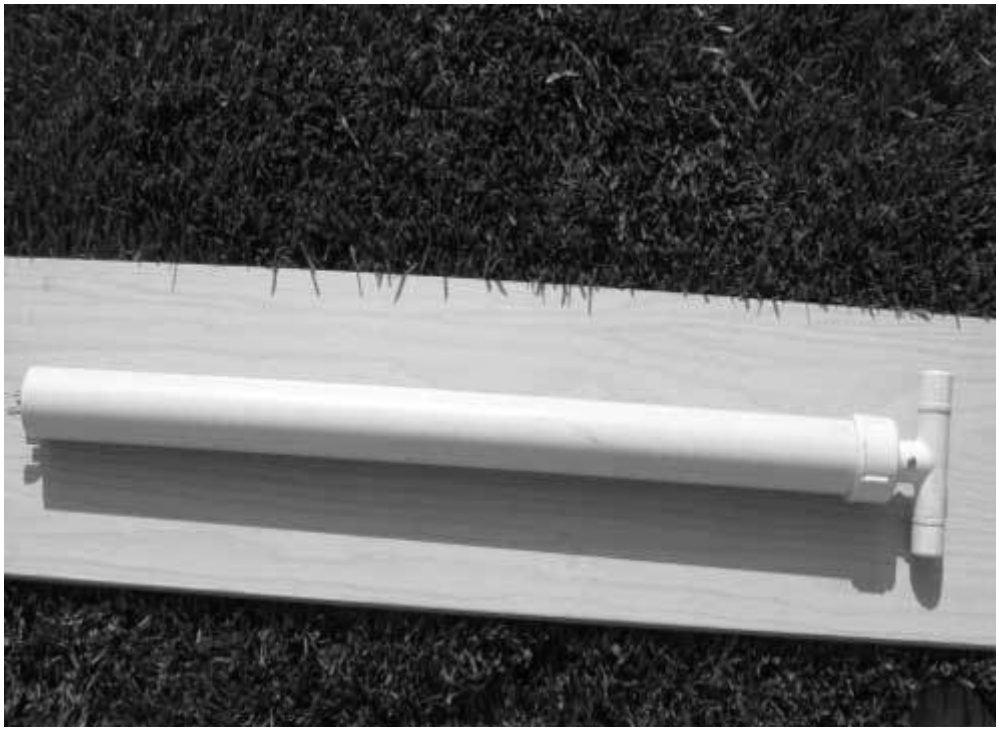
Try to space out your collecting over a large area.

I recommend that you return any egg-laden females and the largest shrimp you catch back to the hole from which it came. That way we can be sure there will be bait for future trips to the beach!

Kids love collecting ghost shrimp, so don't be afraid to let them try it! Just keep a safe eye on them at all times and remember some shrimp have large claws and can pinch hard enough to break the skin.

I believe current California law specifies that the "capture limit" of Ghost Shrimp is 50, but always be sure to check current DFG regulations for any updated information just to be on the safe side. You must have a valid fishing license in your possession to collect ghost shrimp. You can find the current regulation here: http://www.dfg.ca.gov/regulations/

Shrimp pumps are very easy and inexpensive to make and most anyone who can follow these simple directions should be able to build one in a no time and save oneself some money!



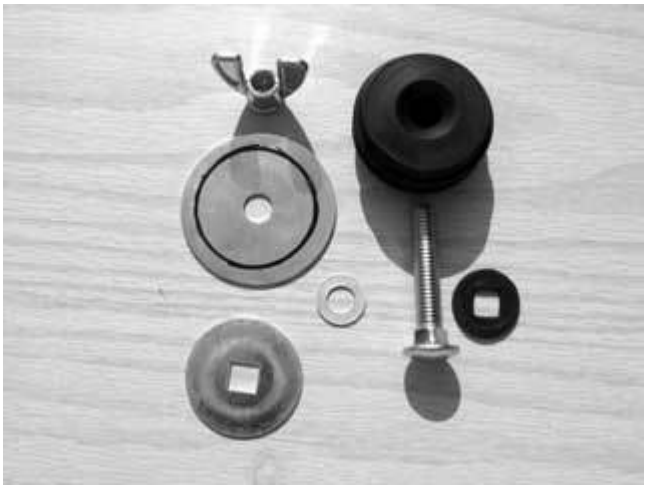
Here's a parts list of what you're going to need to make one like the one depicted:

I purchased all of this at Home Depot for about $17.00

1- 2" x 36" piece of PVC
1- 3/4" x 36" piece of PVC
1 - 3" x 1/2" piece of PVC
2- 1 1/2" pieces of 3/4" PVC
1- 2" PVC cap (non threaded)
3- 3/4" PVC caps (non threaded)
1- 3/4 "PVC tee (non threaded)
1- 2" rubber test plug (for PVC)

1- 1 1/2" metal washer with a 3/8" hole
1- 2" x 5/32" machine screw & nut
1- PVC Primer
1- PVC cement (I used “Weld-On” PVC 2700 Clear)

Note: The test plug should come with plug, bolt, washer and wing nut as shown here:



Make sure that you examine your test plug. It should be the rubber type, not plastic. Some of them come with a washer on top that is larger than 2". Replace it with one that is 11/2" in diameter that has a 3/8" hole and is of the same thickness.

Use too small of a washer and the squeezing action of the test plug will not work as well. You can also just grind or cut down the original washer to a 1 1/2" diameter (as I marked) if you prefer.

It is recommended that you “dry fit” your components prior to application of primer and that you allow the primer to “soften” the PVC for about 30 seconds before you apply the cement.

Step #1:
(Handle Assembly)

1. Apply PVC primer/cement to approximately half of one of the 1 1/2" pieces of 3/4" PVC and insert the glued piece half way into one side of the 3/4" tee.

2. Now apply PVC primer/cement to the other half (one end) of the inserted piece and slide one of the 3/4" caps onto that portion.

3. Repeat the same process on the other side of the tee handle.

4. Drill a 3/16" hole in the center of the neck of the 3/4" tee

5. Take the 3" piece of 1/2" PVC and primer/cement it inside the top of the 36" piece of 3/4" PVC. Make sure it is flush with the top of the 3/4" piece when inserted.

(Note: I added the 1/2" insert to give extra support to where I will later attach the handle)

Once the caps have been attached to the 3/4" tee, the handle should appear as it does below:

Note: You can make this pump WITHOUT the caps and WITHOUT the screw and WITHOUT the 1/2" reinforcement... (Just glue the t-handle to the top of the 36" piece of 3/4" PVC)

I added the caps as a way to make the handle a bit wider for a better grip. This will result in less fatigue while pumping.

Rather than just attaching the handle with glue, I choose to use a machine screw to make the handle removable so the gun can be cleaned easily (*Highly recommended*).

I added the 1/2" PVC reinforcement inside the 3/4" piece as a way to make the top of the neck where the handle attaches sturdier.

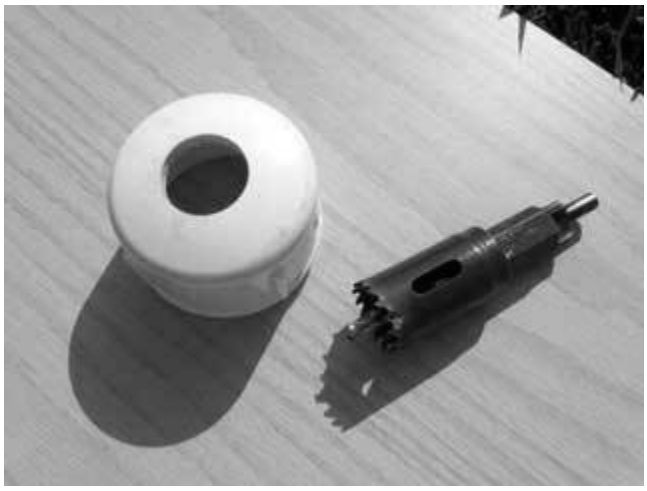
Step #2:
(Drilling and attaching the 2" cap)

1. Take the 2" cap and find and mark the dead center of the cap.

2. Drill a 1 1/6" inch hole in the dead center of the cap.

The cap should appear like the one shown below when you are done. I used the tool shown here (hole saw), but you can also drill a 3/4" hole and then file it out to 1 1/16", or use a “step-drill”.

IMPORTANT: Be careful to make and drill the hole at dead center.

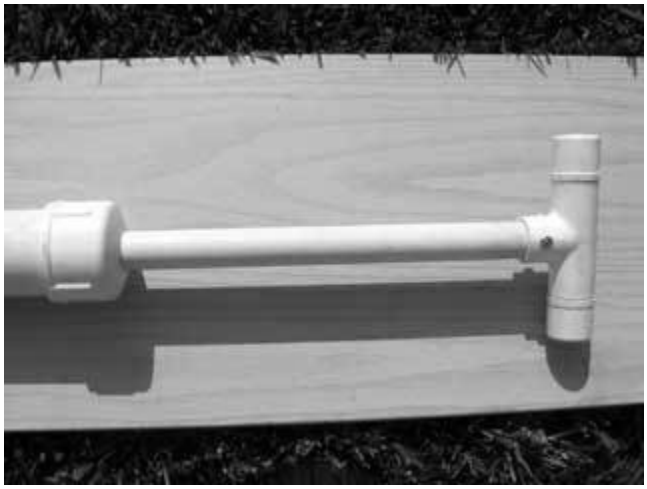


2. Once the hole is drilled properly, apply PVC primer/cement to the inside of the 2" cap and attach it to your 36" piece of 2" PVC.

3. Now slide the 3/4" tee handle onto your 36" piece of 3/4" PVC. Using the hole that you already drilled in the tee handle as a guide, drill a 3/16" hole thru all of the pieces

4. Insert a 2" x 5/32" machine screw & nut and attach the handle.

You should now have two assembled pieces, again similar to the ones shown below:

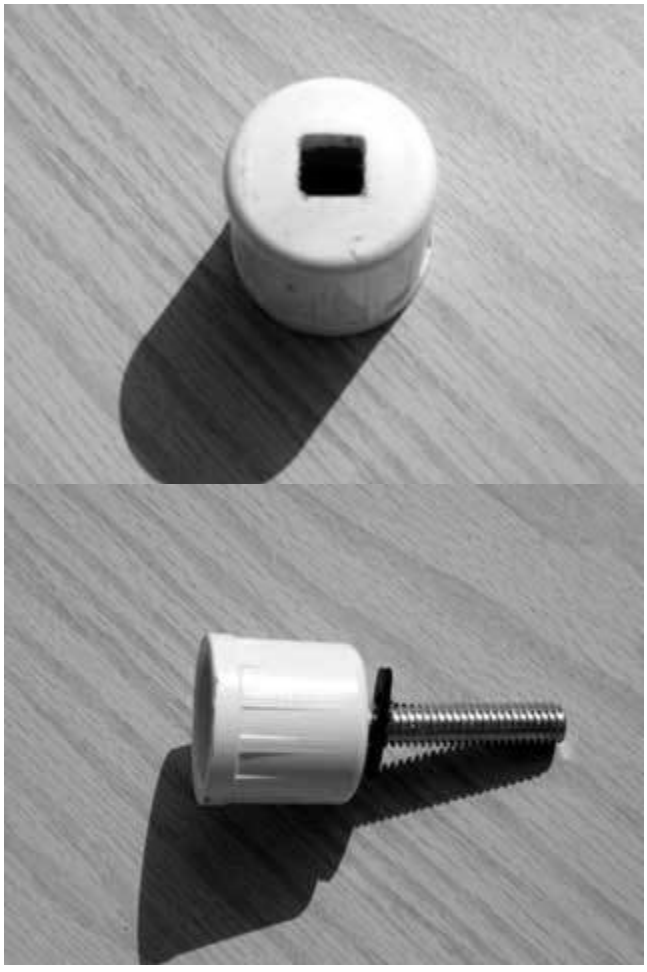


Step #3:
Pump Piston assembly:

1. Take the remaining 3/4" cap and drill a 3/8" hole dead center.

2. The “test plug” comes with a square shouldered (carriage) bolt.

File out the 3/8" hole so the square shouldered bolt fits perfectly once it's installed from the inside of the 3/4" cap (Yes, you'll be making a round hole square)

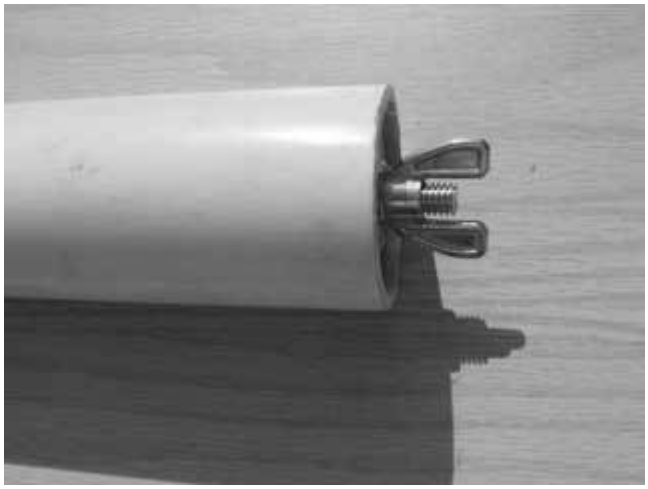


3. Install the carriage bolt by pushing the bolt thru the cap from the INSIDE of the cap. DO NOT YET ASSEMBLE THE ENTIRE PLUG.

4. Next, primer/cement the 36" piece of PVC (with the attached handle) into the inside of the 3/4" cap

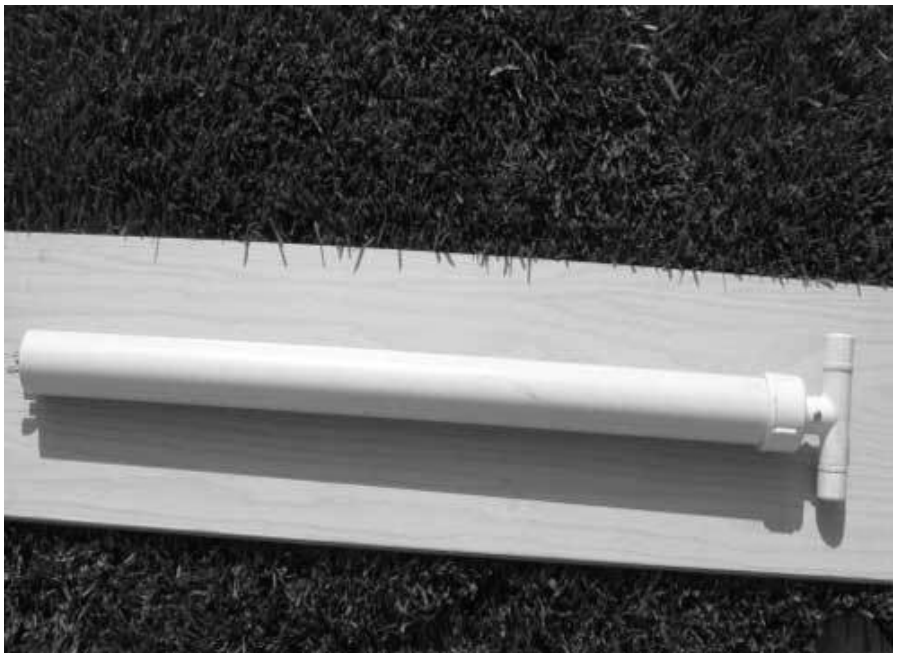
5. Now insert the 3/4" piece thru the 2" cap and push all the way down

6. Finally, attach the rest of the "plug" hardware. (Once assembled, it should appear as shown below)



7. Use the wingnut to adjust the plug so it makes a good seal yet allows the handle and rod to be pumped up and down smoothly. Adjust the plug once you're in the field. Thick sand, mud or lack of water may require you to loosen and retest the plug.

You're done!



Note: There are certainly better ways and perhaps EASIER ways to make a “slurp gun”... this just happens to be how I made mine.

There are all sorts of people on the web selling slurp guns, even selling “plans” on how to build a slurp gun... but if you do a little searching, all the information on how to build one can be found for free on the web... that’s how I learned how to build mine.

This article was written by and is published in memoriam to its author Dana “Team57” Rea



Dana Rea of Team57 has researched and written a great article about ghost shrimp and how to build a pump. You can find his article at: www.fishingnetwork.net, www.team57fishing.com Tragically, Dana lost his struggle with heart disease in 2010 and will be greatly missed.

Each year the Hunting Giants Surf Fishing Tournament is held in his honor. To learn more about "HG" visit fishingnetwork.net for details.

Dana's contributions as a moderator and regular contributor to Fish Taco Chronicles, dozens of fishing seminars, events and as a long time moderator on fishingnetwork.net were a testament to his love for fishing and teaching others. Again, thanks to Dana for his support of surf fishing and the fisherman's right to enjoy the beach. He was a great colleague and an even better friend who will be missed but forever remembered.