

Catching & Keeping Live Baits

Introducing **Parts 3 and 4** of our special series all about live baits - finding, catching and storing them (either naturally or with the latest power infusion pumps) in this very special series by top scientist, fisherman and author, **Scott Bannerot**.

Report, Pics & illustrations by **Scott Bannerot**

You've got a naturally-aspirated live well now but the thought of power oxygenation, and what this means for increasing the amount and variety of bait on board, is intoxicating. Here's how to enhance that live well without busting the electrical or financial budgets.

I need to level with everyone who has been following this series of articles. If it seems like we are slowly drawing you deeper into the subject with each successive month, it's because we are.

We all know that fishing is a progressive disease. You start small, taste the sweet wine of success, and then set yourself up with more gear and technology to expand and enhance the experience. As long as you purchase the right stuff and it works the way it should, you never look back. Eventually we top out at the limits of the time and money available for fishing, but we're happy, because we're getting the maximum possible pleasure out of our investments. And these experiences make us rich in a way that money can't.

Our continuing discussion of live bait is a perfect reflection of fishing disease. Stoked by the success of simple, naturally aspirated systems, we're looking at this point to take the next step towards boosting the amount and diversity of live bait we can take out to the fishing grounds. This month we'll add a 12 volt power pump to the equation, nothing too expensive or power-hungry, just enough to take us to the next level of fishing success.

Bait Pumps

Last month we limited ourselves to naturally-aspirated live wells, most of



which work best with some degree of boat motion. Actively pumping fresh, oxygenated seawater through a bait-holding compartment obviates the need for boat motion and evens out the degree of oxygen saturation in the system. Two kinds of 12 volt pumps can accomplish this task: (1) in-line centrifugal pumps; and (2) submersible bilge pumps.

Until recently if you stepped in to one of the marine store chains or thumbed through a catalogue to the section on live wells the heart of the featured system would be a low-capacity in-line pump - no more than 400 GPH - designed to feed a diminutive tank. The set-up on most production fishing boats wasn't much better.

Meanwhile, professional fishermen have been creating their own highly efficient, heavy-duty live well systems for well over 25 years. The disparity between the professionals and the manufacturers has lessened, but most

of the pro designs remain custom creations.

Many of these systems surpass the available amps and budgets of small recreational boaters. So let's see how to get the most out of a low-draw bait pump, and how to integrate power with natural aspiration.

First let's go back to the marine catalogue or store. That live well pump section isn't nearly the joke it was a short time ago. Both in-line and submersible pumps have been customized for live well applications, and yes, they start at 360 GPH, yet most model series go up to 1100 GPH. They draw between 1.5 and 4 amps. The 360 to 500 GPH pumps are generally meant to feed 22 to 30 gallon tanks, the 600 to 700 GPH pumps 30 to 50 gallon tanks, and the 1100 GPH pumps 50 gallon and larger tanks. Personally I ignore these guidelines and feed a 30 gallon tank with a 1100 GPH pump with excellent results, although I do agree with not under-feeding a large tank with a small pump. I recommend purchasing and installing the largest pump your electrical system and budget can handle, and using it to feed the largest on-deck well you can comfortably and safely accommodate on your vessel, remembering that water weighs 8 pounds per gallon. If that only results in a 360 GPH pump and a 22 gallon tank, no worries, there's a heck of a lot you can do with that and it's well worth acquiring. Regardless of raw water pump and tank size, consider the additional purchase and installation of an aerator pump to boost the carrying capacity of the system (these attach to the tank usually with a thru-hull, and re-circulate aerated water).

A Simple Starter System

Diagram A illustrates a simple 12 volt power pump live bait well system using an in-line pump, while diagram B substitutes a transom-mounted submersible bilge pump for the in-line pump. Both pumps feed a round, plastic live well secured on deck. A through-hull fitting three times the diameter of the inlet elbow, connecting to a section of plastic hose dangled over the side, provides drainage. Notice the location of the fresh seawater inlet low in the water column of the tank for maximum oxygenation of the water column as it spirals up to the drain in a circular flow created by the 90 degree elbow fitting. I recommend the cone-shaped, threaded screen fittings now available for the drain outlet to keep baits and debris from entering the drain hose while minimizing resistance to the water flow out of the drain. The in-line pump set-up features a removable pre-filter, critical for keeping debris out of the pump. Unscrew the cap, remove the stainless steel cylindrical screen, dump out the seaweed, and replace at least in the morning before each trip, more often if you notice diminished inflow to the well.

The submersible bilge pump is more accessible than the in-line pump, and tends to have less problems with losing prime - that in-line pump must be below the water level, and may still experience problems holding prime when the boat is backing up rapidly or occasionally catching air while running in big seas. When you examine the space required for the pre-filter, there's not much room in many small launches to keep that in-line pump sufficiently low. We get into more elaborate in-line pumps with anti-airlock devices and air infusion systems next month available from KeepAlive (www.keepalive.net), although several starter-grade models now incorporate anti-airlock systems.

Depending on hull characteristics, you may be able to mount a submersible bilge pump on a trim tab and still maintain prime while on plane. If not, make a dedicated bracket and attach it as low as possible and as far away from the outboard as possible. Using a submersible bilge pump instead of an in-line pump can mean one less hole in the bottom of the boat.

Combining Power with Natural Circulation

The forward-facing, screened scoop fitting in Diagram A forces water through the in-line pump and into the well when the vessel is moving forward, enough so that the pump can be shut down while running to the fishing grounds in the case of harder bait species, particularly if the tank has an auxiliary aeration pump (again, this is another feature from KeepAlive that we cover next month for more elaborate systems). In the case of submersible bilge pumps, if you presently have any style of below-the-waterline naturally aspirated live well, you can add this pump to the system by simply installing it inside the well. When you flick this on to pump from the naturally-aspirated well to the on-deck power well, you not only supply the latter, you increase the seawater flow through your natural well. Note, however, that if your natural well is loaded with bait, you will be pumping oxygen-depleted, ammonia waste-filled water into the power well which will slightly decrease the carrying capacity of that well. Therefore if you are housing bait that tends to lose slime and scales under stress, it's best to keep them in the on-deck power well, and leave harder fish species and

