

MOSQUITO FISH/MINNOWS *Gambusia holbrooki*

Rob McCormack

Mosquito Fish are extremely common and inhabit both fresh and salt water in NSW. Frankly there is not much of NSW that you will not find the hated Mosquito fish. They do prefer warm water so as you go higher up the river catchments they do become less common. On the lower flats and plains they are a major problem.

These fish are not natives and were introduced in the early 1920's. They were used as mosquito control and they are very effective at that. However it is not just mosquitoes they eat it is basically everything that is small enough to fit in their mouths will be consumed. They do not grow very big the females only about 75mm maximum and the males are generally smaller at 50mm. The problem is that they eat the eggs and small larvae of other fish like, Bass, Cod, Yellowbelly and Silver perch, etc and this is having a major impact on these native fish stocks.

Another problem is the phenomenal breeding rates of these mosquito fish. They do not need large volumes of water or flood conditions like most of our larger native fish. They breed in fresh or salt water and anything in between with multiple breeding per year and they are live bearers. The females are internally fertilized by the males. The eggs develop over a 3 – 4 week period dependant on water temperature and then small live young are born. These young grow rapidly if food is available and then after 2 – 3 months they start breeding as well. This can lead to massive densities of these animals and they can be a real disaster for aquaculturalists.

It is imperative if you are going to conduct aquaculture that you prohibit mosquito fish from your ponds. Mosquito fish are a major nasty and can seriously injure your bottom line if they infest your aquaculture facility.

As I travel around looking at other peoples farms it is not uncommon to see Silver Perch farmers with 400 kgs of Silver Perch in the pond and another 50 kgs of mosquito fish in there with them. The mosquito fish are eating the same food as the silvers and using the same oxygen. The farmer is feeding them every day but will receive nothing for them when he harvests the pond. This is greatly increasing his production costs and reducing his profit.

Yabby farmers are worst off if it is a breeding pond because mosquito fish can kill up to 95% of your new born baby yabbies.

Mosquito fish can be easily pumped into a pond as they are extremely tough. It is not uncommon for these fish to be sucked into the intake go through the pump and over 1000mtrs of hose and into a pond you are topping up. Then grow and breed up into plague proportions. Also as live bearers it is not uncommon for those using mesh screens on the intakes to have adult female mosquito fish sucked up against that screen and their stomachs burst open and the live babies sucked out and through the pump into the pond.

Mosquito fish have an instinct to migrate upstream and will easily enter a pond that has water overflowing out of it. They can swim on their sides in extremely shallow water against strong currents and jump over obstacles to a height of 1mtr.

They are basically a surface fish mostly utilizing the first 600mm of water and enter into the shallow edge of the pond of only 3mm deep. They are also a tail biter and can be a major problem for people who release fish fingerlings into a dam infested with mosquito fish. Do not release fish fingerlings into shallow water where there are mosquito fish. When fingerlings are first released into a dam they are disorientated and afraid. Usually the first thing they do if shallow water is dive to the bottom and try to hide. If mosquito fish are about they will nip the fingerlings tail and basically eat the tail off which can kill your fingerlings. Fingerlings need to be released into water over 1 meter deep so there are no mosquito fish to hassle them.

Many people actively stock their dams with mosquito fish as a food source for there larger perch. Most fish will eat mosquito fish but they are a food of last resort as they do not taste very good. So most fish will eat everything other than the mosquito fish. Other people stock them to eat the mosquitoes but you are better of with gudgeons or pacific blue eyes.

Once a pond is infested with mosquito fish it is extremely difficult to kill them all. We drain the pond and either use hydrated lime to sterilize the water that's left or we use rotenone. Rotenone is a bio degradable poison which we apply at a rate of 2.5kgs per Mega liter of water. It is highly toxic to all fish but has a relatively short active period, so after 3 weeks we can start to use the water again.