MEMBERS PAGE

A TALL TALE BUT TRUE - HAPPY TADDY TALES PART 2

The first native fish, six western minnows, were introduced into the dam in late winter 2005. They seemed to mature quickly as a good sized adult was spotted in late Dec, with the bulge of a gravid female we hoped, not of gastronomic 'taddy-delights'. This was the only daytime sighting, alas, as these fish seem very shy and well camouflaged.

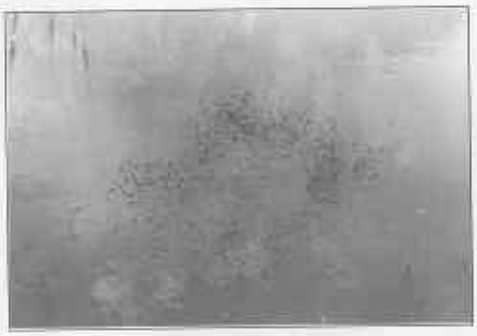
With great anticipation we waited to see the effect on our new season's tadpoles.

In late Nov. and early Dec. the first juvenile tadpoles were seen, once again rising from the dense forest of algae on the floor of the dam at about noon. However this time they behaved differently, keeping close together in a school much as sardines do in the ocean, but in a slow-motion display. As they rose to the surface, the whole body of tadpoles spiraled constantly. Near the surface they all moved along as a tight group, all taking the same direction. With a few stragglers swimming in the rear, the overall appearance to me was like a monster fish, ponderously patrolling the pond. Moreover, three or four such monsters lurked – and I could well imagine with what fear the western minnows must have fled and hidden themselves from these watery apparitions.

By Jan the tadpoles had fattened and were dispersed throughout the dam, often hanging suspended in the water, nose up tail down, as if taking a nap. Their numbers seemed not quite as prolific as during the previous year but still impressive. By mid-Jan, teenage legs were showing on the motorbike frogs. They seem to enjoy hanging out together in small groups among the reeds at the water's edge, sunning themselves in the shallows.

And as for the fish, this is indeed a tale of "the BIG ones that got away".

Meg Wilson, Mundaring



We asked Prof. Dale Roberts (UWA Zoology) if he knew why the taddies were swimming in spirals. He commented:

These are probably motorbike frog (*Litoria moorei)* tadpoles. I have seen them doing that before. Possibilities:

a) some sort of co-operative feeding behaviour - occurs in toad tadpoles, but there they can be kin groups, not a random mix. Toad tadpoles do it on the bottom of the pond and stir up sludge. This is in open water so unlikely but possible - eg chasing aquatic prey that might be small enough not to be seen by the naked eye or from the dam bank.

b) might be some sort of predator avoidance. There are a lot of theoretical models about predator-prey interactions that generate groups. Dilution models - one predator limited prey catching ability - join a group to minimise the risk. Use your buddies as a shield against predation - selfish herd models.

c) there might be hydrodynamic advantages in swimming in a school but why you would swim in circles is beyond me!

When you see tadpoles exhibiting this behaviour, I suggest you look out for predators - birds, dragon fly larvae, water beetles, fish – all might have a go. That might help to confirm or eliminate one of the theories.

ORIGIN OF CHYTRID FUNGUS DISEASE IN FROGS

A deadly fungal skin disease that is responsible for wiping out frogs around the world may have been spread by a human pregnancy test. From the 1930s to the 1960s, the standard pregnancy test involved African clawed frogs. A pregnant woman excretes chemicals in her urine that, if injected into the clawed frogs, would induce them to produce eggs or sperm. No pregnancy, no chemicals, no frog eggs. It was simple and reliable, and all over the world laboratories were set up to undertake this test. As a result, huge numbers of African clawed frogs were exported worldwide from South Africa.

Researchers at North West University, USA, have discovered by examination of preserved frogs in museum collections that the first recorded case of the fungus correlated with the use of clawed frogs in this laboratory procedure. Another example of why quarantine (or biosecurity as it is now called) is so important. For further info:

http://www.int.iol.co.za/index.php?set_id=1&click_id=14&art_id=vn20060205134

Anna-Marie Penna, Conservation Council of WA.