Managing Mosquitoes

Well-constructed wetlands do not promote the growth of the mosquito population.

Most mosquito breeding occurs in very still or stagnant water in suburban backyards (where there are fewer predators).

Top Of the various species of mosquito recorded in our wetlands, few are those that transmit disease to humans.

Above Mosquitoes are a natural part of the diet of wetland frogs and many other fauna species.

Adult mosquitoes feed on nectar, but females consume blood in order to produce eggs. It is this behaviour that can result in the transfer of disease. Fortunately, very few of the mosquitoes in the Adelaide area are of the type that carry diseases.

The first three stages of the mosquito life-cycle (egg, larvae and pupa) require still water. Only the adults are able to move away from water, with some adult mosquitoes found up to 50 kilometres from the pool they hatched from.

Conditions that trigger population explosions include shallow sheltered water, poor water quality with low oxygen levels, and an absence of natural predators, such as fish and frogs.

Mosquito control measures in constructed wetlands can be integrated into the initial design of the wetland. These can include:

- situating the wetlands in open areas to allow wind to disturb the larvae
- a regime of fluctuating water levels to drown or strand the larvae
- maintaining steep edges in ponding areas to reduce the growth of vegetation on which mosquitoes may lay eggs
- maintaining good flow rates.

Mosquitoes in wetlands may also be regulated by chemical control measures. The periodic harvesting of vegetation (including algae) and sediment can further reduce their numbers.

Predation by other organisms such as fish, single-celled organisms, fungi, spiders, crustaceans, parasites, frogs, reptiles and other insects is another highly effective means of controlling mosquito numbers. The Blue-spot Goby and other native fish species feed on mosquito larvae.

The City of Salisbury monitors the mosquito population using traps to catch adults and dip-netting for larvae.

Results of monitoring suggest that the majority of mosquitoes in the area breed in small, unmanaged pockets of water, such as old tyres and weed-choked open drains, rather than in constructed wetlands.

Residents of the City of Salisbury can help to keep mosquito breeding (and numbers) under control by:

- keeping properties clear of rubbish and building materials
- making sure wheelbarrows, empty pot plants and similar items do not contain water
- screening rainwater tanks to keep mosquitoes out.

Learn more

For more information on related topics, see the other fact sheets in the Wetlands series. You may also like to visit the following websites for more information:

Mosquitoes
www.medent.usyd.edu.au/fact

EPA report on Mosquitoes in Adelaide
www.epa.sa.gov.au/pdfs

Avoiding mosquito bites
http://www.health.sa.gov.au/pehs/publications/mozzies-fight-bite.htm

Top Gambusia were initially introduced to wetlands to control mosquitoes and are now a pest species. Photo: Luke Simon

Above Mosquitoes require special conditions for breeding. Most people are familiar with their larvae - 'wrigglers' - in small puddles of water around the garden. Photo: Wikipedia

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