

Male mosquitoes feed only on plant products - females require a blood meal before their eggs can mature.



MOSQUITOES



That prick of pain you get while sitting in the backyard and that annoying buzzing around our pillow at night will often lead to an itchy bite. What most people don't know is that each bite is likely to be from different mosquito species.

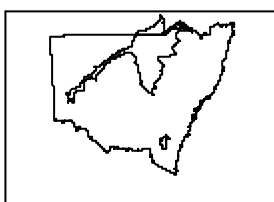
Mosquitoes derive from larvae (wigglers) that live in aquatic habitats. These habitats vary dramatically and can be characteristic for many species (Russell, 1999). For example, the larvae in the pot-plant saucer in the garage will be responsible for outdoor evening bites, while the midnight bedroom biters come from the drum behind the chicken shed full of composting liquid manure. Once we know what species is biting us and where its 'breeding site' is, we can then think about ways to modify breeding grounds and therefore the biters themselves.

DESCRIPTION

Mosquitoes are soft-bodied insects, with two wings, which create the characteristic high-pitched whining sound. The mouthparts form a piercing-sucking apparatus (Goode, 1980). Males are distinct from females being of a slender build, with feathery antennae (CSIRO, 1991).

DISTRIBUTION

Mosquitoes are found throughout Australia. Mosquito genera which are likely to occur in the Darling Riverine Plains include *Anopheles*, *Aedes* and *Culex*.



The Darling Riverine Plains bioregion.

ECOLOGY

Mosquitoes generally feed on nectar and plant fluids (Merilyn *et al* 2000). Only the female feeds on blood, which is required to nourish the developing eggs (CSIRO, 1991). Mating takes place in flight, and the eggs are laid in water. Still water is preferred by most species (Zborowski

and Storey, 1998), although the size of the water body can range from extensive wetlands, to a trough or a hoof print. Adults rarely disperse more than 2km from their original breeding site and have an average lifespan of 2 to 3 weeks (Merilyn *et al* 2000).

Females of different species show considerable host preference. Some prefer to bite humans, for example *Aedes alternans* (Merilyn *et al* 2000); while others favour rabbits or birds such as *Culex australiucus* (Merilyn *et al* 2000). A female detects a host in a variety of ways including body odours, increases in carbon dioxide or air pressure and heat (Merilyn *et al* 2000). Adult mosquitoes and larvae form an important part in the ecosystem, contributing as a food source for a variety of native frogs, fish, reptiles, birds and bats.

DISEASE

Australia has more than 350 species of mosquito. However, only a few of these are commonly abundant and cause disruption to human activity. Of most interest to humans is the: *Aedes notoscriptus* (from backyard containers), *Anopheles annulipes* (from rural irrigation) and *Culex quinquefasciatus* (from domestic sewerage) (Russell, 1990). The

Fact Sheet



disease carriers include: *Aedes aegypti* (dengue fever), *Aedes vigilax* (Ross River Virus), *Anopheles farauti* (malaria) and *Culex annulirostris* (Ross River and Murray Valley encephalitis) (Russell, 1990).

Mosquitoes are known to spread a variety of diseases. These are commonly transmitted when a female mosquito injects a small amount of saliva containing chemicals to stop the host's blood clotting while feeding (Merilyn *et al* 2000). In Australia mosquitoes are known vectors for Dengue fever, Australian encephalitis, Ross River fever virus and Barmah Forest virus. Ross River fever is the most commonly reported mosquito transmitted disease in Australia (Merilyn *et al* 2000). Signs include rashes, fevers and arthritis-like symptoms which can last from months to years. *Culex australicus* is a known vector of the rabbit virus myxomatosis, providing an important economic function (Merilyn *et al* 2000). Ways to prevent mosquito bites include avoidance of known infested areas, wearing insect repellents (tea tree is a good natural repellent) and protective clothing such as long sleeved shirts and long pants.

REFERENCES

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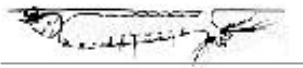
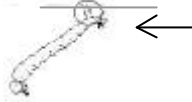
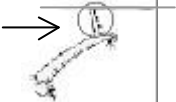
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Some characteristics, which can be used to identify and distinguish certain of the more common genera, are shown in the table below
(adapted from Sutherland and Crans, n.d.)



Anopheles	Aedes	Culex
Eggs: Laid singly with floats	Laid singly, no floats	Laid in rafts, no floats
		
Larvae: Rest parallel to the water surface, no air tube.	Air tube short and stout	Air tube long and slender
		
Adults: Wings spotted	Wings clear, abdominal tip pointed	Wings clear, abdominal tip rounded
