

- Sensitive individuals or young children not wishing to use commercial repellents can try liberal applications of baby oil or Avon skin so soft to exposed skin to reduce bites. An effective home repellent can be made up with equal parts of baby oil, Dettol and an aromatic oil such as citronella or lavender. Local research has shown that oil extracted from the lemon scented gum Eucalyptus citriodora is also a good midge repellent.
- Biting midges have a histamine like substance in their saliva which can cause intense itching in sensitive individuals. To prevent acute allergic reaction and allow the body to develop its own immunity to midge bites vitamin B1 (thiamine) can be tried.



- As biting midges are biologically linked with the lunar cycle, take note of the lunar period when midges are most active in your area. If for example you live around a canal estate you will most likely be affected by *Culicoides molestus*. This species bites most actively in the few days following the full and new moon, so planning an evening barbecue around this time during the warmer months would not be wise.



What Is Tweed Shire Council doing about biting midge?

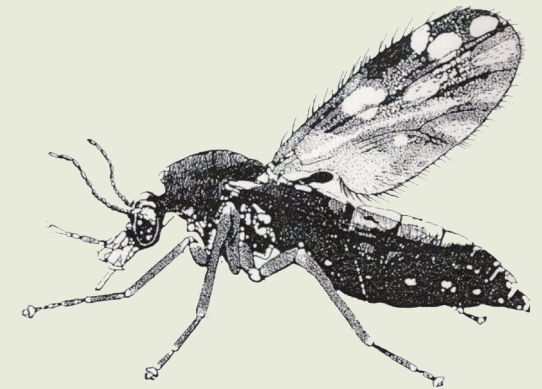
This council has been carrying out research and control work on biting midge since 1981. The following midge related activities are carried out by Tweed Shire Council.

- Midge monitoring biting midge larval numbers are monitored monthly at set points along canal estate beaches.
- Midge larval control biting midge larvae are controlled with a larvicide several times per year along artificial beaches of the Shire's canal developments. Treatments are timed to have the biggest impact on midge adult numbers for the least number of chemical applications.

For further information, go to <http://www.tweed.nsw.gov.au>

Biting Midges

In the Tweed Shire Council area



Also known as 'sand flies', biting midges are small flies renowned for their nuisance biting. They tend to occur in areas such as coastal lagoons, estuaries, mangrove swamps and tidal flats.

What are they?

The female biting midge takes a blood meal to provide protein to develop her eggs. The 'itchiness' from her bite is due to allergens in midge saliva.

Most people find the bites uncomfortable and distressing with the irritation leading to scratching and sometimes infected sores.

Do biting midges spread disease?

No. Biting midges are not known to carry any diseases affecting humans in Australia.

How do biting midges reproduce?

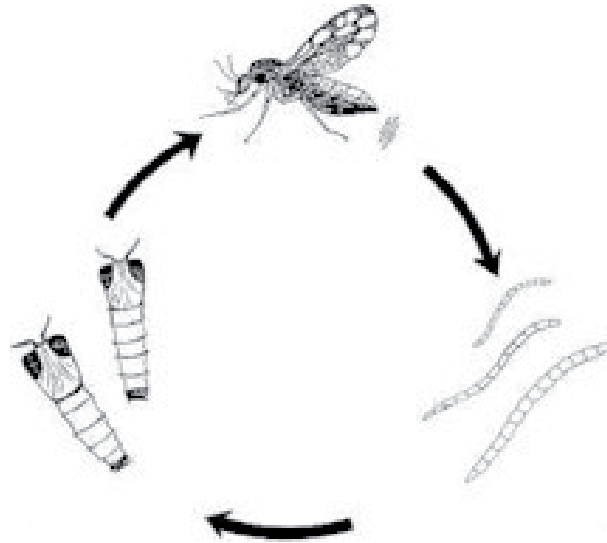
Adult females lay batches of eggs containing between 30-100 eggs, on selected grounds such as clean, flocculated sand in the open or under light mangrove cover between mean tide level and high water spring tide level.

They are also known to occur in mud, decaying leaf litter, damp soil or other vegetative materials.

The larvae then hatch from the eggs a few days later in water containing high organic content.

The larvae moult through four larval stages, before into pupa, where feeding ceases.

Shortly after, the adult emerges, and females go in search of a blood meal to continue the cycle.



What can I do at home to stop biting midges?

If you live in a midge-prone area then:

- Increase air movement around the house by keeping lawns mowed and minimising low, dense vegetation as this reduces insect harbouring areas.
- Use smaller screen size on windows and doors or by treating screens with a synthetic pyrethroids. Synthetic pyrethroid barrier sprays, applied around vegetation and exterior walls may substantially reduce midge adult numbers around treated premises for many weeks.

- As midges do not like to seek blood meals when a moderate breeze is blowing, ceiling fans or other air circulation devices that increase air flow inside the dwelling is recommended.
- Activities such as water hosing and digging soil attract biting midge. Avoid outdoor activities like car washing and gardening during the early morning and late afternoon when midges are most active.

When you are outside:

- Wear light long sleeve clothing when outdoors during midge activity periods to minimise exposure to these insects.



- Personal insect repellents applied as directed usually give several hours protection. Natural insect repellents are available for use by sensitive individuals or young children, and should be used by those working in natural environments or waterways.