

## HORSE OWNERS

If you are a horse owner, odds are you have come across the stable fly or “biting fly”. This fly prefers to feed on horses and cattle more than any other animal including humans. The biting fly feeds on horses several times a day, where their bite causes a sharp pain as it quickly draws blood – the fly pierces the skin several times before drawing blood where they can weight up to 3 times more when fully fed. Horse owners in the Shire of Capel have had to either (i) fully cover their horses with face fly guards and body rugs, or (ii) apply numerous repellents and creams and insecticides in an attempt to reduce the biting fly attacking them, or (ii) they have simply agisted the horses elsewhere.

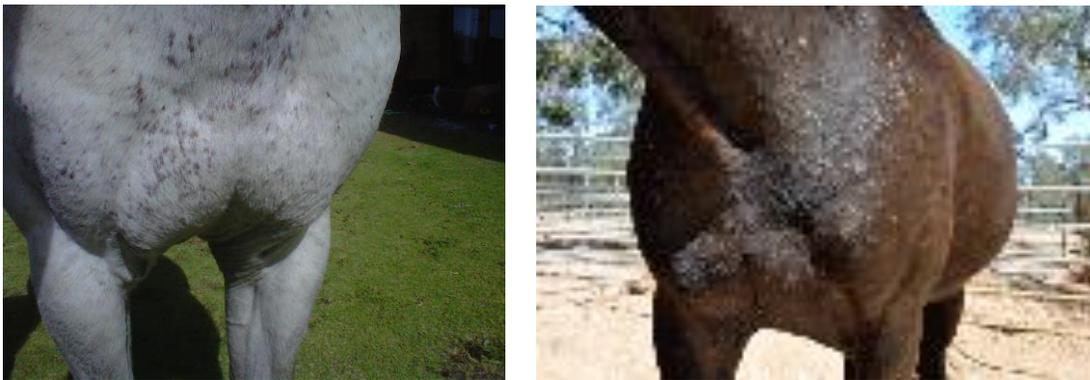


**Fig.1.** Horse owners have resorted to putting protective rugs, fly boots (left) and face masks (right) on their horses to reduce the numbers of biting flies affecting their animals.

The name “stable fly” is an historical name given to the fly when animals were housed over winter in the northern hemisphere. Being kept indoors for several months their straw bedding was rarely changed and the animals manure and urine mixing with the straw allowed the “stable fly” to develop in this fermenting material. The name “stable fly” suggests that this fly only comes from stables, which is simply not the case in and around Perth. Horse stables and owners rarely produce high numbers of biting flies as their manure is removed at least once daily and horse manure by itself is simply too dry for this fly to develop in, even if spread on irrigated, green pastures and watered.



**Fig. 2.** An adult biting fly with prominent biting mouthpart (LHS) and all the stages of the biting flies life cycle (RHS) from egg (left) to actively feeding larvae (centre, top), dormant pupae that lie in the soil (right) and adult biting fly that emerges from the pupae and digs its way to the soil surface where it flies away in search of a blood meal.



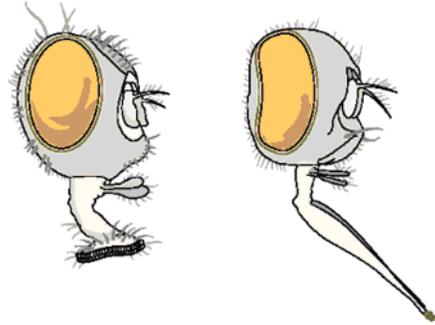
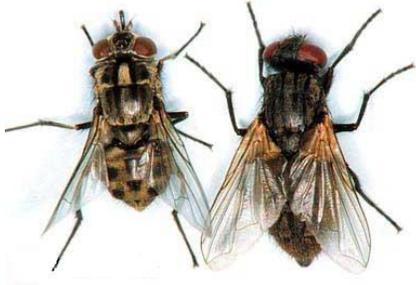
**Fig.3.** Photos depicting a horse's reaction to stable fly bites. The fly's bites come up in welts, which are extremely itchy and horses will often have an allergic reaction to them.



**Fig.4.** Horses often react violently to bites from this fly and try to shoo them with their tail or mouth or stamping of their feet as well as brushing up against fence posts and trees to remove the itch from their bites (left). Flies around a horses face (right) are invariably bush flies and not biting flies, which attack the lower limbs and underbelly.

# HOW DO I KNOW I HAVE BITING FLIES?

The biting fly or “stable fly” is very similar in size and appearance to the common house fly and bush fly – the major difference between these flies is that the biting fly has, as their name suggests, a prominent biting mouthpart. Stable flies are persistent biters, feeding on animals several times a day, preferring to bite cattle and horses, but will also attack humans, dogs, pigs, newborn lambs, pet kangaroos and emus. .



**Fig 5. Biting fly (LHS) v House fly (top view) Fig 6. Housefly mouthparts v Biting Fly mouthparts (R)**



**Fig 7. Biting Fly piercing mouthpart**

**Fig 8. A Biting fly drawing blood from a human**

The picture on the far left (Fig 5) shows that the biting or stable fly is slightly smaller than a house fly but has the prominent, piercing mouthpart sticking out the front of its head – this is lowered and used to pierce the skin of animals and humans to draw blood, as is shown in Figs 7 and 8. House flies have sponge-like mouthparts that release saliva down onto a surface and then suck back up the food they have contacted (Fig 6).

# REDUCING BITING FLIES ON HORSES

**The following options will help give your horse(s) some relief and/or respite from biting flies, but will not eliminate them:**

**(1) Protective Equipment:** Covering your horse with protective face guards, body rugs, and leg guards can reduce the numbers of biting flies able to inflict bites on your horses. As the biting fly mostly targets the lower limbs, chest and underbelly, they are not able to prevent every biting fly from attacking your horses, so some repellent sprays and insecticidal pour-on products will help in addition. There are now horse protective rugs available that have permethrin bonded to the fabric fibres that act as a repellent to blood-feeding flies without insecticide being in direct contact with the horses skin.

**(2) Manure & Straw Bedding Management:** Horse manure and straw bedding that is left unchanged for more than a week can start to rot and ferment and allow female biting flies to lay eggs on this material. Regular removal of manure from stalls, pens and paddocks will help reduce a range of nuisance flies from breeding. Particular attention to wet and soiled straw bedding will prevent biting flies from developing.

**(3) Insecticides and Repellents** can be used on horses to keep biting flies away. There are numerous products on the market including insecticidal backline pour on's, rinses, sprays or ear tags through to repellent sprays and creams. The relative effectiveness of these products in controlling biting flies has not been tested. Repellents do not kill the flies, but are designed to stop them landing on and biting your horse. Most repellents only last from a few hours to several days at best, given the huge numbers affecting horses around Perth, so it is best to use 3-4 different repellents, rotating to a different one every day. Please check the website [www.apvma.com.au/products/index.php](http://www.apvma.com.au/products/index.php) for up to date information on product registration

**(4) Biting Fly Traps** can be used to specifically catch and remove this fly from areas where your horses feed and spend most of their time. Protein-based traps will NOT catch biting flies, but a whole other lot of nuisance flies including bush flies, house flies and blowflies that still annoy horses, but not nearly as much as the biting fly. There is a 4 page brochure specifically on "Biting Fly Traps" that detail all the homemade and commercial traps that can be used to reduce the numbers of this fly.

Disclaimer: Neither the University of WA nor the Shire of Gingin endorse any of the products mentioned on this information brochure. Any product omission is unintentional and prices quoted are current as at April, 2013.

**Authors:** David Cook and Ian Dadour

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