

# Magpie Pox

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## Cause

This disease was first described in Australia in the 1970's.

Magpie pox is caused by a pox virus specific to Australian magpies. The pox virus that infects magpies is not infective to other bird species. Other related poxviruses have been reported in the literature to affect wild species include the Magpie lark. Anecdotally, similar lesions have been seen on Tawny Frogmouth and wattlebirds, but these have yet to be confirmed as being poxvirus.

## Transmission

Magpie pox is transmitted by biting insects, such as mosquitos. The mosquito bites an infected bird and takes up some virus with the blood it ingests. The mosquito seeks another bird for a blood meal and injects some blood with the virus into the new bird.

Note that the distribution of the lesions on the bird is restricted to the areas without feathers, which are the places that mosquitoes bite birds.

In Victoria, this year is the first wet spring and summer after a period of drought. The number of mosquitos is increasing due to the presence of more water in the environment. As this wet year follows several dry years, the number of magpies that have immunity due to previous exposure to poxvirus is low. Thus we are seeing more Australian magpies affected as the population is naïve to this virus. It usually affects fledgling birds.

## Clinical signs

Magpie pox virus can be seen on:

- The feet and legs as shown in the photo on the left below;
- Around the face – on the beak, next to the nose and on the eyelids.

It does not occur in all places on all birds.

The pox lesion may be a small raised lump. However, the pox lesion can become infected and a secondary bacterial or fungal infection may develop. In this situation, the lump may be warm to touch, ooze fluid.



In rare instances, magpies can die as a consequence of secondary infections. This is a normal, natural event where the weakest individuals die, leaving the fittest to survive.

## Diagnosis

The diagnosis of this condition is usually made on appearance. However, diagnosis can be confirmed by a veterinarian submitting biopsy samples to the laboratory.

## Treatment

### **Treatment of the wild bird**

- Whenever possible, these young Australian magpies should be left with their parents. This will provide them with an adequate and balanced diet, and avoids captivity with its risks of increased parasite loads, poor diet and orphaning.
- Successful treatment of wild birds has been to teach the birds to walk through a shallow iodine bath once daily for two weeks, in return for food items.

### **Treatment of a captive bird**

- The infected bird should be housed either by itself, or with other infected birds. It must be separated from birds that are not infected.
- The bird should be housed behind fly-wire as it poses a risk to not only the other Australian magpies in captivity, but also the local magpies and their young.
- A balanced diet must be fed. A meat mix diet of meat and Wombaroo insectivore, fed at a ratio of 2:1 (i.e., 500g meat to 250g insectivore) must make up NO MORE than 50% of the diet. The remaining 50% must be made up of chopped up young mice, mealworms, crickets, earthworms, cockroaches and other insects. A mince-only diet is not balanced. A meat mix with insufficient Wombaroo insectivore is also not balanced. Unbalanced diets will slow the healing of the lesions as they fail to offer sufficient vitamins and minerals.
- Overcrowding must be avoided at all times. All cages must be cleaned daily to reduce the contact between faeces and infected scabs and the open sores.
- Treatment for underlying internal and external parasites is recommended.
- If a secondary infection is found, then systemic antibiotics can be given for a week.
- The most effective agent against poxvirus is TIME as the lesions will naturally resolve over 2 – 3 weeks.
- However, an effective topical antiviral solution that is recommended for use is a 1% solution of iodine. This can be applied daily to the lesions with a cotton bud or gauze square. Iodine is effective against viruses, bacteria and fungi, making it a suitable broad-spectrum treatment for all lesions.
- Topical antiviral agents that are intended for other viruses will be ineffective. However, as the lesions resolve over time, there are anecdotal reports of a wide range of medicines that are presumed to be effective. This shows a lack of understanding of the disease process and leads to the needless applications of potentially toxic agents to the bird without due concern for its welfare.

## Complications

- The lesions can grow large enough to cause gangrene of the toes due to constriction of the blood supply to the toes.
- Lesions around the eyes may be so large as to cause blindness or damage to the surface of the eye. This is shown in the image above.

## Euthanasia

Australian magpies with severe infections that have resulted in blindness should be euthanased. Under the Code of Practice for the Welfare of Wildlife during Rehabilitation, birds who have toe lesions severe enough to warrant amputation should also be euthanased. This is due to the impaired ability to walk and the likelihood of bumblefoot developing in the good foot is very high, thus leading to ongoing pain and infection for the bird.

## Other important points

This disease is NOT zoonotic. It cannot be transferred to humans. Humans have their own version of poxvirus, which may be seen as warts in young children.