

French Moul

By HAMILTON & DISTRICT BUDGERIGAR SOCIETY INC.

This discussion of French moult is one of the most detailed.

French moult is, undoubtedly, the worst illness that a Budgie breeder can experience among his birds. It can ruin the joy of an entire season or even destroy the incentive to keep Budgies forever.

Even a beginning breeder can recognise a victim of French moult. Early signs of trouble are dropped pin feathers. Then you will notice birds that cannot fly at the time they ought to be ready to leave the nest, even though there seems to be no reason why they aren't able to fly. Tail and wing pin feathers are partially missing at that time and pin feathers continue to drop. Dropped pin feathers look weak and curled. If you take one in your hand you notice that it lacks resilience and feels weak. The last centimetre of the quill is filled with a red liquid. This appearance of "bloody pins" in young birds is a sure sign that French moult is a problem.

Birds with French moult move by climbing around the cage. It takes months before the birds have enough pin feathers to fly. Those born late in the season have poor prospects because they don't have a chance to recover before the onset of winter. Beginners, especially, should never buy birds that have had French moult. There always is a good chance that they will produce more birds with the same problem.

Your best protection is to always buy from a reliable dealer or breeder. Watch to see that you get birds that look strong and well developed, have good feathering, and are a normal weight. Birds with French moult almost always weigh less than completely healthy birds. There are a number of theories attempting to explain the cause of French moult. Most of the explanations agree that it isn't really a true "illness."

This is a severe case of French Moulting in a Budgie



And many of them hold that a basic cause is inbreeding that has gone too far. People who fear inbreeding point to the fact that new Budgie blood has not been imported for some time, so that all captive birds have become more or less related.

This, they say, has caused a weakening, which can lead to French moulting under certain circumstances. Therefore, people should keep "freshening up" the blood of their Budgies by buying or otherwise acquiring unrelated birds. The theory holds that there are many outwardly normal birds who carry the tendency toward French moulting. When these birds are mated, the tendency is intensified and outward signs of problems appear.

More technically, French moulting is triggered by a recessive gene that must be received from both parents. Another theory holds that the illness is caused by weak parents. In other words, it would be nothing more than a weakness inherited by the young, manifested by the symptoms of French moulting. Dr. Mannaerts, a breeder from Bladel in the Netherlands, believes firmly that you can avoid the problem altogether by not breeding with any birds that have small grey or black cross-stripes in the pin feathers. You can easily note these stripes ---especially on the light coloured pin feathers by spreading the tail and wings. The stripes, supposedly, indicate carriers of the problem.

In a recent interview, Mannaerts pointed to his record of complete freedom from French moulting in his aviaries, while another, neighbouring breeder had dozens of cases. This breeder had not "freshened up" his bloodlines in an earlier season and

had not paid any attention to the tell-tale stripes. Be that as it may, Mannaers has been breeding Budgies for years and has a reputation among breeders for the high-quality birds he produces. In a way, Mannaer's theory also includes the notion that inbreeding promotes the development of French moult even if it isn't a direct result of this practice. The late Mr. H. Van Dijk of Eindhoven in the Netherlands believes that French moult is caused by parasites specifically the larvae of a type of moth.

These moths deposit their eggs in the droppings found in the nest and in the seams and walls of the nest box. The resulting larvae feed on the horn of the feathers and thereby interfere with their growth. This moth can in fact be found in some nest boxes. It looks like the ordinary clothes moth, but the wings have brownish spots instead of being silver-grey. Van Dijk also was well-regarded in the Budgie fancy. He had been breeding for 50 years, had bought, sold, bred and traded tens of thousands of them, and was the founder of a bird park. He claims never to have had a problem with French moult in his aviaries. His theory rejects the inbreeding hypothesis totally without implying that inbreeding isn't a problem. Van Dijk saw inbreeding as a problem that has nothing to do with French moult. Still, his theory does not do away with the notion that a bird which is weak by nurture or by nature would show the effects of French moult to a greater degree than a completely healthy bird. Van Dijk's theory is supported by the fact that birds with the illness can develop into normal birds after the pin feathers of the tail and wings have grown back.

The theory also implies that the continuous moult that occurs in older birds is caused by breeding or housing them in infected nest boxes. The upshot of this theory is that absolute cleanliness in the nest boxes can completely prevent the occurrence of French moult. Nest boxes would have to be serviced daily and cleaned after each brood by boiling them in water and disinfecting them with insecticides. Dr. M.D.S. Armour, an English Budgie expert, doesn't recognise French moult as a true illness or disease. In his book, *Exhibition Budgerigars*, he rejects inbreeding as a cause, but expresses the belief that the problem is caused by a type of mite. This mite is said to resemble the grain mite.

It gnaws a path to the roots of the pin feathers and causes an infection that inhibits their growth. The infection irritates the skin, causing the bird to bite and pull at the

feathers, thereby aggravating the condition. Dr. Armour is certain that the mite saps the feathers ability to grow. He points to the dark mass that can be found at the bottom of the shaft of feathers that have fallen out. Many breeders accept Dr. Armour's theory because it accounts for a number of symptoms associated with French moult. The dirty, red fluid in the shaft could be caused by blood associated with the infection and the dirt could be the excrement of the mite. Because the mite infection could occur at any time, it is consistent with finding cases of French moult in the second and third brood as easily as in the first. It also explains why certain birds are affected to a worse degree than others. And it accounts for cases of continuous moult in older birds, which, naturally, can also be infected by the mite. Therefore if one could prevent mite infestation, problems with French moult could possibly be avoided. As a cure, Dr. Armour recommends Chloroxylenol or Chloroxylenolum(UK), an antiseptic that is safe for use with pets. He recommends removing all infested feathers and then dipping birds in a bath of warm water to which a tablespoon of Chloroxylenol has been added. Repeat the treatment every three or four days, and infested birds will recover completely, Dr. Armour says. The repeat treatment in a Chloroxylenol solution serves to kill mite eggs and larvae. The birds aren't damaged by the treatment, even if they get some of the solution in their mouths and eyes. Put treated birds in a cage without sand on the floor for several hours. After they have dried, they will look fresh and fit. Dr. Armour also says not to use birds with bloody pin feathers for breeding until they have been treated and have recovered fully. If you breed from affected birds, you will almost certainly find that one or both parents had the tell-tale bloody pin feathers. According to Dr. Armour, you will never raise birds with French moult if you treat all breeding stock with chloroxylenol before breeding. French moult sneaks up on your flock without warning and must be prevented at any cost.

(Please note that as far as we are concerned there is no proven cure in Canada for French moult and we have not seen or heard of this treatment and have no knowledge of where you can buy this chemical.)

This is a clear case of where an ounce of prevention is better than a pound of cure. The preventive recommended by Dr. Armour is disinfecting the cages with sulphur-fume or spraying them with chloroxylenol twice per week. Not everyone considers

Chloroxylenol a complete solution, although most English breeders report good results. For example, C. Enehjelm, the director of the Helsinki Zoo, has his reservations which I pass on without comment. American scientists believe that French moult is a dietary deficiency caused by improper feeding. They also believe that the trouble also has a hereditary form. Dr. Steiner of the University of Zurich (Switzerland) agrees with the hereditary explanation and calls the problem a type of genetic degeneration. The worst cases of French moult, birds that never learn to fly-- are called DD cases by Dr. Steiner. Dr. Steiner gives a genetic designation (or genotype) of DD to birds that were affected in their youth but later learned to fly. He calls normal birds "dd" types. Using this model, Dr. Steiner has shown that the putative factors for French moult follow Mendelian law. Accordingly, DD birds are heterozygous for the disease. This means that they don't have the disease themselves but are carriers of it. Dr. Steiner holds that French moult cannot be caused by a dietary deficiency. His feeding experiments showed that DD type birds continued to exhibit symptoms of French moult after being placed on a diet rich in vitamins and other dietary supplements.

Now that you've read a wide range of theories about French moult, I'll present the one that makes most sense to me. It is put forward by the American Budgie expert, Cessa Feyerabend, who believes that nutritional deficiency in the young Budgie plays a major role in the development of French moult. The theory is supported by the newest research findings, which indicate that nutritional deficiency most certainly is involved. Feyerabend's theory supposes that this trouble starts when the feeding behaviour of parent birds or the so-called "Budgie milk" they provide is not adequate over a period of time. This milk, made up of half-digested food, is rich in fats and proteins. If certain proteins or protein precursors (called amino acids) are missing, then the young are supposed to exhibit French moult symptoms. Even if the deficiency is corrected later on, the symptoms are supposed to remain. For proof, Feyerabend points to the fact that some birds in a brood may have French moult, while others are free of it. She attributes this situation to the large difference in age that sometimes occurs within a brood. Also she postulates that the sick birds were deprived of Budgie milk of a certain composition at a time when they needed it critically. Instead, they received milk of a composition suited to the needs of their brothers and sisters. Budgie milk of the wrong composition could be present as the

result of negligence, inbreeding, or excessive breeding. A second cause could be a supply of the wrong kind of seed or too-old seed. Thirdly, vitamin deficiency could be involved.

Experiments have shown that vitamins from the B and G groups are essential for feather growth. Fourth, extremely warm weather during the feeding period could be a possible cause if the parents then do not feed the young properly. To avoid providing the wrong seed, Feyerabend advises against using red millet and old seed that may have lost some of its critical feeding value. Instead, Feyerabend recommends white millet mixed with cod liver oil and powdered beer yeast. She uses a tablespoon of the yeast in five pounds of millet. I add the following advice:

1. Buy and breed only totally healthy birds.
2. Thoroughly clean and disinfect nest boxes so that parasites don't get a chance to develop.
3. Always furnish a properly constituted diet that provides the proper vitamins. A supplement that includes a protein rich in Vitamin A is also strongly recommended.