THE SCIENTIST'S CORNER

by Dr. J.P. Stosskopf Courtesy The Natural Ways, Natural Cy Belgium

THE HEALTH OF THE PLUMAGE

Diet plays an important part during the moult. I should therefore like to commence this article by listing briefly the dietary requirements for a good moult. To summarise them: proteins from but no more - let's say 30%. Fats in large quantity for the fatty acids of vitamin F (linoleic acid and its compounds), i.e. linseed oil, rape etc. Traditional minerals (calcium, phosphorus, silicon), vitamins A, D3, B2, B6, PP (brewer's yeast, multivitamin complexes) and finally sulphurated amino acids (cystine, methionine) which means that you will choose grains which are rich in these constituents (sunflower. cardy) or artificially add supplementary multi-vitamin compounds.

There are also health requirements: good intestines to assimilate all that, a good liver to synthesise and eliminate, and blood to transport quickly and efficiently the required substances to the feather follicles which are at the height of their activity.

So vigilance is absolutely indispensable. A touch of trichomoniasis hanging on (acidosis of the blood), or a coccidiosis inflaming the intestine and reducing its permeability can cost very dear.

But this fine plumage in the process of formation must stay fine. The shape and length of each feather is fixed for a year, until the next moult, whenever it occurs. Only the upper wing feathers have a longer and less well-determined destiny.

The enemies of good plumage will resume their activitiy on the new feather as soon as it is formed. The damage will, of course, take a shorter or longer time to appear visibly. With syringophilus, for example, which passes from the old feather to the new one, the damage will only appear the next spring in the form of an area 2cm in diameter initially, on the front of the crop in the great majority of cases, where the covering feathers are broken 1-2mm from the skin.

For a start, that does not look good, and secondly it bothers racing pigeons (in races) which become increasingly barefronted, especially in a head wind. Parasitisation by Syringophilus bipectinatus, though not very serious, is none the less very contagious, and, in the absence of treatment, the number of affected pigeons increases slowly but surely. Vigilance is there called for, since the parasite, which lives within the shaft of the feather and eats it from the inside, is very difficult to get at. Like mange, to which it is related (it only measures 0.1-0.2mm), it is very sensitive to lindane but its abode protects it easily from this. calling for repeated treatments to be applied.

Mange is, in fact, just as much an affliction of the skin as of the feathers. In fact the parasite lives at the base of the feather, in the follicle, where it enters the skin. It is a small (0.1mm), dreadful parasite, which reproduces by means of eggs which hatch after 8-10 days of incubation. This is an important fact to know for its treatment. The parasites provoke, through their presence (their feet have hooked claws) and their saliva, a continuing inflammation at the base of the feather which becomes surrounded by a small felted, fatty, white sleeve typical of this infestation.

The pigeon itches and the badly nourished and loosened feathers break off a few mm from the skin. Differential diagnosis of this with infestation by syringophilus depends first on the presence or absence of the felted sleeve on the base of the shaft and then on the location of the infestation, which is much less well defined than for syringophilus. Mange can in fact be found on the side of the forewing, the flanks, the rump etc. The skin becomes fatty, whitish and thick.

Treatment of mange is by means of lindane (1g per half litre of tepid water) applied by brush to an area limited to a diameter of 3cm at a time.

In the case of large or multiple lesions, a limited area should be treated each day. These treatments should be applied three times with an interval of eight days. As in the case of all external parasitic infestations a weekly bath with the addition of a good non-toxic insecticide (e.g. bath powder) will be a good preventative.

When the feathers break on the front of the crop, many think that this is a consequence of repeated rubbing on the feeding bowl, the tray etc. So why are some, and not all or nearly all, affected? Although everything is, of course, possible, this cause can be affirmed to be exceptional. With a microscope it is fairly easy to find mange but it is on the other hand difficult to find a syringophilus, which is a resident of the interior of the shaft, and when the infested feather breaks, it goes into the next one.



When the feathers break on the front of the crop (see photo below) many think that it is the result of repeated rubbing on the edge of the feeding bowl. This may happen, but is rather rare. Its cause is a very small parasite named Syringophilus which lives in the shaft of the feather and eats it from the inside. It is to be found primarily on the chest, in the neck and around the rump. Contamination is by direct contact (youngsters incubated by their parents, pigeons cramped in baskets, down falling on the droppings — mange organisms can be found in the liquid in which the droppings are diluted for microscopic examination).

At the end of the season, spraying lindane on the walls and in the boxes enables many parasites to be destroyed by direct contact and this must not be neglected in infested flocks.

"The enemies of fine plumage will resume their activity on the new feather as soon as it is formed."

Intermediate between manges and lice are Falculifera; larger than mange but similar to it in appearance, this parasite lives in the follow tips of the primaries and comes out at night via the operculum. It feeds on the barbules, causing small holes in a line in the feather, with the appearance of 'sewing machine stitches' which you look through the open wing. Under the effect of the mechanical stresses to which the primary is subjected during flight, the barbs gradually disengage and the feather takes on the lamentable appearance of a comb with missing teeth. There is no need to point out that once these holes are there you can only wait until the next moult. It is therefore a matter of urgency to take steps to stop the damage. Fortunately the parasite is very sensitive to most insecticides and an extra bath or powdering will quickly stop the attack.

Then there are lice. Two large families — the 'permanent guests' which only leave the pigeon to move on to another one, and 'sporadic guests' which only go on the pigeon when they wish to feed (always at night) and then return to their hiding place under a dish, between two boards, under the straw in the nest etc. In the first category comes Lipeurus baculus, the pigeon louse, which is in the form of little straight rods parellel to the barbs, which are easy to see by transparency. These are habital, inoffensive parasites which feed on skin or feather debris.

It is only their large numbers in the covering feathers on the next in particular, that bothers the pigeon. Like all lice, they require darkness and warmth. They fee from light and abandon the pigeon when it is killed or dies. This can very easily be seen by wrapping the still warm pigeon in a newspaper.

Two hours later, by unwrapping the newspaper, the lice are to be found leaving the pigeon which has become cold. This test should be carried out from time to time.

The Menopon (chicken louse) a big white louse which is much rarer in pigeons, resides in the ventral, anal and sub-caudal area. It is resistant to everyday insecticides.

The best one is pyrethrum and its modern derivatives.

Red lice, like ticks, are sporadic parasites of the pigeon. They only emerge from their hiding placees at night ans suck the blood, especially of youngsters in the nest bowl and brooding hens. They leave their traces in the form of small brownishblack dots.

They can only be detected by visiting the boxes after nightfall. The bowl is raised and a torch lit suddenly: the red lice run away very fast (unlike other lice which are much slower). This infestation is very serious since the lice are red only because they are full of blood. When fasting they are a transluent white. So they cause anoemia in incubating hens and in young pigeons in the nest.

The are eliminated in two ways: by sprinkling insecticide (bath powder, for example) around the nest bowl and by adding the same product to the weekly bath water. Finally Lindane is sprayed on the floor, walls, boxes as soon as possible after, removing the pigeons for a few hours. The fight against ticks requires the use of organo-phosphorus insecticides, solely in the nest boxes, with due precautions as these products are not devoid of birds.

SPECIAL ANNOUNCEMENT John Brislin of Melbourne REDUCTION AUCTION SALE

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