

SUMMERS.

Diseases of Pigeons

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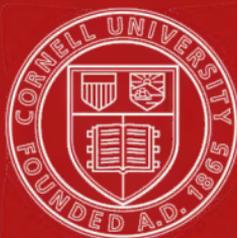
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OF
PIGEONS.

...BY...

J. A. SUMMERS,

PRICE 50 CENTS.

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..OF..
PIGEONS.

BY
J. A. SUMMERS.



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BY

C. E. TWOMBLY, BOSTON.

U. S. A.

Preface.

The author after publishing the book entitled "Squabs for Profit" has received numerous inquiries concerning the various ailments of the Pigeon Family.

I write this book giving a description of most all diseases, with particular reference as to the Cause, Prevention and Treatment for the benefit of those making inquiries which will, I trust, be of great service to them and all other fanciers as well.

Chalfout, Pa.

J. A. SUMMERS.

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Diseases of Pigeons.

WHEN pigeons are in their proper state of health they are without doubt the liveliest and happiest family of the feathered tribe. They are always active, full of spirit and a source of much pleasure to the fancier. When ill they are the very opposite, huddle up their feathers, are usually "off their feed" and have a very miserable appearance.

One must have some practical experience with the birds when in health, and should have close observation also so as to readily tell when disease has taken hold of his stock.

As soon as disease sets in, no matter in what organ, or what part of the body, the eye is about the first to show it. The eye of a pigeon in health is bright and clear, having the appearance of intelligence, but it soon becomes somewhat inflamed and watery in the feverish conditions, and glassy and sunken in wasting diseases. When a bird is taken ill, it is not an easy task to the inexperienced to be able to detect the disease or to make a proper diagnosis. After carefully examining the eye, direct your attention to the other parts, taking particular notice of the mouth, looking far down the throat which enables one to detect any false growth as Canker, Ulcerations, inflammation of the mucous membranes or abnormal changes of the secretions. This close examination of the mouth is by far the most important part in making a diagnosis of diseases

and should not be overlooked, by any means, as the condition of the whole elementary canal can be readily ascertained from the appearance of the membranes of the mouth and throat. Another very important part of the examination is to notice the character of the excrement voided, taking particular attention as to its color, consistency, etc. The droppings of a bird in full health should be somewhat firm, with a small amount of the whitish substance (the urea.) When frothy, black or green in color, or watery and containing much mucus and slime, there is a derangement somewhere needing attention.

Next look to the respiration noticing if the breathing is labored after slight exertions, remembering at the same time that even in healthy birds when frightened, the respiration will be always quicker but this does not necessarily indicate disease. Examine the abdomen to see if there is any malformation or injury i. e. a fallen egg or gizzard, the former will most always be found on the left side while the latter generally in the middle slightly to the right and low down. When an affection of this kind has become established the skin over the abdomen will always have a shiny appearance, in fact it will often appear in other affections also. If the bird has any trouble in flying, examine all the bones of the wings, and see if there is any swelling of the joints or wounds etc. also examining closely all parts of the wing where the feathers are seen to be ruffed or uneven. If a bird eats very heartily and does not seem to thrive well look at the excrement very closely and see if there are any worms adhering to it. If none are found the first time look again.

CARE OF SICK BIRDS.

Pigeons when sickness takes hold of them, generally show it at once by their actions, and require the best attention possible of the owner, as to their feed, and water, for when at liberty they can gather such articles as nature required them to have, but when housed up they of course must eat what is given them.

It is here that many diseases originate, in the negligence on the part of the fancier; either in the use of poor or impure food, or in the management. The daintiest and most nutritious diet such as hemp, canary, caraway-seeds or stale bread (soaked) should be put before them to tempt them to eat, if in any-way possible, and give oat-meal water for their drink.

Occasionally one finds birds that care not to eat. In such cases examine the crop and notice if any stale or decomposed food still remains in it. If so then remove as much as possible without injuring the bird, for if this stale food should remain in the crop and is allowed to become putrefied the gases and poisons thrown out thereby, would cause an irritation or inflammation and a violent enteritis or diarrhoea, which might be the means of causing other diseases of a more serious nature. After removing contents of the crop in a few hours time allow the bird some soaked bread, then next day give the seeds etc.

Occasionally after the above operation the bird is too weak to eat. Here many fanciers cause the death of their birds, where if a little judgment and precaution were used in the way of feeding, the bird would oftentimes have recovered. Many of these fan-

ciers stuff the crops of the already weakened bird with corn, wheat and other varieties of heavy feed which is only intended for healthy birds and will thereby make their weak crops weaker still. A bird knows when to eat, and will readily partake of the heavier variety of grain when in the proper condition.

If a bird is exceedingly weak give about 20 or 30 pills, and make it doughy or work it up in an easy digestible maner with fine cracker dust, or bread crumbs. Above all in contagious diseases keep the bird or birds in a separate compartment and use the best judgment in treating. The necessary food for the pigeon should be nothing but red wheat, peas, cracked corn, with a small amount of hemp, millet, caraway, canary seeds, buckwheat etc and never use oats or rye. The latter especially has caused the death of many valuable birds from its tendency to scour. Have a good supply of fresh grit or sand, old plaster or lime in some way, oyster shells ground fine, salt etc. always before them, and together with proper management, keeping every part of the pigeon loft in a good sanitary condition many of the diseases will be prevented.

The diagnosis of a case is the main part and be positive the true nature of the disease has been discovered before commencing treatment. In administering medicines be sure to give the right dose and quantity for a very delicate bird will require a stronger dose than a more robust one. Hold the bird in the left hand, open its mouth with the other and if the medicine be a liquid pour down the throat using a small syringe being the best way of administering it, being careful to inject into the throat and not the

windpipe. The following table of medicines with their doses and therapeutic actions will be of value to fanciers in treating diseases.

Laudanum (Tincture Opium) dose one-half to three drops useful in allaying pain and to arrest the discharges of diarrhoea, enteritis, etc.

Alum (astringent) dose one-fourth to one grain, useful in the treatment of canker, diphtheria, and in some causes of diarrhoea and influenza.

Santonin (vermifuge) dose one-twentieth grain, the best remedy in removing intestinal worms. To be repeated often, followed with cathartic.

Cod Liver Oil excellent in treating wasting diseases such as going light etc. Give three to five drops in a capsule at a dose three times daily.

Sulphate Magnesia (Epson Salts) dose one to five grains used as a cathartic and antiseptic.

Phosphate Soda (mild aperient) and stimulant to the liver, dose one to five grains of especial value in liver troubles where the droppings are black, tarry and offensive, also in cases of constipation ultimating with diarrhoea.

Castor Oil (purgative) dose one to five drops given in a capsule. Beneficial in healing the bowels after a severe enteritis etc.

Gentian Root (bitter tonic) dose one-half to two grains a general tonic, of use to restore a bird's appetite. Gentian (fluid extract) dose one-half to one drop, same as root in action.

Quinine Sulphate (tonic) dose one-eighth to one-fourth grain.

Iron, Muriatid Tincture (tonic) dose one drop well diluted. Tonic when the blood is thin, or where there is a deficiency of red corpuscles.

Soda Sulphate dose one to five grains use same as for epsom salts.

Alum (burnt) valuable to dust the throat of a cankered bird.

Syrup Iodide of Iron (tonic used in scrofulous and blood diseases) dose one half to one drop well diluted.

Hypophosphites of Lime and Soda (tonic and tissue builder) very useful in treating Going Light, Roup, etc. dose one-fourth the grain. Three times daily.



DISEASES.

ROUP is a name given to diseases of the mouth, nose, and throat where the membranes become inflamed and the secretions somewhat thickened. There is however, two different kinds of Roup namely: Wet Roup and Dry Roup. Wet Roup is probably the most common of the two and the most serious in nature.

Cause: It is probably in the beginning caused by poor ventilation of the loft which is at the same time overcrowded, whereby the birds are compelled to inhale vitiated air. This disease seldom appears in lofts well taken care of and when kept in a good sanitary condition at all times. Another probable cause of Roup is from a deficiency of salts in the food, and also the feeding of too much carbonaceous and not sufficient nitrogenous food thereby not providing enough proper nutriment to the tissues of the body to supply the want taken up by the amount consumed. Some claim Roup is caused by a chill or the effect of a very severe cold taken during damp weather but the author thinks this is not the direct cause it only making the membranes still more sensitive to the disease (which has already taken hold to a certain extent upon the bird) as tubercles have already formed for some time prior to any symptoms noticeable, the bird having probably taken cold after the high fever, which always accompanies this disease, had somewhat lowered which leaving the pores more or less open, and the cold or congestion following. This disease is exceedingly contagious especially when it appears in the severest form, all the birds in the same loft being liable to contract

it, and die off quickly and in large numbers. It is a very peculiar disease and the same as in many others the birds' health must be in a certain condition to allow the germ to develop and the disease to take proper hold, although it is very often inherited from the parents and may run back for generations. Birds apparently well may have Roup in a mild form and may not suffer much, but their offspring never thrive and generally die before a month or two of age.

The germ or bacillus is the same in all cases but the severity of the symptoms altogether depends upon the condition upon which it was developed, i. e. delicate birds and ones which catch cold very easily are liable to contract it much sooner than stronger birds although the latter when afflicted often die off quicker than the former. Roup affects birds as well as poultry in most all climates and countries the bacillus tubercles being found wherever birds live. The germs after taken into the system gradually develop, becoming increased in numbers to such an extent that the bird finally dies from true form of Tuberculosis.

Symptoms: High fever, offensive breath. The breathing is somewhat constricted caused by the thickening of secretions of the mucous membranes, there is some sneezing and cough. From the nostrils there comes an offensive discharge, bubbles appearing in the mouth and sometimes at the corner of the eyes. The membranes of the mouth have a very pale appearance probably due to a deposit of tubercles being formed after which ulcers put in their appearance. It may however be only a sign of anaemia or deficiency of the red corpuscles of the blood caused by the disease.

Treatment: So long as the germ remains in the system of the bird the disease will gradually become advanced and cause the death of the bird sooner or later. Tuberculous diseases in pigeons could under favorable circumstances be checked and probably the health fully restored for as many medical doctors now claim that tuberculous diseases in man are curable why could not it be likewise with the bird as well. If the remedy given has the power and properties to fully eliminate the disease germ, the bird will without doubt become fully restored to health provided that none of the special organs have become seriously affected or impaired. There are however drugs that will kill the germ outright but the trouble remains that as the drugs must be exceedingly powerful, too often the life of the bird itself is endangered.

The main point in treating this disease is to keep up and restore the tone, and reinforce the power of resistance of the tissues. The organisms must be placed in a condition not only to provide for the daily needs, and to resist the vicissitudes of temperature, humidity, etc, but to enable it to resist the attack of enemies in the form disease germs. This can only be done by feeding the most nutritious foods and giving what the author has found best in treating this disease Hypophosphites of Lime and Soda which build up the system and renders it more liable to fight the disease. To prevent this terrible disease from spreading and to aid in affecting a cure the use of the "Tonic" in the drinking water described in the last chapter.

This consists of a number of salts acting as anti-septics as it were. Creosote the best known tissue builder and preserver, Iron the best oxidizing agent,

together with the simple bitter tonic Gentian forms a prescription exceedingly valuable in the Prevention and Treatment of Disease.

The mouth and nostrils of the bird must be washed out several times a day and cleansed of the ropy matter. Use a lotion for this purpose made by dissolving several grains of Pennanganate of Potassium in an ounce of distilled water. In washing out the eyes this solution must be further diluted.

Another most excellent remedy to use as a lotion in washing the mouth etc. is Peroxide of Hydrogen (Merchand's.) Take a small stick with a piece of cotton on one end and dip into the bottle using it pure. After this has been applied several times Aristol (a brown powder) should be applied to the membranes, to favor healing. Aristol is the best for this purpose and by applying three times daily for a few days a cure is generally effected.

DRY ROUP.

This is a name given to another form of Roup where there is no discharge from the nostrils. It is less malignant than Wet Roup and is most always milder. Its cause is similar to the other form, Wet Roup.

Symptoms: The symptoms are in every respect the same as in the wet form with the exceptions of the discharge from the nostrils. There is fever, deposits of tubercles on the membranes of the mouth which loses its natural color and becomes somewhat paler. Treatment: Same as for Wet Roup.

SCROFULA.

Scrofula is a tuberculous disease and one which probably causes the most deaths of the birds. It afflicts them without showing any particular symptoms in the start. The germ does its deadly work slowly and it may never occur to the fancier that his bird is afflicted until he finds the bird cold in death, which may occur (after the disease is established) by any slight cause such as a cold etc. The germ is the same in every case and attacks various parts of the body and making the disease appear in a variety of forms. As in most diseases the severity altogether depends upon the conditions allowing its development. It is a disease most common among the fancy varieties such as Carriers, Barbs, Antwerps, etc. which are fed upon the richest foods in order to get them into their highest state of perfection. The joints of the bird, mostly those of the wings, is where the deposits mostly form. It may however attack the lungs and liver which will surely cause death. Unfortunately not much can be done for a bird after this disease once takes hold of it, but by using precautions in the way of feeding, giving only plain food, allowing them plenty of exercise, this disease will seldom appear.

BLIGHT.

An inflammatory disease affecting the eye and is usually caused by a cold. The eye first has a watery appearance, but the membranes surrounding the eye finally become very much inflamed. The secretions are usually somewhat thickened and oftentimes causes the eyelids to stick together.

Treatment: Use a lotion a mild solution of Peroxide of Hydrogen. An excellent plan is to use a small syringe and gently pour the lotion into the eye. At the same time use the "Tonic" in the drinking water. A solution of Copper Sulphate is considered good also, but the best results will be obtained if the Peroxide is used.

VERTIGO.

Cause: Vertigo in pigeons is a cerebral affection caused probably by diseased membranes, disease of the brain matter itself, or from a congested state of the blood vessels caused by the injudicious feeding of too much rich and heatening foods making the blood entirely too thick. When the blood is in such a condition, the slightest disturbance such as constipation etc. will cause an attack. It is not an uncommon disease and usually affects high bred birds fed upon hemp seed and the like. Vertigo may however be a symptom of a serious liver derangement.

Symptoms: The bird will not be very active. Many cases they will remain in a corner for instance holding its head against the wall. When trying to walk it will turn around and around finally falling completely over. In other cases the head is held in an unnatural position, the crown of the head sometimes being pressed upon the floor. Generally in Vertigo the head is terribly heated while the feet and legs are cold.

Treatment: This disease is almost always fatal and unless it be caused by a liver affection, or unless the bird afflicted is of especial value to the fancier, it should be killed at once to end its sufferings, for if the case is treated all the trouble might be for noth-

ing as only a small percentage of cases are curable. The best medicines to administer are those having a tendency to thin the blood and at the same time have the tendency to improve the circulation. None will be found better for all cases than Phosphate of Soda. It acts as a mild aperient, removes the liver difficulty if any exists and greatly improves the circulation. The bird should be fed very sparingly, of wheat and the milder grains, should be kept quiet, and the blood removed from the head as much as possible by applying cloths soaked in ice-water. Don't disturb it any more than is absolutely necessary. A slight fright might bring on a severe attack also.

SWELLING OF NECK. (Emplysema.)

Cause: This is not a disease but only a condition in which one or more air cells have been ruptured under the skin allowing the extravasated air to pass through the pores under the skin. It may be due to a shot wound or an injury from a sharp pointed instrument.

Symptoms; It usually will be found in the neck although there have been cases where other parts of the body are afflicted. The accumulation of air under the skin causes a swelling which gradually becomes enlarged and may even attain the size of a Pouter's crop, and sometimes completely encircles the neck. This condition does not however injure the health of the bird, but it should be treated as it has a very unsightly appearance.

Treatment: Wash off well the skin where the operation is to be performed and take a sharp pointed needle which has been previously dipped into some anti-

septic solution and gently puncture the skin in several places. This will allow the air to escape, but will not always affect a cure after the first operation, but this should be practiced several times before a permanent cure is affected.

GOUT.

A name given to a disease of a scrofulous nature affecting as it were the feet and legs of a bird has been termed the Gout. It is usually caused by tubercular infections and attacks of great severity of pain is caused without doubt by an exposure to damp weather.

Symptoms: The joints become greatly swollen and contain a great amount of heat caused by the inflammation. The hock joint is the one chiefly affected. After the disease is allowed to run its course the lumps become greatly enlarged caused by the formation of the deposits.

Treatment: Paint the affected parts with Tincture Iodine and remove the bird to dry and quiet quarters. Feed only the plainer grains, no hemp-seed, and add a few drops of Syrup Iodide of Iron to its drinking water. Ofttimes the deposits can be removed considerably by applying an oil such as sweet oil or castor oil to the swellings for several days in succession.

FUNGOID.

Fungoid, a disease commonly termed Small Pox. It is an exceedingly contagious disease and one of a very malignant nature. The large wattled variety of pigeons are the ones most subject to this malady. It is usually found in lofts which are overcrowded, impure and foul air accumulating thereby and the birds are compelled to inhale it time and again. It is contracted

to other birds from the scales or flakes that peel off the swellings from time to time. These flakes may be taken in the food or drinking water and the disease set up violently from the affects. One very important part in treating diseases is to remove the afflicted birds to quarters by themselves, and it will be found best to remove quite a distance from the breeding house or loft, as some ailments such as Diphtheria etc. are exceedingly contagious and all the precautions possible should be adhered to, to prevent the disease from spreading. Fungoid may however originate in the start by the too free use of Indian Corn and carbonaceous articles of food, finally terminating into a regular tubercular disease, the system being full of tubercles is evident from the nature of the swelling. A bird when once afflicted in a very severe form may be considered incurable and it would be far better to kill it at once and prevent it spreading to the others.

Symptoms: A small swelling having the appearance of fungus appears first on some part of the wattle and sometimes the growth may start in the orbit of the eye itself. Wherever these swellings do appear they finally develope into an ulcer out of which is discharged an ugly yellowish fluid. These ulcers enlarge greatly and spread very rapidly until finally the whole head may become involved with them, and may have swollen to twice its natural size. Most cases death however relieves the bird of its suffering before reaching this stage.

Treatment: In mild cases the swelling can be reduced somewhat and the discharges should be removed as much as possible. The object is mainly to heal

these ulcerations. Nothing will be found better to heal than Iodoform or Aristol. The ulcers should be well dusted with either of these powders, and Sweet Oil being used afterwards to encourage healing and have a soothing effect.

BRONCHITIS.

A catarrhal affection of the bronchial tubes leading to the lungs, caused by a severe cold or a sudden chill. The tubes leading to the lungs may only be affected, or the tubes of the lungs itself may be inflicted. This disease is more common among pigeons about the moulting period, at that time they being more susceptible to a cold. The blood vessels become more or less contracted by a cold, throwing an undue amount of blood into the internal organs. This superabundance of blood in the lungs causes the blood vessels to become greatly distended and in consequence the bronchial tubes become almost entirely closed up. It is often the cause of draughts in the loft, and may occur in young birds which are exposed too much to all kinds of weather.

Symptoms: There will be a dry hacking cough, the breathing will be somewhat constricted. There is always a very high fever, the eyes being inflamed, somewhat bulged out, and the bird will appear to be entirely unconscious of its surroundings in severe cases. They generally care not to eat, and too often discard their food for that of drink, this being due to the extreme high fever. They will huddle up their feathers, have a very miserable appearance in general, and a sort of mucous may extrude from the mouth. This mucous as the disease becomes advanced will change in color to a yellowish, blood streaked matter, and rather thick.

Treatment: The first thing to do is to remove the bird to warm quarters and try to induce a free perspiration. Give Carbonate of Ammonia in one-half grain doses three times daily and allow the bird only the lightest kind of food such as soaked bread, etc. Give for it to drink oat meal water and add a small pinch of powdered alum to this. After the disease is checked the constitution of the bird will be greatly weakened and the "Tonic" should be used in the drinking water at all times for at least a month afterwards.

PNEUMONIA.

A disease resembling somewhat congestion of the lungs termed Pneumonia, differs from it in the respect that in the former there is congestion, where in Pneumonia there is an inflammation of the lungs. The cause however may both be attributed to the same cause, that of taking a very severe cold, but this disease is usually a complication of Influenza or Grip. This complication with Grip although appearing to be very severe usually terminates into the full recovery if proper means are applied.

Symptoms: High fever, ruffed feathers, a dry, husky cough, attended with a very constricted respiration.

Treatment: Use the Carbonate of Ammonia in the same doses as for Congestion, and after fever has subsided, and the bird is convalescing the use of Hypophosphites of Lime and Soda will be very beneficial in restoring the strength. This should be given for several weeks, and small doses of Quinine could be added if the bird is extremely weakened.

APOPLEXY.

Apoplexy is almost always a fatal disease and is caused from the overfeeding of too much rich and stimulating articles of food especially when birds are confined and do not get the proper amount of exercise. Birds having their freedom seldom get apoplexy unless it be from some organic brain trouble. This disease is caused by the rupture of a blood vessel in the brain and most always originates in summer on the extremely hot days. After an attack however any slight disturbance such as a cold or liver difficulty, a fresh attack is liable at any season of the year.

Symptoms: Apoplexy will often be confounded with Vertigo, but there is considerable difference from the fact that in Vertigo they appear dizzy and unable to move, where in Apoplexy they fall completely over and have severe convulsions and with twitching of the muscles. Very often the bird will die in one of these convulsions.

Treatment: Remove the bird at once to cooler compartments, and quickly as possible apply cold rags to the head, or dip the head in ice water at short intervals. The bowels should be made to move freely to encourage a better circulation of blood and to draw it from the brain, a few drops of Castor Oil being about the best of purgatives for this purpose. After improvement takes place leave the bird by itself, keeping it very quiet, and do not allow anything to eat for several hours or half a day. When food is given, use the soft food first such as soaked bread for a day or two, then as the bird improves give regular food. Above all, in this disease as well as in Vertigo, never use Tonics, but what would be much better are sedatives.

SUPPRESSION OF FEATHERS.

A diseased condition of the skin in which the feather sacs are choked up, thereby preventing the growth of the feathers, which in consequence curl up under the skin forming a lump. Birds allowed a bath when desired, and ones fed properly, seldom get this complaint.

Symptoms: This is an affection of the skin, affecting the bird at the moulting period, causing the feathers to be suppressed. A lump forms on the wing or near the vent generally, where if they be opened will be found to contain the feather substance.

Treatment: Open the lumps with a sharp knife and remove all the matter and gluey substance. Sew up the wound with fine catgut, after which use an ointment of Iodoform and cosmoline to favor healing.

SPOUTS.

A disease of the eye wattle, mostly found among the larger wattled variety of pigeons such as Carriers, etc. It is caused by an abnormal growth of the wattle, which causes the lower eyelid to become dragged down below the level of the lachrymal duct.

Symptoms: The secretions of the eye instead of passing down the lachrymal duct flow down over the outside, causing an inflammation from the acrid nature of the secretions and form a sore. Birds sometimes lose their sight entirely from this disease.

Treatment: Remove as much of the growth as possible with a sharp knife (care being taken not to make too deep an incision) and apply a healing oil or ointment occasionally, also washing out the inflamed portions with a mild solution of Peroxide of Hydrogen.

RHEUMATISM, (Wing Disease.)

An affection of the wing joints, especially the elbow joint. It is the most exposed joint of the wing and is the one mostly used by the bird. It being the most exposed joint is probably the reason it is chiefly afflicted, owing to its liability of becoming chilled. It is a disease very common among the Homers, they being compelled to endure many hardships, and encounter all kinds of weather. A bird after arriving home is allowed to remain quiet, near an open window or in a draught, is one cause of this ailment.

Symptoms: The bird will not care much about eating; the joints of the wing are stiff, swollen, hot and feverish.

Treatment: Remove the bird to a pen by itself, feed plain food, and to each pint of its drinking water, add ten grains of salicylic acid. This will have a tendency to carry off the impurities or to neutralize the poisoning acids in the blood of birds so afflicted. It will not be at all necessary to remove any of the feathers around the swollen joint, for this would make the inflammation worse than ever, but all that need further be done is to paint the joint or joints with Tincture Iodine.

ENTERITIS, (Inflammation of Bowels.)

The causes of this disease must be divided into two distinct classes namely: Secondary and Primary. The first class is that attributed to the sudden changes of the temperature when the thermometers fall from twenty to thirty degrees in a short time. The bird is taken with a sudden chill and an inflammation of the bowels follows. The Primary class

are those conditions of a catarrhal nature brought about by the use of improper food, too much green food, foods having an irritating nature such as rye, etc. In some birds however, the decomposition of certain grains in the intestines may excite the most violent intestinal catarrh from the irritating acids and gases formed by such decomposition. This inflammation of the bowels however, may be brought about by other diseases or conditions from the use of impure food or temperature changes. Circulatory disturbances may cause a catarrhal enteritis, which will usually run a chronic course. This is very common in diseases of the liver. Worms is another cause of Enteritis, they producing an irritation of the intestines by their presence.

Symptoms: The excrement will be very watery, and as the disease advances will contain mucous streaked with blood. Sometimes there will be a copious discharge of clear blood caused by a hemorrhage of a small blood vessel of the bowels. Where the disease is of a catarrhal nature and became chronic, the discharges will be mostly of mucous, or mucous will be seen adhering to the sides or ends of the excrement. In this chronic state there may be periods where constipation and diarrhoea will alternate.

Treatment: This altogether depends upon the cause of the disease. If it be from temperature changes, the food should be changed giving coarser articles of grain, and the discharges checked with small doses of Laudanum. If it is of a chronic nature of a catarrhal type, the bowels must be first unloaded of all the mucous and undigested food-stuffs.

Use the sulphate of Magnesia for this purpose or Castor Oil, after which the best attention possible must be given in the way of feeding, allowing the bird nothing that has a tendency to scour. Rye is often used as pigeon feed, and is one cause of so much diarrhoea. When the cause is from a liver complaint give the phosphate of soda. Enteritis caused by worms will be described under Intestinal Worms.

INFLUENZA, (or Catarrh.)

Influenza is an infectious disease characterized by great prostration and a more or less catarrhal condition of the mucous membranes, particularly those of the throat and respiratory organs. The intestines are also sometimes affected by the catarrh. Complications such as Pneumonia may arise in this disease and the delicate birds are more subject to this complication than the more robust. It is an exceedingly contagious disease and may be contracted to healthy birds from the sick ones. The bacillus of this disease are present in enormous numbers in the head and throat of the afflicted birds. The period of incubation is about from two to four days and uncomplicated cases usually recover, but delicate birds and their young often die from the disease itself, or from the extreme weakness following. Influenza is caused by a peculiar miasma in the atmosphere and is usually epidemic afflicting many birds in the whole community at the same time.

Symptoms: Fever; eyes are swollen, watery and inflamed. A gummy, sticky discharge will run from the nostrils and from the mouth, collecting, as it were, upon the sides of the mandible or bill. The

bird will be apparently off its feed, and have a rather sickly appearance. It will prefer drink instead of food owing to the high fever present.

Treatment: Remove as much of the gummy discharge as possible that collects on the bill, and use a small pinch of common alum in the drinking water. Alum is the best remedy for Influenza, it being an astringent removes and dries up the discharges.

EGG BOUND.

Young hens and ones laying their first eggs are usually the ones subject to be egg bound. It may however affect older birds as well, especially those hens which have been overfed with too fattening food and not getting sufficient exercise. In young birds laying their first egg, which if it be too large or the vent not having enough elasticity to allow the expulsion of the egg, the hen becomes egg bound. Another cause is where the muscular system is weak and the hen not having the power to expel the egg.

Symptoms: The bird is seen to be very uneasy, flying on and off the nest, raising itself up, then squatting down in the nest and appearing to be greatly excited. The egg can be readily felt above the vent, and if it is not removed will set up an inflammation and cause the bird's death. If attention is not at once paid to the hen, the egg oftentimes breaks inside and a very fatal inflammation follows from the irritation of the pieces of broken shell.

Treatment: Take a small syringe and inject into the egg passage a little sweet oil. This is usually all the treatment necessary for most cases, but when this does not favor the expulsion of the egg, a pair of small tweezers which have been dipped in sweet

oil may be used to stretch the vent, when the egg will drop out easily. Care must be taken however in this operation not to break the egg while still inside. After the egg has been expelled always grease the vent with sweet oil to heal and soothe.

CONGESTION OF LIVER.

Causes: Birds which are fed upon rich food or overfed, and not being allowed enough proper exercise quite frequently become subject to this disease. Unsuitable food such as mouldy peas, cracked corn or grains having undergone germination to a certain extent will cause a congestion of liver, if fed for any length of time. A weakness of the heart causing an insufficiency of blood to flow into the very important organ is another cause of liver trouble, but in this case the liver will be pale and somewhat shrunken, when from improper food or from feeding upon one article of food too long, the liver becomes darkish red and somewhat enlarged.

Symptoms: The bird has a very lazy appearance eyes are dull, does not care to eat very much, and prefers to lay around having the appearance as though unconcerned about anything. The appearance and character of the excrement voided by such birds is the only true means by which a diagnosis can be made, and it is for that reason very easy to diagnose properly. The droppings in these cases instead of being brownish in color as in health, will be rather tarry looking, slightly looser than normal and at the same time very offensive. Occasionally the droppings will be very watery and black.

Treatment: Feed the bird upon the best food obtainable, discarding any mouldy food probably

given before, and instead give only red wheat, bread crumbs, etc., until the character of the excrement has a healthier appearance, which should be brown in color. Administering phosphate of soda, either by a capsule three times a day, or put a small quantity in the drinking water, is the best remedy known for this disease. In these cases the eyes of the bird will be very dull, but the body does not emaciate like in the other liver troubles.

ENLARGEMENT OF LIVER.

Cause: Feeding too much fattening food such as Indian corn or hemp seed. Birds kept in confinement and those fed upon the richest articles of diet, such as given the fancy varieties, are usually the ones to suffer most from this complaint.

Symptoms: Bird is apparently drowsy at all times, but more so immediately after eating. As the disease advances, they will gradually lose their appetites and are off their feed.

Treatment: Feed light articles of diet, administer a liver pill containing a small amount of mercury or calomel, giving at intervals, or what is best every morning, a dose of phosphate of soda. This treatment has a tendency to stimulate the liver, relieve the constipation often present, and cause a flow of more healthy bile. After the bird is convalescing use the tonic in the drinking water.

INFLAMMATION OF LIVER, (Hepatitis.)

Causes: The cause of this disease is almost identical with that of Congestion of Liver, but there will be severer symptoms in this disease. In the former the blood vessels of the liver are only congested, causing a slight enlargement, but in the

inflammation of liver that organ will be even more enlarged and more painful.

Symptoms: The bird will apparently be dizzy, off its feed, prefers drink to food, and will have a very depressed look. Its wings will be hanging down, eyes dull, often closed, head tucked in, the bird looking as miserable as could possibly be described. Constipation will usually be present, and the excrement will usually be lighter in color than normal, due to the improper flow of healthy bile. The bird will be greatly emaciated.

Treatment: The intestines must first be cleansed of all irritating matter, such as mucous, decomposed food, etc., by administering good sized doses of phosphate of soda. Next, pay strict attention to diet. Do not feed the bird much at a time, but rather often, and only such foods containing the least fats. A bird with this disease should never be given hemp seed to eat, but only plain grains such as wheat, millet, etc. Adding a few drops of fresh nitro-muriatic acid to the drinking water is all the medicine required afterwards. This should be given for weeks before a cure can be permanently made.

INFLAMMATION OF EGG PASSAGE.

Cause: This disease is without doubt caused by the retention of part of broken shell of an egg, or the breaking of a soft-shelled egg inward. Thus causing an inflammation which usually, nine cases out of every ten, proves fatal.

Symptoms: The bird afflicted has a rather heapy appearance, tail depressed, head tucked in, and looks miserable in general. A slimy, whitish liquid resembling egg substance is voided, the bird being com-

pelled to strain violently at the same time. This is the main symptom. Frequently birds so afflicted become paralyzed in one or both legs.

Treatment: The only treatment is to relieve the inflammation and arrest the discharge. To grease the vent is good policy, and to inject a solution of Gum Arabic will be found to encourage healing and subdue the inflammation without further injuring the bird.

GORGING.

A disease afflicting Pouters, those with well developed crops, and is caused by a weakness or atony of the muscles of the crop, and the bird having eaten too heartily or drank too much water. It can be often cured by squeezing the crop gently until all the fluid is removed, and by not feeding anything more until the remaining food in the crop is completely digested. A way much practised is to suspend the bird in a stocking until the food is digested.

SHIVERING.

Occasionally a fancier finds a bird standing around shivering all the time. This indicates a weakness from some cause, or from a liver affection where the circulation is interfered with. If it is caused by an insufficiency of blood, add Iron to the drinking water; if the result of a cold, add Quinine; or if the excrement is black and tarry caused by liver difficulty, use the Phosphate of Soda in the drinking water. The tonic should be used for all cases where there is shivering. Hemp seed may be given ad libitum where the droppings are not black or tarry.

ANAEMIA, (Poor Blood.)

The blood when it contains less than the ordinary number of red corpuscles is a condition known as Anaemia and is characterized by all the signs of weakness. It may be caused by a hemorrhage from a cut or other serious injury, from the feeding of improper food, or the bird's digestion being poor the assimilation of food is not perfected. A long siege of Enteritis, (inflammation of bowels) is another cause of Anaemia. After a sudden loss of blood from the bird, in consequence of a cut etc., the volume of the circulation is quickly restored by the absorption of a fluid, but the red corpuscles cannot be so readily replaced. The poor watery blood circulating through the body does not give it the proper nourishment, therefore the bird's weakness.

Symptoms: Extreme weakness, the bird being scarcely able to get around. It may have diarrhoea and sometimes constipation, or the grains eaten may pass through the bowels undigested. The tongue and membranes of the mouth will have an extremely pale appearance, and the eye will be somewhat sunken and glassy. When flying, the bird will be found to breathe very hurriedly and upon the slightest exertion the bird's heart will be greatly quickened.

Treatment: Iron in some form must be given the bird to increase the number of red corpuscles, and besides good nutritious and easily digested foods such as soaked bread, good wheat, hemp seed, and oat meal water to drink, nothing else need be done. The tonic contains all the Iron required and should be given in larger quantities than in most other diseases.

GASTRITIS, (Acute inflammation of Crop.)

Cause: This disease is caused by the bird having eaten some powerful poison, drank irritating water, or eaten food containing poison. Another form of Gastritis is caused by the feeding of oats, the sharp points causing an irritation.

Symptoms: The bird will have a very wild look, its wattle and tongue will be very red and inflamed. It will try to vomit, and when this is accomplished the vomited matter will be watery with some mucous. It will not care to eat, preferring drink.

Treatment: Do not allow any food. Remove the irritation by giving gum arabic water several times a day with an occasional dose of Laudanum. Before giving any food after the irritation is removed give a few doses of Cod Liver Oil. The first article of diet should be soaked bread. Never use oats unless it is hulled, and be careful that the bird cannot drink any water of a poisonous nature. This ailment is frequently a cause of drinking water standing in old paint pots.

CONGESTION OF LUNGS.

A disease afflicting birds about the moulting period. It is caused by a chill, superinduced by taking cold suddenly or from too thick blood. The blood vessels in the lungs become distended and congestion follows, often the bird dying from asphyxia caused from the closing of the air cells.

Symptoms: The breathing is very rapid and constricted, the bird having a very drowsy, lazy appearance, and at times not giving notice of its surroundings. The disease is almost always fatal and somewhat resembles bronchitis, but is a more

serious disease. Mucous will flow from the mouth, and at times the mucous discharged will contain streaks of blood.

Treatment: As this disease is quick with its deadly work, treatment will be of little advantage. Using the tonic in the drinking water, avoiding draughts in the lofts, and guarding against exposure are the best means of prevention.

DISEASE OF THE CROP.

The crop, as all know, is where the food eaten is first received. Here it becomes softened and macerated by the secretions of that order. It then passes into the second stomach, as it is called, and then on into the gizzard. By the use of poor quality of food, etc., the crop is very often diseased. It is a very fine piece of mechanism and fanciers should all bear this in mind and give their birds nothing but the best food obtainable. An inflammation of the crop is often caused by the feeding of oats or any other sharp pointed articles of food. These points cause an irritation by their piercing, and often penetrate into one of the larger blood vessels causing an inward hemorrhage and the death of the bird.

Symptoms: The symptoms of diseases of the crop, such as crop bound, sour crop, etc., are distention of the crop, caused by the accumulation of gases and decomposed foods. The bird appears to be all out of sorts, is lazy, and cares not for food or drink. This disease is usually caused by the birds having eaten too much by which the muscular part of the crop is weakened, causing an atony. The consequence is that the food instead of passing fur-

ther on, remains still and decomposing, throws off irritating gases, poisons, etc., into the blood of the bird.

Treatment: The best treatment is to remove as much of the undigested food as possible, after which administer a dose of Castor Oil. This will carry the remainder of the poisonous food downward and heal the irritated mucous membrane as it goes.

MOPING.

Most pigeon lofts contain certain birds which never seem to have their full spirit, but are always moping about. This moping, as it is called, may be due to some of the diseases mentioned in this book, but if the excrement voided has its natural appearance and consistency, there is no fever or indication of disease. This moping can often be cured by pulling out the tail feathers. Take hold of the tail and with one sudden pull extract the whole tail. The bird will usually begin to improve immediately afterward.

CANKER IN THROAT.

Canker is a disease of very common occurrence, afflicting, as it were, all varieties of pigeons and is one of the most dreaded diseases all fanciers must contend with. It is an exceedingly contagious disease and often when one loft is infected with it, others in the same neighborhood are likewise infected. It usually appears in an epidemic form and many birds die each winter from this terrible disease. It greatly resembles Diphtheria, and some authors claim it is the same.

Symptoms: When canker begins to form in the mouth, the mucous membranes soon begin to grow

paler each day, finally a substance resembling cheese begins to form on either side of the throat gradually growing in size until the bird can hardly breathe. About this time, this cheesy matter, if not removed, changes and minute ulcers form which, if allowed to run, destroy the membranes rapidly causing the bird's death. These cankered spots or ulcers change as the disease advances from a yellow to a brownish color. Sometimes these ulcers form close to the entrance of the windpipe. The bird will always have a fever, the throat is swollen and the breath very offensive.

Treatment: With a small pointed stick remove as much of the cheesy matter as possible without causing blood to escape, and wash out the mouth with a mild solution of salt water first; then take a small pinch (very small at that) of burnt alum and apply to the throat. This eats away all cankered matter and encourages healing. Or the throat could be painted with a mild solution of Potassium Permanganate of Potassium, using eight or ten grains to the ounce of water. By the oxygen thrown out by this solution and from its powerful absorbing affects, very often the best of results can be obtained. The throat should always be moistened also with a little sweet oil or some mild healing oil at least once a day after the operation.

CHOLERA.

Cholera is a disease of a malarial nature affecting, as it were, birds which are kept in too small a loft, or from overcrowding the lofts, at the same time not keeping it in a proper sanitary condition. This disease seldom appears in a well managed loft.

Another cause is the negligence on the part of the owner in regard to the water given. Some give water in wooden tubs and never change it but once a day, i. e. every morning. If such receptacles are used for water, in the summer the bottom and sides will become thickly coated with a greenish slime, and if the water is not changed often, say two or three times a day, in the hottest days of summer it too will become green and stagnant. This is, I believe, the main cause of Cholera.

Symptoms: Diarrhoea of a more or less severe type, excrement or discharges voided are greenish in color, and the discharges contain much mucous. The bird will be off its feed, gradually emaciate and finally die if the proper attention is not at once given it.

Treatment: The best method is to prevent the disease, using good feed, no corn in summer or very little, if any, is used, keep the drinking vessels well scrubbed out doing so every morning, occasionally scalding them out, give fresh water soon, as the other given them has become somewhat warm and pay strict attention to the sanitary conditions of the loft and its surroundings. If the disease has once become established it will be best to remove the afflicted birds to separate compartments so as not to allow it to spread to the others. Discontinue any food having a tendency to scour, foods such as rye, etc. Give the tonic in the drinking water and also add a little Laudanum to allay the pain which usually accompanies this disease. Feed good grain and that of an easily digested nature, such as canary, caraway, millet seeds, etc., a little soaked bread, and keep the bird as quiet as possible.

WORMS, (Intestinal.)

There is a class of pigeons who, though they eat heartily, never seem to thrive but lay around lazily and have no ambition. If no other disease can be discovered that ails them, they undoubtedly have Worms. Only one variety afflicts pigeons and they are a parasite long and slender, averaging in size from an eighth of an inch to several inches in length. They infect the intestines only and seldom migrate into the large bowel unless carried there by the excrement, and will not remain there but be expelled with the droppings. The presence of these parasites set up an inflammation of the intestines causing the worst form of Enteritis of a chronic nature. The bird eats heartily but still emaciates gradually, finally dying if assistance comes not. The diagnosis can never be fully made without examining the excrement, in fact it is the only means of making a true diagnosis. If these Worms are not discovered upon the first examination, look time and again for they are voided only occasionally, and not in very large numbers at one time often only one can be found.

Treatment: Soon as these parasites have been discovered, feed the bird very lightly giving only a little light food such as soaked bread, and administer one-fourth to one-half grain of Santonin once or twice a day for several days. Then follow with a brisk cathartic such as Castor Oil. They will usually all be exterminated after the first treatment. I once held a post mortem examination on one of my birds immediately after death relieved it and was astonished when I cut into the intestines. There were worms

several inches long, by the hundreds, and were full of life, creeping around for some time upon the platter I use for holding post mortems.

DIPHThERIA.

Diphtheria is quite frequently called Canker, and the latter is very often mistaken for the former, but there is no question but that there is some similarity as far as the symptoms are concerned. Canker is a fungus growth afflicting, as it were, the sides of the throat mostly, where in Diphtheria it i. e. the growth, is confined to the membrane farther down the throat and as the disease advances these growths become enlarged and project on the sides of the neck just below the entrance to the wind pipe. It is however, mostly confined to the young squabs at an age of two or three weeks and being the cause of the death of many during the winter months. Old birds may be subject to the disease as much as the young, but they being so much stronger can endure it a longer period of time, and it is probably transmitted by them to their squabs. The parents may be in apparent good health, there being no growth in the throat visible upon an examination, but farther down, the esophagus, contains the germ or bacillus of Diphtheria, and the peculiar way by which nature adopted the means of their feeding their young is one reason why it is so easily transmitted. It is, nevertheless, a very contagious disease, and the afflicted birds should always be removed far from the loft and placed in the "Hospital" by themselves.

Symptoms: Fever, a hard, red lump will be seen projecting from the sides of the neck which will be very much inflamed and contain a great

amount of heat. The bird will not care to eat and incessantly gasps for breath. The breath will be rather offensive, and care must be taken for it is claimed it can be further transmitted to persons by simply inhaling the bird's breath. The disease sometimes appears in a very epidemic form and large numbers die, it mostly occurring in the damp, cold winter months. If the disease is not checked, the bird finally dies of suffocation caused by the pressing of this lump upon the windpipe.

Treatment: Remove as much of the cheesy looking matter as possible without injuring the membranes of the throat, and use as a lotion a solution of Permanganate of Potassium (eight grains to the ounce) to the throat. To paint the throat with tincture Chloride Iron is also good. Feed only very soft food while treating and add a small quantity of powdered alum to the drinking water. When squabs are afflicted with Diphtheria little can be done except to prevent its spreading. It will be of little use to commence operative treatment on so young a bird, for the surgical operation of cutting out the lump often causes the squab's death owing to its delicate constitution. However, if it is a valuable bird it may be tried for the bird will undoubtedly die anyhow, even if not operated upon. Make an incision into the side of the neck taking care not to cut an artery, and remove the lump. Stitch up again with carbolyzed silk or fine catgut, and finally apply a healing ointment containing Iodoform or Aristol. This operation must be quickly done, and for an hour or two previous give the bird to be operated upon a dose of quinine, otherwise the operation

would cause its death. The best means of preventing this disease is to use a mild astringent in the drinking water several times each week. Alum I have found the best for this purpose, but it must be used very judiciously.

WING PARALYSIS.

Cause: No direct cause can be attributed to this disease, but it is often seen associated with disturbances of the Liver, especially that of congestion. It can also be caused by lead poisoning, the bird having drunk water occasionally out of old paint cans or of water standing a long time in leaden vessels or pipes. Wing Paralysis or dropped wing will often be found in the debilitating diseases where there is extreme weakness. It may however, be caused also by an internal disease of one of the other vital organs, such as Congestion of the Lungs, etc., and is sometimes seen in birds suffering from severe atony of the crop.

Symptoms: The wing or both wings appear powerless and drag upon the ground. There is generally in true paralysis no swelling, stiffness, etc., but if anything, there will be a somewhat emaciated condition of the wing.

Treatment: As Paralysis of the Wing is merely a symptom of some other disease, it is the main point to make a true diagnosis, and treat the cause rather than commence treatment upon the wing itself. If it be the cause of liver troubles as above mentioned, then follow the treatment adopted for that complaint, if from weakness from a debilitating disease use a tonic, or if from crop disease use that treatment, but to make a permanent cure the cause

of the weakness of the wing must first be discovered or all the trouble at treating will be of no avail whatever.

GOING LIGHT.

Probably there is not a fancier or pigeon owner but will with me agree that this disease is one of the most common and the most dangerous that he has to contend with in his pigeon loft. All birds fare alike, it afflicting the fancy and the common varieties in this respect the same. It is an exceedingly contagious disease and often when it once appears whole lofts are completely wiped out in a very short time. It is contracted to healthy birds through the excrement, the bird having eaten food containing the germs, or drinking water into which some of the droppings of the sick bird had fallen. It must always be considered a fatal disease in all cases, but it can often be checked and cured if the proper attention and treatment is given in time before the disease has advanced too far. It is said that birds if they once recover from this disease will never again contract it. This is however very doubtful. It was heretofore understood that this disease was confined to highly bred birds and ones kept in confinement, but I have quite frequently observed birds having their freedom to become ill and die off rapidly with this disease. Going Light is a name applied to that disease of wasting away in which diarrhoea is the prominent symptom, and it should not be confounded with the wasting of lead poisoning for in that there is obstinate constipation. Old birds live quite a length of time sometimes when afflicted, but when it attacks their young they seldom live

long enough to waste away to mere skeletons as the old ones do. When it attacks the young, the lungs are generally affected first by an inflammation, and although a bird may be apparently in health to-day, it may be dead the next owing to this rapid inflammation.

Symptoms: The disease usually starts with diarrhoea caused by an inflammation of the lining membranes of the bowels. It will finally cause an inflammation of the lungs which gradually waste away as in Consumption. The afflicted bird lays around with ruffed feathers and has a miserable appearance in general. The discharges will be watery containing considerable slime or mucous. Diarrhoea is present throughout the whole course of the disease. They care not for food, just eating enough for mere existence and finally die, having wasted to a mere skeleton.

Treatment: By far the best method to adopt is that of prevention. Keep the loft in a good sanitary condition, feed the best of food, (never rye) give fresh water, use the tonic and this disease will seldom appear. After a bird is once afflicted remove it at once and feed it plenty of hemp seed, and encourage it to eat as much as possible. Cod Liver Oil is about the best medicine or nourishment that can be adopted for this disease. It keeps up the strength and helps to supply nourishment to the tissues which are rapidly being consumed. It should be given in capsules containing from three to five drops, three or four times each day, and at the same time administer a dose of Hypophosphites of Lime and Soda, one-fourth grain at each dose. If the

diarrhoea persists in a severe form Opium in some form must be given, Laudanum in the right proportions can be put in the drinking water. After the bird is convalescing, the tonic should be given in the water for some time to prevent the symptoms from recurring.

CANKER IN EAR.

Another form of Canker affecting, as it were, the ear instead of the throat. The cankered matter will be about the same in appearance as that of the throat. This is not considered a fatal disease but will, if let advance, be very detrimental to the bird's hearing.

Treatment: Remove as much cheesy matter as possible without injuring the surrounding flesh, and use as a wash a mild solution of Bichloride of Mercury, or that of Peroxide of Hydrogen.

SOUR CROP.

A form of indigestion often produced by the use of too much corn in connection with wheat. If grains of the same nature such as wheat, buckwheat, millet, canary, etc., are fed at one meal, this condition will seldom if ever arise. Most cases originate in the injudicious use of corn, probably on account of its cheapness.

Symptoms: The bird will have a rather lazy look, and appear rather uncomfortable. The breath will be rather offensive and have a sour smell. When felt, the crop will be mushy and is somewhat distended. When the bird has eaten very heartily the crop may be greatly distended from the accumulation of gases produced by the decomposition of the food.

This is frequently followed with a violent diarrhoea.

Treatment: If possible remove some of the contents of the crop, but it is not of so much importance in this condition as in Crop Bound to remove the contents. Remove the bird so it cannot get anything more to eat and administer a capsule containing five drops of Castor Oil, enough to purge and carry away all undigested food. After a good discharge of the bowels has been effected, soaked bread can then be given. Next day the usual feed can be allowed.

CROP BOUND.

Crop Bound is a condition whereby the crop has been overloaded with food and water, and that organ losing its power of contraction or in other words termed Atony of the Crop. The muscular coating is partially paralyzed and in consequence the crop remains in a dormant state not allowing the food to pass further down into the second stomach. This condition is something similar to Sour Crop, but it is of a much more serious nature. The crop is greatly weakened in this condition, where in the former it is merely a fault of the food. The crop in these cases will be much harder than that of Sour Crop.

Treatment: The first thing to be done is to remove as much of the contents of the crop as can be done without injuring the bird. After this has been done remove the bird to quarters by itself and administer a good sized dose of Castor Oil (5 drops) and leave the bird quiet until the oil operates, after which give about thirty pills of food, made by mixing a medium hard boiled egg with cracker dust or bread crumbs. As the crop in these cases is weak-

ened, that organ must be properly toned up before the bird will be able to digest the harder grains. To strengthen the crop and improve the appetite nothing will be found better than to use Gentian Root in the drinking water. After the bird has fully recovered strength it can then be placed in the loft again.

LEG WEAKNESS.

This is an ailment often afflicting squabs after leaving the nests. It is probably due to their rapid growth and being cramped up in the nests or nest pans. I have never seen a case of leg weakness where nests were used without the pans, whether this is the cause of the weakness I would not like to say, but I do not fancy these pans myself and never use them. I use boxes a foot square for nests and never have birds suffering from this weakness. It is frequently the symptom of some other constitutional disease when found in old birds, and those diseases of a debilitating nature.

Treatment: Remove the cause if it can be ascertained. Remove the bird and place it in a box with the bottom covered an inch or two with hay. Rub the legs morning and night well with a mixture of turpentine, vinegar and white of an egg. Add the tonic to the drinking water.

PROLAPSUS ANAL, (Disease of Vent.)

A disease afflicting the hen bird. It is usually the cause of great weakness and generally is confined to young hens, free breeders. An inflammation, displacement, of some of the inward organs, or the presence of a tumour may be another cause of Prolapsus.

Symptoms: The vent will have the appearance of being enlarged or too much opened, through which protrudes the mucous membrane of the cloaca. The part of the protrusion exposed to view soon becomes inflamed from the action of the atmosphere and becomes swollen. In bad cases the bowels are exposed to view by this enlargement.

Treatment: Removing the inflammation is the main object. Wash off the vent with a solution of alum several times a day, keeping the bird very quiet all the while treatment is being made. In two days' time discontinue the alum, when the inflammation will usually have subsided somewhat, and use a lotion of Peroxide of Hydrogen three times daily, for a week or more. The final treatment should be a mild healing oil such as Sweet Oil or an ointment of Iodoform. Use the tonic in the drinking water for several months, and do not allow the hen afflicted to breed for some time, but give her a good rest.

TUMOURS.

These are small growths or swellings probably due to some impurity of the blood or system, or the result of an injury. They may appear on any part of the body. It is sometimes seen under the eye, and frequently near the vent. If these tumours are treated daily with Tincture of Iodine until the skin appears inflamed, then discontinue, they will usually disappear, but when they are located at any tender spot, for instance the eye, this tincture should not be used for it may be the means of fatally injuring the sight if any should get into that organ's ducts. When the tumour is on or near the eye I would advise the use of a mild solution of sugar lead. Oc-

asionally the above methods of treatment will be of no avail, and when such is the case, surgical operations must be resorted to, to effect a cure. Use a sharp knife, make an incision, care being taken not to allow a flow of blood, and remove as much of the tumours contents as possible. The wound should then be stitched up, and an ointment of Iodoform applied several times daily for a week until properly healed up.

BROKEN BONES.

Fortunately the fancier seldom has a case of broken bones, but sometimes they do occur, so a few remarks here will be of some benefit in case of an emergency. When a bone is broken, remove the bird to another place and make a thorough examination, noticing if the fracture is in more than one place or not, frequently the bone will be fractured in several places. Procure small, narrow bandages and dust them well with Plaster Paris, laying the bandage open and dusting the plaster over it. Roll these up and then soak in warm, salt water for five or ten minutes. While these are soaking place the broken parts of bone together, remembering that the setting of the break is the main point of consideration. Do not remove any of the feathers; these may aid in supporting the limb and keeping it in the right position. Next take the bandages and carefully wind them around the break very tightly, making the Plaster Paris smooth upon the outside as it is cooling.

This is the best method known, better than use of splints, the plaster becoming as hard as cement, especially when salt is added. Leave the Plaster

Paris bandage on for at least four weeks, when it can be removed with careful cutting. Above all keep the bird quiet during the whole course, and after removing the bandages, keep in a small box (so as not to get too much exercise or be able to fly) for several weeks more, otherwise the bone might be easily broken over again, and the second break is not worth the treatment.

WOUNDS.

In case of a wound, gunshot wound for instance, it will be necessary to first locate the shot if possible and extract it. This will encourage healing more rapidly. Cleanse the wound with a lotion of carbolic acid made by taking 300 parts of distilled water to one part carbolic acid. This acid must be the best refined and not the crude kind used for disinfecting. Take a small syringe and inject this lotion into the wound once a day for a few days, then stitch up and use the Iodoform Ointment mentioned heretofore. In treating these wounds, or wounds of different nature, the greatest care must be taken to remove all dirt in the wound and that adhering to the edges, for often blood poisoning will be produced if any foreign substance is left in.

MOULTING PERIOD.

When birds are moulting they are more subject to disease than at any other period. Care should be taken of the birds more at this time than any other. Do not allow a draught to go through the loft. Feed them hemp seed occasionally, and peas, beans and the other foods rich in nitrogen. If salad can be had it may be given them, and they will eat heartily of it; likewise chickweed.

BARRENNESS.

Quite frequently a fancier will find a hen is barren, or at least he thinks so. It is a very uncommon occurrence and when a hen does appear so, nine out of ten times a rest of a few months will fully restore her system to its proper healthy condition. Again a hen is often condemned because of laying infertile eggs. Sometimes it is the fault of the hen, she being weak, run down or the like, but in the majority of cases the fault lies with the cock. Try the plan of giving the hen a new mate; this often tells the tale.

COLDS.

When a bird takes a cold the symptoms will be sneezing, slight discharge from nostrils, etc. A little alum in the drinking water is sufficient treatment.

SOFT SHELLED EGGS.

Occasionally a hen will lay a soft shelled egg, which is frequently due to an insufficiency of lime material in the loft. Birds must have lime in some form, either oyster shells, lime grit, plaster, etc. This is not a disease, but it can also be the cause of giving the bird overstimulating and fat forming foods clogging the internal organs with fat and producing weakness of the muscles.

Treatment: Feed plain food, not much if any hemp, give plenty of oyster shells (ground) and the other materials containing lime, with lime water for drink.

A FEW POINTERS.

Learn how to quickly recognize a disease and to try and check its course if possible. Arrest the

disease at an early period and one half the trouble is over. In using the tonic described in different places in this book, always use wooden vessels, metal vessels may cause a chemical change and be injurious to the bird.

Remove all birds afflicted with contagious diseases, having a separate pen or box as a "Hospital" always ready. Always bury the bodies of dead birds, for often diseases can be contracted from them even after death, or burn them and avoid contagion. Above all bear in mind that an ounce of Prevention is worth a pound of Cure applies to our pets (the pigeon) as well as to ourselves.

Keep the loft in a healthy condition, at all times avoiding draughts and dampness. Have plenty of windows in the lofts, for sunlight is nature's disinfectant. Dark lofts and disease are companions. Prevent lice from forming by whitewashing nests and all the interior of the building, and use tobacco stems for their material to nest with. A handful of slacked lime in a nest before it is occupied is a good plan to further prevent the formation of lice. Allow the birds a bath when they feel so inclined at least twice each week. Remove the droppings once each week.

THE TONIC.

The Tonic mentioned in this book in several places is the best I have found for the pigeon, for general purposes. It is composed of only the best medicines, not an injurious combination, but will be found very beneficial in Preventing and Treating many of the Diseases of Pigeons. It is an excellent antiseptic, laxative, and at the same time a good Saline Tonic.

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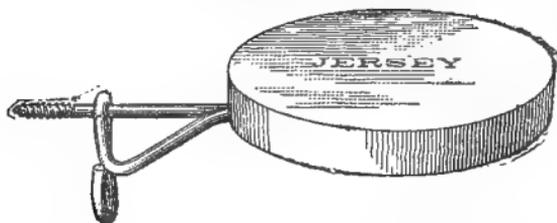
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