

Poultry Yard.

How to Distinguish Barren Hens.

BARREN hens are those that never lay, or that will sometimes produce a few eggs in the spring, and at other times a small number during the latter part of summer. Such hens are to be found in almost every poultry yard. As none of the treatises on poultry now extant allude to this subject, we herewith record certain infallible signs by which barren hens may be distinguished from those that lay.

Hens that lay are off the roost at the first dawn of the morning; while barren ones often remain there until the sun is high in the sky, or until the laying hens have ample time to fill their crops. Laying hens have a voracious appetite, which appears almost insatiable when they are being fed; while barren hens are often very indifferent about eating. Hens that are about to commence laying, or that do lay every day, or every alternate day, are as active in obtaining feed for themselves as one having a brood of hungry chickens is diligent in scratching up and searching out necessary feed for her young ones; and such hens are always ready to run into the barn, stables, or other places where they are not permitted to go, while a barren hen moves about with as much indifference as if she were a piece of animated stupidity. A hen that lays an egg to-day, and will lay another to-morrow has a comb and gills red and glowing like the ruby lips of a beautiful damsel in the last stages of her giggleshood, while the comb and gills of a barren hen will be as colorless, pallid, and sometimes wrinkled and dried up as the once fair face of some of our maiden aunts of forty-five and upward. When a hen that lays has eaten till her crop appears distended to its utmost capacity, she will force down a little more, while a barren one will often appear as indifferent about eating good feed as a weaned baby after it has been stuffed with sweet cake and candy. A hen that has laid an egg to-day and will lay another to-morrow will go singing around the yard and uttering soft and complacent notes, as if the vast universe were an Eden of love, and producing eggs were a source of exquisite pleasure; while the hen that never lays has no more music in her soul than the wife of Socrates. Those hens that lay will companionize with their betrothed chanticleers, while those having no eggs in their ovary will avoid the flock and resent the attentions of the rooster as if he were some insulting and abusive renegade. That part of the body of a laying hen around the ovary will appear plump, and sometimes an egg can be felt, while one that does not lay will seem as destitute of eggs as if it were her twenty-eighth day of incubation on turkeys' eggs.

When all fruitful hens are on their nests, either laying or setting, we frequently see a fatherly rooster strutting round and making amorous advances, calling some hen that does not lay to partake of every little tit-bit he may find, and leading her to some secret place in the evergreen hedge, or to the tall grass, or through the waving rye, enticing her beneath the manger, where a hen could enjoy all the secretiveness that her highest aspirations ever desired, or coaxing her on the snow, where the voluptuousness of such a secluded retreat and the fragrance of the new-mown hay, or the ripe sheaves of golden grain, would lend their inspiration to the production of eggs. A rooster will often appear so impressed with the duty of a pullet to lay, that he himself will make a nest in some cosy corner, and get on it, and call, and chatter, and make use of every means in his power to induce her majesty's henship to come and sit on the nest and try to lay; while she will take it as coolly and indifferently, as if it were really the duty of the rooster to go through with all that rooster twattle. Then, when he has given up in despair and left the nest, a barren hen will run and peep in to see if he has not after all produced a rooster's egg.

Did you ever see a rooster attempt to call a laying hen on the hay-mow and make a nest for her? Never. That is a prerogative which a good layer never resigns to the other sex. When a hen is going to lay, she gives her mate to understand that he can keep at a respectful distance; for she knows how to make a better nest than he. When hens wait for the rooster to make their nests, and have to be coaxed and wooed to induce them to lay, and then they don't do it, as good old Jonah said of himself, "it is better for them to die than to live;" because, if they are ever so well

fed, they never will lay; and those hens that will produce eggs will be more prolific with the room of these barren ones, than their company.

You may smile, gentle reader, at these insignia of barren hens; but be assured they are as infallible as a heavy beard on a boy's face is the sign that he has passed from his boyhood to manhood. There is one more sign that never fails. When we know a hen has not produced an egg, or but a few at the most, from May to October, it is safe to conclude that she will subserve the purpose of her existence on the dinner table eminently better than in the henery.—*The Independent*.

HENS WITH THE DEMES.—"They are taken with a weakness in their legs; they hobble around for a week or two until they have not strength to stand; appetite fails; they linger three or four weeks and die." That's what's the matter with H. Mansfield's fowls, (New Haven Co., Conn.) They probably do not have range and wild foraging enough, and perhaps they lack regular feeding with grass or vegetables. Give them these, and put some Tincture of Chloride of Iron, enough to be distinctly tasted, into their water; also feed them well twice a day with bread soaked in ale.—*Am. Ag.*

BREEDING FOWLS.—A writer in *Wilkes' Spirit* says: "I am a great advocate for choosing young birds for this purpose and recommend that early pullets be selected every year for stock the following season, and put with two-year-old cocks for instance. Pullets hatched in May attain their growth and become perfect in shape, size, and health, before the chills of winter. They should be put with cocks of two years old, when they will lay on the first appearance of mild weather, and their produce has the same advantage as these have had before them. I do not advocate having young stock fowls so much on account of their laying early, as I do for the superiority of their breeding. Neither is it desirable to breed from fowls of all the same age. Where it can be done, it is better to put a two-year-old cock with pullets, and *vice versa*. It is well to introduce fresh cocks of pure breed into the yard every second year; this prevents degeneracy, and for the same reason no cock should be kept more than three seasons, nor a hen more than four, if it is intended to keep them in the highest possible perfection and efficiency.

Entomology.

Endurance of Cold by Insects.

It is often a subject of wonder among Agriculturists that the insects which prove so injurious to their crops, are not destroyed by the intense frosts of winter, especially when there is little or no protection afforded by nature's mantle of snow. It is, indeed, one of the most wonderful phenomena in their natural history, that they are enabled to endure with impunity an intense degree of frost. Many insects, which pass the winter in their pupa state, are of course secured from the effects of cold by their cocoons of silk or other non-conducting materials, or by their penetrating for some little distance into the earth. But there are a vast number of others which, in all their states, are exposed to the air without any covering; while many are sheltered too slightly to be secure from frost. Still they are able to endure the exposure, remaining unfrozen in the severest cold, or, that is still more marvellous, recovering their vitality even after having been frozen into lumps of ice. Many instances of the possession of this wonderful faculty have been recorded, and numerous experiments have been tried with a view to the discovery of its limits.

Kirby and Spence relate that Spallanzani exposed eggs of silk-worms and other insects for five hours to a freezing mixture of 33 degrees below zero, and found that they were not frozen, nor was their fertility in the slightest degree impaired! Others were exposed even to 56° below zero, without being injured! Dr. Wyman stated, at a meeting of the Boston Society of Natural History in 1856, that he had examined chrysalids of the common mud-wasp, and found that they were not frozen during the coldest weather. When the thermometer had been 18° below zero, and had risen to about 8° below, they were still unfrozen, and when removed from their pupa

cases, made obviously muscular actions. The pupae preserved their usual transparency; but when they were crushed upon the surface on which they rested, the fluids of the body instantly became opaque and were congealed. He had also examined the eggs of the moth of the canker-worm, and found their contents unfrozen.

Mr. Lister (according to Kirby and Spence,) relates that he had found caterpillars so frozen that when dropped into a glass they chinked like stones, which nevertheless revived. Mr. Stickney, in order to ascertain the effect of cold in destroying a noxious grub, exposed some of them to a severe frost, which congealed them into perfect masses of ice. When broken their whole interior was found to be frozen; yet several of them resumed their active powers. Brunet exposed the pupa of the Cabbage-butterfly to a frost of zero, until they became lumps of ice, and yet they afterwards produced butterflies. Again, in an experiment made on the caterpillars of a moth, during Sir John Ross' voyage, two of them revived, and assumed the imago state, after being four times in succession exposed to a cold of 40° below zero, and four times revived by being brought into the warm atmosphere of the cabin! These, and numerous other instances which might be quoted, do not, however, appear so incredible when we remember that animals of a much higher organization have been known to revive after being frozen. The well-known little fish called the Tommy-cod, which is captured through the ice at this season of the year in the river St. Lawrence, frequently freezes immediately upon being drawn out the water, and becomes as hard and brittle as a dried stick; yet when it is thawed in water, even after some hours have elapsed, it comes as it were, to life again, and regains its former activity.

In the present state of our knowledge of animal physiology, it is impossible to determine what is the source of heat which enables these organisms to preserve their temperature when exposed to so low a degree of cold. The question is still involved in mystery, but we may hope that as science advances, it may eventually be cleared up. In the mean time we may perhaps be permitted to conjecture, that this faculty arises from some principle of vitality which enables the living creature to bear up and fight against conditions which would ordinarily be destructive to its life; and that it is Divinely ordered for the preservation of species in apparently uncongenial climates, and for the working out of the mysterious ends of Providence.

THE BLACK KNOT.—Dr. Fitch, the State entomologist of New York, thus accounts for the black knot: The black knot excrescence is a disease peculiar to the plum and cherry trees in this country. It begins on the small limbs, but a year old, recognized at first by a slight swelling of the bark at a particular point. This spongy substance is of a pale yellow when growing, changing to coal black when mature, and then a minute fungus plant grows upon its surface. Their whole surface is covered with black granules, which are the fungus plant alluded to, a species of the genus *Sphaeria*. It is a curious fact that the surface of these excrescences, when mature, are covered with this plant never found elsewhere. Most persons suppose them (excrescences) to be of insect origin. The larvæ of the curculio are always almost found in them, and consume near all the spongy matter of the warts, but do not touch the fungus growing on their surface, forming a kind of shell after the inside is devoured. It has been supposed that these excrescences are a species of fungus, growing on the limb. But what is a fungus? To express it in familiar language—it is a body which grows, and forms its own substance, distinct from, and independent of the body in which it takes root, and from which it draws its sustenance. Now these black knots are no such growth. They are merely a change in the texture of the natural parts of the limb. And thus we arrive at the conclusion, that these excrescences are not of insect origin, and not a vegetable fungus, but are properly a disease of these trees (plum and cherry), whereby the natural tissues, the bark and wood become softened and swollen at the place affected.