

of the water at its surface had been 29° for some days, when a very rapid and extensive fall in the temperature of the air took place; the following morning a film of ice half an inch thick had formed beneath the surface, and had become fixed in position at the under surface of the harbor-ice, whilst another film a quarter of an inch thick had formed at the surface of the water, leaving a space between them of about four and one-half feet.

The dissipation of sea-water ice by the approach of spring takes place at first much more rapidly from the upper than the under surface, the atmosphere reaching the required temperature so much sooner than the water. No sensible effect had been produced by the water till its temperature exceeded 29° , when a loss of transparency and vertical stratification of the ice became visible as the first signs of its dissipation from beneath. In the mean time, of a total thickness of four and one-half feet, eight inches of the upper surface had been dissipated.

W. A. ASHE.

The Observatory, Quebec, July 29.

The Florida Heron.

MR. SHUFELDT'S article on the wanton destruction of our heronries I found decidedly depressing reading. As an eye-witness, he was able to give graphic pictures of both life and death. There is perhaps no bird more beautiful, and at the same time more harmless to mankind. Indeed, it is its wonderful beauty that brings its cruel death; and the lack of fear and cunning, being never engaged in mean work, makes it all too easy for the barbarous murderer to approach. The heron is unfortunate. Nature has given it what human vanity makes valuable; and as only death can bring this beauty within reach of the hard-hearted wretches, whom money will induce to do many revolting things, the poor bird must die. If this were the only instance of the kind, it would be yet more painful to our better natures, and those who are guilty of the outrage would seem to us more blameworthy. In truth, it is the trivial use to which the heron's plumes are put that makes the act of getting them so detestable. The taste which calls for them is that of creatures not yet developed to the highest form. Would a bird's feather of any kind add to Venus de Medici? Yet feathers, even those of a buzzard's tail, would adorn an Indian female. When we contemplate any young lady of our age and generation, whose head is so covered with feathers that the only part of the impression the memory retains is that of the curiously combined mass of bird-plunder, we are apt to be led to reflections which it would be cruelty to the good-intentioned girl to make known to her. If the gentle creature is really beautiful, that beauty cannot be adorned, except from within. Any attempt to add to it externally by bright-colored ribbons, flashing jewelry, or plumage, is always shocking to refined minds. If beauty is lacking, the use of accessories to make up what nature has denied is quite certain to excite contempt or compassion.

The truly hideous practice, in vogue a few years ago, of wearing the bodies of birds on the head, seems to have been too much, even for the calloused sensibilities of people of fashion. To be attacked by hungry cats, or to see the famous myth of a spring chicken on Biddy's proudly erect head, was too unpleasant. That there was any sentiment about it is not easily conceivable. The silent woods and meadows did not trouble the dissipated young female of the city. She must be in the fashion, or she must die; and, if she reasoned at all, it was to the effect that it were better that birds should die than that she should give up her slavish ghost.

The fate of the heron is plain. After the slaughter has continued until only here and there a shy one can be found, they will probably assemble in convention, and migrate, to be seen by us no more.

It would be idle to legislate, for only hunters know the way to their resorts, and the former would hardly do for constables. The very habits of a hunter would make it impossible to catch him at it; and, as he likes the sport too well, it would not be practicable to try bribery. The horrible evil will have to be put up with until fashion shall dictate something to take the place of the matchlessly beautiful plumage, or until the frightfully persecuted bird takes itself to remote regions impossible of access to man.

This topic has occupied my mind at times for many years, and I have mourned over the fate of the harmless denizens of our glades;

but I have never been able to form a plan of hinderance that did not soon prove impracticable. I have submitted with a sigh which sometimes became almost a groan. My experience will, I fear, have to be that of all who become interested in the subject. The few words which I have brought together here may be of use in checking the abominable fashion: otherwise they are useless.

L. R. PEET.

Yalaha, Fla., Aug. 11.

Answers.

12. MOSQUITOES.—In *Science* for Aug. 5, 'T. J. H.' queries concerning the re-appearance of mosquitoes on Staten Island seven days after a storm. Though I have made some notes in reference to *Culex* from time to time, this fact has never been observed. Storms are always disastrous to insect-life, and will kill or blow away moths and butterflies, as well as mosquitoes; but that these latter insects should re-appear in numbers seven days after a storm, will depend entirely upon whether the majority of the pupæ have reached maturity or not at that time. Mosquitoes are present in numbers all summer on the salt meadows, — indeed, I have scooped with my two hands together hundreds of their larvæ from the little pools, — but it is only at intervals of about a month that they swarm on the upland. During the latter week in May or first week in June, and the first days of July and August, I have noted swarms of mosquitoes in past years. The worst visitation of all is likely to be the July one, or at least it has been generally so. On low ground and near the meadows I have seen horses in July dressed in garments made for the occasion, and others decked with a profusion of wild indigo, that shook violently as they trotted along. The older residents remember well the mosquito visitation of July 3, 1862, when the vegetables were left unpicked in the garden for a week, and people wore mosquito-net over their hats.

WM. T. DAVIS.

Tompkinsville, Staten Island, Aug. 9.

13. ELECTRICITY AND THE EARTH.—In your issue of Aug. 5, Mr. M. A. Veeder points out some passages in Deschanel's text-book of physics, which he takes to imply that moist air is a good conductor of electricity, and that the earth is a reservoir of electricity; and then he asks, "Has Deschanel been superseded?" I do not happen to have the book referred to at hand, but it does not matter. It is true enough that one may complete an electric circuit through the earth, or through any part of it, when there is proper conducting-material at the wire terminals, not otherwise. The earth, in such case, acts solely like a return wire to complete the electric circuit, and its sole function is conductivity between points that differ in electric potential. As most of the earth's surface is made of conducting-materials, one may make connections for conduction almost anywhere, and it is a great convenience to be able to do so; but it does not follow that the earth stores up any electricity at all, so that it might be called a 'reservoir.' Electricity is but a transient phenomenon, and, when it does work in no other way, is changed at once into heat, in the earth as well as anywhere else. It is therefore improper and misleading to speak of the earth as a reservoir of electricity. As to the effect of a damp atmosphere upon electrical machines, it is well enough known that if means be provided for preventing the deposition of moisture upon the surface of such machines, by heating or otherwise, the machines may be kept electrified for an indefinite time. The electricity generated creeps over the damp surfaces of wood or wax or varnish to the earth, not through the air, whether moist or not. If moist air were a good conductor of electricity, or if it were one of the best conductors, as was stated by Mr. Garriott, it is highly probable that telegraph companies would have found it out long ago, and have had to insulate the wire from the air, instead of which they find it only necessary to insulate from the posts upon which the wires are hung. There is nothing new or strange about these things, except it be, that, having been patent to all for so long a time, they should be unknown to any who are pretentious enough to criticise the labors of those who work according to knowledge, and at the same time evolve out of their consciousness a theory unsupported by a single experiment, and directly contradicted by all we do know.

A. E. DOLBEAR.

New York, Aug. 12.