as above set forth bears no apparent relation to the functional sexual activity of those organs, since it occurs from the time of hatching on. So far as the available histological or physiological evidence indicates, sexual activation of ovary and testis in the fowl begins at the earliest not until some weeks after hatching.

RAYMOND PEARL
ALICE M. BORING

A NOTE ON THE STAR-NOSED MOLE

TO THE EDITOR OF SCIENCE: On April 20 of this year I discovered a star-nosed mole (*Condylura cristata* (Linn.) Desmarest) entering a half-rotten willow stump at the edge of a little pond in the woods at West Roxbury, Mass. The crevice it had entered proved to be a *cul-de-sac,* and, after watching for some little time its eager efforts to escape by burrowing out, I easily captured it by seizing the tip of the tail between thumb and forefinger. I dropped it on the path close by, where it at once burrowed below the surface of the humus and progressed with some speed there, its progress being indicated by a lengthening ridge of earth. Catching it again, I carried it home wriggling and placed it in a wire cage with a wooden floor. It was very active but, owing, I suppose, to the position of the fore paws, which, of course, were fixed with palms outward, it could not get over the ground very rapidly. In the cage it kept going the rounds, poking its nose between the wires in an effort to escape. I dug some earthworms and placed them one by one in the cage. Apparently the mole's power of scent was nearly or quite as weak as its eyesight, for it paid no attention to the worms unless they were dropped directly in the path it pursued about the edge of the cage. When it actually ran its nose into a worm, however, it ate with astonishing greediness, and in a curiously piggish way, with a constant shaking of the head, and shuffling the worm into its mouth with the help of the *backs* of its "hands," which it moved in unison. It devoured about ten worms before its appetite appeared to flag, but one worm, a very large, fat one, it abandoned after cutting it into three pieces by transverse bites. Perhaps this worm was uncomfortably large for its mouth and gullet, for it afterwards ate one or two smaller ones. Little or no chewing took place, apparently, and the worm always disappeared down the animal's throat in a very short time. I heard no noise of the teeth in eating, such as Audubon and Bachman mention in describing the feeding of the common mole. A saucer of water put inside the cage, was not noticed for some time, but finally the mole put its nose into it and appeared to drink, with the same continual motion of the head that it used in eating. It tipped the saucer up a little and spilled some of the water, which it then seemed to drink off the board in a way that resembled sponging out the bottom of a boat. It continued the same operation on the dry part of the board, as if it could not tell where the water ended except by feeling. It struck me as a creature of very small intelligence. Its eagerness to escape was perhaps due less to fear than to a desire to get below the surface of the ground and to a habit of perpetual motion that seemed to possess it. I use the word "eagerness" advisedly, for that seemed to be the dominant mental attitude of the little animal. There was nothing frantic or nervous about its actions, simply eagerness to enjoy life, liberty and the pursuit of earthworms. The tail, and, in fact, the whole body, was very flexible and had a distinctly sneaky suggestion. This was especially noticeable as the animal climbed up and down the crevice in the stump. The mole escaped the same afternoon, so that my observations on its habits are not extensive, but certain mammalogists to whom I have told the story have advised me to put it on record in the pages of SCIENCE.

FRANCIS H. ALLEN

WEST ROXBURY, MASS.,
May 16, 1912

ECONOMIC IMPORTANCE OF THE MITE PHYLLOCOPTES SCHLECHTENDALI NALEPA

THE introduction of this mite into the pear and apple orchards of southern Oregon

(Rogue River Valley) has been comparatively recent. The writer found it for the first time in the summer of 1910, but it was thought to be of slight importance at that time and little attention was given it. Since that time, however, it has been very conspicuous in many pear orchards throughout the valley, and its effect upon the trees was so noticeable this season as to attract general attention.

It is interesting to note that Parrott[1] makes mention of it as very common on apple foliage in the United States, but does not seem to consider it a serious pest. However, he states that "*Epitrimerus pyri* and *Phyllocoptes schlechtendali* have been quite numerous and appear to be more common here than on the continent." However, he adds, "The behavior of these two species in the future is a matter of interest, as both seem to have possibilities of developing to greater economic importance." In Science (N. S., XXIII., 576) he states that *Phyllocoptes schlechtendali* has been detected only on apple foliage. However, the writer has noted that apple foliage is not seriously attacked, while the foliage, terminals of twigs, and frequently the fruits of the pear are most subject to injury. In fact, the presence of the mite on apple foliage seems to be of little importance, as no serious injury because of its presence has ever been observed.

In this district this mite seems to be of economic importance to the pear growers. The injury resulting from its presence in the pear orchards is generally apparent during the latter part of June or early July. The foliage has a peculiar rust or russet appearance on the under side and is also somewhat curled, as though by drought. There may be some slight russeting on the upper side, but this is rather uncommon. The terminals of shoots are also attacked and have the same brownish appearance of the under surface of the foliage. Where the attack is serious, the whole tree has a brownish appearance and the trouble has been given the local name "rusty leaf" by the fruit growers. During the latter part of July and through the month of August, badly injured trees shed the foliage from their terminals. The terminals have a somewhat shriveled appearance, the epidermis being brownish-black or black. Very often the injured epidermis is cracked or broken, due to the expansion of the growing tissue beneath. The fruit is also attacked and is russeted and cracked in the same manner as the terminals.

The injury to young pear trees is usually greater than to older bearing ones. Sometimes almost complete defoliation of the young tree results before it has had its season's growth, and besides the epidermis of the growing shoots has been injured. Fortunately, this mite is very easy to control. As in the case of all of our economic species attacking plants, the use of lime-sulphur, dry sulphur, oil emulsions, etc., will completely control it. Since it is a surface feeding mite producing no galls, it would seem that there should be no trouble in eradicating it.

The writer wishes to thank Dr. Nathan Banks, of the U. S. National Museum, for verifying his identification of the species.

P. J. O'Gara

Office of the Pathologist and Entomologist,
Medford, Oregon,
November 4, 1912

[1] Bulletin No. 283, New York Agricultural Experiment Station, 1906.

A PARAFFIN BATH WITH CONCEALED THERMO-ELECTRIC REGULATOR

One of the disadvantages about the ordinary paraffin bath is the exposed thermo-regulator. By attaching a covered moat to the back and one side of an oblong bath and inserting a thermo-electric regulator similar to one described by Long[1] patterned after Mast[2] there need be no delicate and breakable parts above the bath.

The bath described is heated by two incandescent lamps, one a four-candle, the other a

[1] Long, J. A., "The Living Eggs of Rats and Mice with a Description of Apparatus for Obtaining and Observing Them," Univ. of Cal. Pub. in Zool., Vol. 9, No. 3, pp. 105–136, pls. 13–17.

[2] Mast, S. O., 1907, "A Simple Electric Thermo-regulator," Science, N. S., 26, 554–556.