

klein; letztere können auch gänzlich fehlen. Bisweilen entsteht eine anilläre Prolifikation der Blüten, und zwar immer in der Weise, dass in den Achseln von zwei bis drei Kelchblättern sich neue Knospen bilden, aus denen aber wohl niemals normale Blüten entstehen.

Uebrigens versteht es sich von selbst, dass an den weniger heimgesuchten Pflanzen auch ziemlich normal entwickelte Aeste, Blätter und Blüten vorkommen.

Die von *Aphelenchus ormerodii* nov. spec. und *A. olesistus* nov. spec. verursachten Pflanzenkrankheiten werden in der zweiten Abteilung dieses Aufsatzes beschrieben werden.

#### BURIED ALIVE, — ONE'S SENSATIONS AND THOUGHTS.

BY WARREN K. MOOREHEAD, 5215 WASHINGTON AVE., HYDE PARK, CHICAGO.

THE title of a paper written for *Science* — "Buried Alive" — seems rather sensational, and, so far as the title goes, the article might be more properly published in one of the daily newspapers. I have made bold to write upon an unpleasant experience of the year 1888 at the suggestion of several friends interested in studying suspended respiration. They have told me that cases of complete burial in earth (the subject being conscious meanwhile) where the person "interred" escaped with his life and was able to give a satisfactory or intelligent account of his feelings, are extremely rare. They suggested that, as my accident would furnish material for consideration among medical men interested in kindred studies with themselves, it had better be described.

A mound was being excavated near Frankfort, Ross County, Ohio, in August. At the centre the wall (from the base-line upwards) was fifteen feet high. It was undermined by the workmen, and, as I bent down to examine a small bone uncovered in the process of undermining, a mass of earth equal to several cart-loads suddenly dropped from above.

There was no one in the excavation, the men having gone on top preparatory to cutting down the undermined wall. As the earth cracked loudly, I looked up and started to rise. The falling mass knocked me back about five feet, so that I fell with my head and shoulders resting upon a heap of loose earth. The falling wall was, of course, seen only for an instant. It looked black, and the rush of wind it caused I well remember. My head and shoulders were somewhat higher than my legs, possibly a foot. The feet were spread apart. There was little pain, only pressure, *intense pressure*. It forced the buttons of my light field costume partly inside the flesh; my watch-chain left a bright-red mark along my left side. I could feel the watch strongly pressed against two ribs (these were broken). The skin over my forehead seemed being cut, but it was the pressure of my hat forcing the flesh between the laced straws. A knife in my pocket seemed burning hot. Just under the small of my back lay a large clod. The pain at the point of contact was considerable at times, and my spinal column seemed slowly breaking. Then the pain stopped and I could feel nothing.

Thoughts coursed like lightning, — past life, future, and home. I did not think much of the situation, except to wonder if I could breathe when I got out. One singular thought occurred. I remembered reading of women who, in war times, buried their husbands in ash piles or sand-heaps to prevent their being drafted into the army. I had often wondered if it were possible for one so placed to breathe through a tube, as described in the stories. I remember trying to move a hand, even a finger. One could not have been more firmly held in a mould. My arms and hands were perfectly motionless. The chest could not be inflated or moved the slightest distance. On the contrary, the downward pressure forced all the air out of my lungs. I remember how hot the earth against my face became as the last breath was forced from me. Just in front of my mouth and chin was a slight hollow, formed by the arching of two good-sized lumps of clay. I could move my chin and open and shut my mouth. That was the only part of my entire body that could be moved. I remember trying to keep my mouth shut to keep out the dirt. But after a few seconds my mouth instinctively opened, and, the arch having broken down, earth filled it. I remember the horrible sensa-

tion of trying to dislodge the earth and the fear of strangling that suddenly seized upon me. I then felt that I was doomed to perish, but had no fear and did not particularly care.

It was sixty seconds, so the surveyor says, when the men reached my head. The laborers think it was over a minute, but I am inclined to believe the surveyor. I felt the earth move slightly above my head. That gave me hope. I had not thought much of rescue, but I gathered my remaining strength. A shovel passed across the top of my head, cutting the scalp; I remember feeling it as if a hot iron had struck me. Then they uncovered my head and removed the earth from my mouth and eyes. For some unaccountable reason they stopped for an instant. The surveyor says the pressure was so great upon the imprisoned portions of my body that the blood was forced to the head, and the veins stood out so strongly he feared they would burst. Even with the head uncovered I could not breathe. They soon had me laid out-side upon some wheat sheaves. I remember, just as they carried me out, seeing a little yellow "wild canary" perch upon a tall thistle near at hand. I heard it sing a sweet song. As the bird flew away, I seemed to follow it, dancing about the fields, perching upon this and that shrub, just as it did. The sky seemed to have a different color from that usually noticed, I was impressed with its grandeur, — the scenery of the surrounding country was remarkably beautiful, and as I observed all these things they affected me, and I cried.

They rubbed my limbs, I could see the men at work, but could feel nothing. The partial paralysis of my limbs continued for some days. To some extent the accident has affected my mind. I cannot now enter an underground cave, or mine, or stand under an overhanging bank without an effort; it requires all my will to go in them. I also often dream of caving banks and experience precisely the same feelings as I did in reality. I neglected to state that the earth above my head was about three feet thick, that over my legs was much deeper. Many persons buried in gravel pits and in earth not nearly so deep have been taken out dead.

#### NOTES AND NEWS.

IN a letter to Dr. Charles S. Minot the method used by Dr. M. von Lenhossék to obtain his remarkable results on the nerves of earth-worm, is described as follows: The method cited by me corresponds to Golgi processo rapido: Pieces of an earth-worm, each three-quarters millimeters long are placed for three to five days in about ten cubic centimeters of the following mixture: Bichromate of potassium, 3.5 per cent, four parts; perosmic acid, 1 per cent, one part. The pieces are then dried off with filter paper, and placed for about forty-eight hours in the second solution of 0.75 per cent nitrate of silver, to every two hundred cubic centimeters of which one drop of formic acid is added. As soon as the pieces are placed in the second solution a reddish brown silver precipitate is thrown down upon their surfaces; the success of the method depends upon this precipitate being formed in the interior of the tissues also. The pieces after this treatment must be hardened rapidly in absolute alcohol (probably a large quantity of 96 per cent alcohol will act equally well), and are then imbedded in elder pith and cut with the microtome. If the reaction has been successful, the nerve-fibres and the cells from which they spring will show the well-known and characteristic Golgi coloration (almost black owing to the silver deposit). If the first attempt at the reaction fails, the coloration may be often obtained by repeating the sojourn in the two liquids as above directed. But even after double treatment the reaction is often not accomplished, but when it succeeds it amply repays all the trouble and vexation it causes. The sections must be mounted at once in Canada Balsam dissolved in xylol (or benzole), and left without a cover-glass. (In the second volume of the "Anatomische Hefte" a method is described by which Golgi preparations may be made so permanent that they may be mounted with a cover glass.) It is by means of this method that Lenhossék made the discovery that the sensory nerve-fibres arise from the sensory cells of the epidermis and branch in the same manner as in vertebrates, forming within the central nervous system a branch running tailward and another running headward.