

For the REVIEW.]

NATURE LESSONS.

Agaricus (Amanita) Vernus, Bull.

(THE "DEADLY" OR "SPRING" AMANITA).



TEACHER. I have drawn here roughly, and I am sorry to say not very accurately, for I was never made to draw until I had to teach, seven stages in the growth of mushrooms and toadstools generally. The particular species whose life history I have endeavored to picture is one you should know in order to avoid it and its relatives. You have collected very many different kinds of these gill-caps, mushrooms, or toadstools, this fall; but not this species exactly, although we have got another next brother to it in considerable abundance. I mean the Fly-Poison Amanita, the top of whose cap is tinged a beautiful yellow or orange generally, although its spores are pure white like those of the one figured. And the ragged patches sticking on its cap are very conspicuous. But the Deadly Amanita appears in early summer, while the Fly-Poison Amanita is to be found abundantly in the fall only. The Deadly Amanita is also nearly white, and the scales as a rule are not nearly so conspicuous as I have figured them above. Sometimes they nearly altogether fall off; and the reason why I figured so many of them on this specimen, was rather

to call your attention to the fact that they are there at first, and you should look very carefully to see if any specimen which appears to have no such scales on them, have not at least a few to show that they were there. But some of you can draw just about as well as I can, if you try. Now tell me how you would change my picture of stage seven to make it the Fly-Poison Amanita?

SCHOLAR. I would color the skin of the cap under the patches a yellow or orange, for I have seen some with a very reddish yellow color, while others were a paler yellow.

T. Very good. But will you look at the base of the stem from which the rootlets come?

S. The Fly-Poison one does not show so distinct a cup around the stem. You can hardly see a cup at all. The base of the stem is large but instead of a regular rim there are only, as it were, fibres sticking out.

T. Very good again. But as you have a number of mushrooms and toadstools in all stages of growth, you can tell me some respect in which there is a difference between this one and the ordinary and other mushrooms.

S. I have a young mushroom here of some kind and there is a sort of a veil running out from the stem to the edge of the cap just as if it were to keep the gills in a chamber by themselves, and when the cap opens out the veil or curtain is torn and remains around the stem as in the figure. But I do not see any outer covering such as is shown plainly in the split specimen of stage 4, and which is being burst in stage 5, and which is completely burst in stage 6, leaving patches on the top of the cap and a rim or cup at the base.

T. That is just what I wanted you to notice. You correctly named the membrane connecting the edge of the cap to the stem as the "veil," and the veil in some species is thinner than a cobweb, and in others a very conspicuous sheet. But the real difference between this and the other gill-caps you have been examining is in the conspicuous outer covering surrounding the whole plant, when it was young, like an egg shell, which, when it is burst, remains as patches sticking more or less firmly to the true skin of the cap and which forms a cup-like rim around the enlarged base. That cup should be shunned as a death cup, and when the cup is nearly invisible, as it is in the Fly-Poison, you should notice that it is really there, although when the covering is burst it does not leave so marked a cup as the other.

S. What do you call the outer covering, the remains of which make the scales on the top and the cup at the base?

T. It is called the "volva" to distinguish it from the "veil."