almost homogenous, soft and tender, marked on its surface by numerous sinuous furrows, and having within many irregular cavities, which, as well as the outer coat, are uniformly covered with linear parallel cells. From the summits of these peripheric cells, internal as well as external, issue oval corpulces, (small particles) from the 5 to the 7 thousandeths of a millimeter (the least measure of length) in length, which spread upon neighboring objects, and especially the glumes of the flowers they inhabit. They are a kind of reproductive cells, called conidia, which are produced by many fungi, long before the perfect plant is developed. M. Tulasne calls them "*Spermatic.*" In the early stage, the sphacelia respects the top of the ovary and the stigmas attached. The stamens often abort; but the filaments and anthers may sometimes be seen buried in the tissue of the sphacelia and altered by its action. Sometimes the ovule is not completely aborted, but it is certainly never developed into a monster grain. In all ergotted plants the top of the pistils and stigmas, when they remain, are often covered with a mouldiness, consisting of spores and entangled filaments which end by covering the parts with an abundant ashy or sooty powder. This is a different fungus, and was confounded by M. Quekett with the ergot plant. It is found as well in the non-ergotted as the ergotted flowers, and in those of plants which do not bear ergot. At a somewhat advanced period of the development of the sphacelia there exudes, especially from the summit, a very adhesive juice, which spreads over that structure bearing along with it an immense number of the seedlets or "spermatics,"

This leaves on the surface when dry an oily appearance, and afterwards the spots, where it remains, become brownish or blackish. But this exudationdoes not appear until the sphacelia has ceased to constitute the whole plant.

At the base of the sphacelia is produced a compact body, violet-black without, and white within, which is the ergot in a rudimentary state. With this commences the second stage in the development of the fungus. The young ergot is everywhere invested by the tissue of the sphacelia (which Tusane calls also spermogonia, from its office) but, as it increases it seems to be placed below the *spermatopherous apparatus*, and raises it steadily out of the floral bractes which concealed it, ending by supporting it wholly at its summit. Sometimes are carried with it the atrophied ovary, which still shows the hairs that crowned it. and some remains of the stigmas. It results that the ergot, which is technicaily the sclerotium of the fungus, remain for some time concealed in the sphacelia, so that this seems to constitute the whole plant. But when the function belonging to this has been fulfilled, which is apparently to impregnate the