

PLATE II.

FIG. 21.—Base of a broken root-hair; *s*, cutinized sheath; *b*, hypha of penetrating fungus. $\times 1,000$.

FIG. 22.—*a*, formation of conidium; *b*, ripe conidium; *c*, germinating conidium. $\times 1,000$.

FIG. 23.—Antheridial ridge showing three antheridia in different phases of development, *a*¹, *a*², and *a*³. $\times 250$.

FIG. 24.—An older antheridium. $\times 250$.

FIG. 25.—A still older phase in which the outer wall is undergoing division. $\times 250$.

FIG. 26.—Antheridial ridge showing the formation of paraphyses, *par*. $\times 90$.

FIG. 27.—Development of antherozoids; *a*, young sperm-cells. $\times 500$. *b*, definite spermatophytic mother-cells; *c*, a later phase of the same, the nucleus is beginning to become crescentic; *d*, young antherozoids within the mother-cells; *e*, ripe antherozoid. In *e*¹, the protoplasmic vesicle is still retained; in *e*², it has disappeared. $\times 1,000$.

FIG. 28.—Matured antheridia showing the doubled outer wall; within, the antherozoids are swimming in a gelatinous matrix. In *a*, they are escaping. $\times 250$.

FIG. 29.—First stage in formation of the archegonium. $\times 250$.

FIG. 30.—A later phase showing formation of the basal cell. $\times 250$.

FIG. 31.—Anticlinical division of the cervical rudiment. $\times 250$.

FIG. 32.—Periclinical divisions of the cervical portion of the archegonium. $\times 250$.

FIG. 33.—Nuclear division of the axial cell. $\times 250$.

FIG. 34.—The same completed. A paraphysis at *a*. $\times 250$.

FIG. 35.—Nuclear division of the cervical canal-cell. $\times 250$.

FIG. 36.—The same completed. $\times 250$.

FIG. 37.—Ripe archegonium, showing the ventral canal-cell. $\times 250$.

FIG. 38.—Opened archegonium with penetrating antherozoid. $\times 500$.

FIG. 39.—Fertilized egg. $\times 250$.

FIG. 40.—The same older and larger. $\times 250$.

FIG. 41.—First division of the embryo. $\times 250$.

FIG. 42.—Formation of the median wall of the embryo. $\times 250$.

FIG. 43.—An older embryo in which anticlinical divisions are present in the upper octants. $\times 250$.

FIG. 44.—Another embryo of the same age, with oblique walls. $\times 250$.

FIG. 45.—The same age as the foregoing, showing irregular segmentation. $\times 250$.

FIG. 46.—A more advanced phase showing periclinical activity in the upper cells of the young embryo at *a*; *b* is the foot region. $\times 250$.