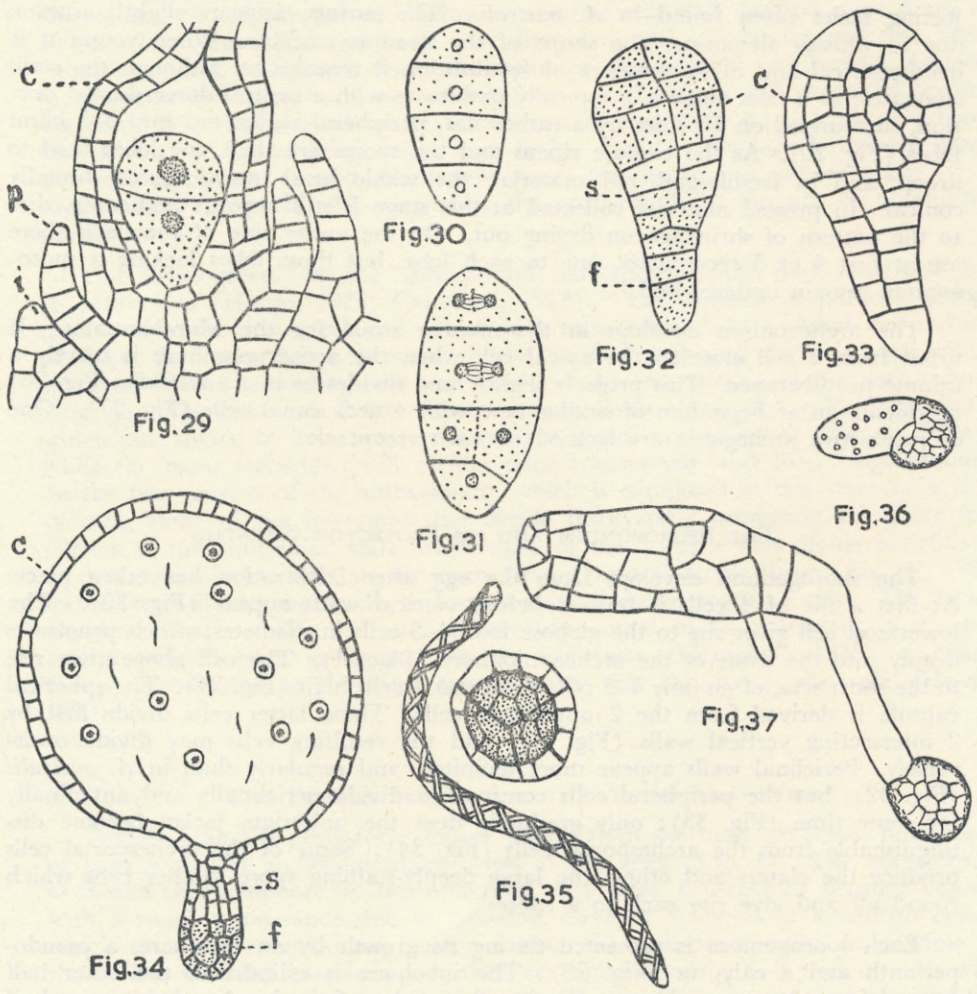
disjunct and incurving (Fig. 28). It is distinguishable from the basal portion in that its cells have thickening at the corners and to some extent on the longitudinal walls except in the regions where the actual splitting occurs. The calyptra is the thin, innermost sheath developed from the archegonial venter after fertilization. The sporogonium is mature in October to December. At this stage it has a small attaching and absorbing foot region, a short seta which does not lengthen further, and a spherical dark-brown capsule. The uniseriate jacket of the capsule at maturity is pale golden-brown or faintly green in colour and lacks thickening except in the cap region where colourless trigones are found at the corners of the cells. Dehiscence takes place by the top breaking away as a lid of more or less circular outline which temporarily becomes trapped by the incurved lobes of the pseudoperianth. The cup-shaped basal portion of the capsule, irregularly toothed on the rim, remains in position. Gradually the spores, aided by hygroscopic movements of the elaters, are shed through the slits of the pseudoperianth.



TEXT-FIG. 3.—*Asterella tenera*. Fig. 29.—Vertical section of a 2-celled embryo *in situ*. × 380. c, calyptra; i, involucre; p, pseudoperianth. Fig. 30.—Vertical section of an embryo showing a file of 4 cells. × 380. Fig. 31.—Vertical section of an embryo showing vertical divisions. × 380. Figs. 32, 33.—Vertical sections of an embryo showing periclinal walls in the capsule region. × 380. c, capsule region; f, foot region; s, seta region. Fig. 34.—Vertical section of a sporogonium when almost mature. × 75. c, capsule; f, foot; s, seta. Fig 35.—Spore and elater. × 350. Fig. 36.—Germinating spore. × 200. Fig. 37.—Young sporeling with the apical cell forming. × 200.