

## NOTES.

**CORRELATION OF GROWTH UNDER THE INFLUENCE OF INJURIES.**—In the paper on this subject which appeared in the *Annals of Botany*, Vol. xi, No. XLIV, December, 1897, reference was made on p. 513 to Laurent's valuable paper, *Études sur la Turgescence chez le Phycomyces*, but by an oversight the name of the author was omitted.

C. O. TOWNSEND.

**GELATINE AS A FIXATIVE.**—Microtome-sections passing through embryonic and parenchymatous tissues embedded in paraffin are sufficiently fixed to the microscope-slide, for staining purposes, by their own simple adhesion to the glass. This, however, is not the case when the section comprises a large proportion of woody tissue. For such preparations, collodion, agar-agar, and albumen have been recommended as fixatives. The first of these, so far as my experience extends, is the most certain. But it has the disadvantage that with its use the paraffin-section cannot be floated out on water on the slip and caused to flatten out by gentle warmth. The same objection applies to albumen<sup>1</sup>, and in addition, I have found it to be very easily coloured by stains (especially the blue dyes) which are often essential to use in microscopic work. I have no experience with agar-agar, but Zimmermann states that it becomes dyed with haematoxylin—one of the most important stains, and that the sections often come loose from the glass during the staining and washing manipulations. This latter objection, perhaps the most vexatious of all, applies, to some extent, to albumen also.

Recently I have used as a fixative a dilute solution of gelatine in a watery solution of bichromate of potash. The solution should be quite fluid at 10° C. In use the ribbon of paraffin-sections is laid on a drop of this solution on the slide. Wrinkles in the sections may

<sup>1</sup> I used the preparation given by Zimmermann, *Bot. Mikrotech.*

be removed by gently warming the slide over a flame. Then the superfluous fluid is drawn off by blotting paper, and the gelatine is allowed to dry and harden. During this process it should be exposed to a bright light. The action of the light on the bichromated gelatine renders it quite insoluble even in warm water, and so removes all danger of the sections becoming detached from the slide. The bichromate of potash in the gelatine has this additional advantage, that after exposure to light it prevents the latter from taking up the dyes used as stains. So far as I have at present tested it, this preparation of gelatine is unaffected by saffranin, fuchsin, acid fuchsin, haematoxylin, iodine green, gentian violet, and aniline blue. With aniline blue, however, a precipitate is sometimes formed along the line which formed the edge of the paraffin ribbon and in cracks in the ribbon; but in no case is the substance of the gelatine itself stained, and so it offers a marked advantage over albumen and agar-agar.

HENRY H. DIXON.

TRINITY COLLEGE, DUBLIN.

**LATHRAEA SQUAMARIA.**—I find that in my paper on this subject, which appeared in *Annals of Botany*, Vol. xi, 1897, p. 385, I omitted to include in my references to the literature the observations of C. Darwin and F. Darwin, of which an account is given in 'The Power of Movement in Plants' (footnote, p. 85). The authors show that *Lathraea* can excrete large quantities of water underground, and state that the water is secreted by glands lining the cavities of the scales.

PERCY GROOM.