vention is to paste a border of ordinary black binding tape on the coated side before work upon the slide is begun. This is an easy method also of inhibiting any tendency to write upon more of the slide than can be shown upon the ordinary screen.

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CELLOIDIN-PARAFFIN METHODS

The review of Apáthy's[1] celloidin-paraffin method published in Science by S. I. Kornwork the present writer chanced upon, although actively interested between the years 1912–1915 in similar methods of imbedding plant tissues.

During research studies in plant anatomy, bulbs of *Cooperia Drummondii* were found to be particularly troublesome material to imbed. The delicate scales contain starch, calcium oxalate crystals and a mucilaginous slime which may coagulate during killing and fixation. These scales are attached to a base or axis formed of parenchyma, it is true, yet of parenchyma of an entirely different structure from that of the scales. The difficulties encountered because of the included materials plus the variance in structure of the bulb axis and its attached scales caused a wide search for a suitable imbedding medium. The choice at last was a combination of celloidin and paraffin, the advantageous qualities of which can not be emphasized too strongly. As Dr. Kornhauser points out, celloidin in contact with the object prevents shrinkage of the material on cooling and paraffin allows of serial sections which can be readily spread on the slide. Whether there are advantages or disadvantages in Apáthy's oil mixture I do not know, having never tried it, but I do know that entirely satisfactory results can be obtained with material which can be handled neither in paraffin, in celloidin, in agar-agar, nor in rubber and paraffin, by a much more simple celloidin-paraffin method than that of Apáthy's. The technique planned and followed out by the present writer was simply as follows: Material is treated to the celloidin process of imbedding up to the point where the object would usually be set in a block. Instead all surplus celloidin is removed from the object which with the adhering and infiltrated celloidin is hardened in 70 per cent. alcohol and later placed for clearing in chloroform for two hours. The next step is to place the object in 85 per cent. alcohol and from there on to follow the paraffin method. Material thus treated cut with an unusual smoothness, making it possible to obtain serial sections 10 μ in thickness with an ease that was a surprise and also a great comfort.

If one desires to cut serial sections of objects too large for the block of a rotary microtome or to be handled in paraffin, such large objects imbedded in celloidin (mature bulbs) can be cut into sections 50–75 μ thick with the sliding microtome, and placed immediately in 70 per cent. alcohol, from which they can be carried through the alcohols and imbedded in paraffin. It seems probable that Apáthy's oil mixture would be a valuable asset here because in cases where it is necessary to retain considerable celloidin, *e. g.*, in handling bulbs where the scales ordinarily fall apart on cutting, it would prevent the shrinkage caused by the drying effect of the alcohols and the heat from the bath.

There are surely two advantages to the celloidin-paraffin method as commonly used by the writer, (1) its simplicity and (2) the removal of surplus celloidin, a substance affected by the drying effect of the higher alcohols and heat and also inert itself in histological value and yet troublesome because of its affinity greater than that of plant tissues for stains such as gentian violet and safranin.

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[1] Apáthy, S., 1912, "Neuere Beitraege zur Schneidetechnick," *Zeitschr. wiss. Mikr.*, Bd. XXIX., S. 449–515, 4 textfiguren.

[2] Kornhauser, S. I., "Celloidin Paraffin Method," Science, N. S., Vol. XLIV., No. 1134, pp. 57–58, July 14, 1916.

ALLIGATORS AS FOOD

An article by the writer on "Reptiles as Food," which appeared in the December, 1917, number of *The Scientific Monthly*, having