It is quite likely, of course, that treatments with these chemicals stimulate the production of gentiobiose.

Details of these experiments will be published elsewhere.

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CHEMICAL EXAMINATION OF THE LIPID FRACTION OF ROYAL JELLY

HEYL[1] has reported that dilute NaOH extracts or aqueous pyridine extracts of royal jelly, when injected subcutaneously for five days into 21-day-old female rats, caused an increase in follicular activity of the ovaries. Melampy and Stanley[2] have recently failed to confirm this finding. However, it is important to note that the latter workers used *acetone-dried* royal jelly. The use of such a solvent to remove water completely would also remove sterols, phenols, acids, esters, glycerides, etc., some of which are the very types of compounds most likely to possess gonadotropic activity.

For nearly two years the chemical fractionation of royal jelly has been progressing in this laboratory and biological testing of the fractions has been commenced. In a paper at present in press, the authors describe the preliminary results of the chemical examination. Royal jelly contains an ether-soluble fraction of some complexity from which the authors have been able to isolate six substances, and there are indications of several others. Royal jelly, dried to constant weight over P_2O_5 and then powdered, when exhaustively extracted with ether in a Soxhlet apparatus, yields 10 to 15 per cent. of its weight as a cream-colored, semi-crystalline material of waxy consistency. This fraction has a characteristic flowery to spicy odor. The ether-soluble material contains about 0.1 per cent. phosphorus and 0.3 per cent. nitrogen. About 85 per cent. of this fraction can be extracted from ethereal solution by dilute sodium hydroxide. The separation of phenols and acids from this alkali-soluble material, and of wax, phospholipid, sterols and glycerides from the alkali-insoluble portion, has been accomplished. The difficulty of obtaining sufficient quantities of these individual substances delayed commencement of the biological experiments.

However, some feeding experiments performed over a year and a half ago, using the fruit fly, *Drosophila melanogaster,* revealed that the ether-soluble fraction possessed a remarkable influence on the number of eggs laid and the rate of reaching sexual maturity. These results have not been reported because we had hoped to be able to identify the compound responsible for this effect before publishing. The failure of Melampy and Stanley, using acetone-dried royal jelly, to confirm Heyl's results, appears to support our finding that the active material influencing the reproductive system is in the ether-soluble fraction. The detailed results of the Drosophila experiments will be published shortly. Our chemical and biological studies are being continued.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

ACCURACY IN ANATOMICAL DRAWING

To encourage greater accuracy in anatomy students' drawings, this year one class was provided with 8×10 inch sheets of cellulose acetate (du Pont Plastacele, 1/50 inch thick) ruled in centimeter squares with black auto lacquer. The students themselves prepared 8×10 inch heavy bristol board sheets with India ink rulings in centimeter squares (one side), in $1\frac{1}{2}$ cm squares (opposite side), in $\frac{1}{2}$ cm squares (another sheet, one side), and in 2 cm squares (opposite side). Both cellulose acetate and bristol board sheets were numbered vertically and horizontally so that the coordinates of points could be read off with ease.

For drawing, the clear cellulose acetate sheet is laid over the specimen and the appropriate surface of the proper bristol board inserted under the drawing paper. To draw natural size, the surface of the bristol board ruled in centimeter squares goes under the drawing sheet, its rulings clearly showing through the page. To enlarge to $1.5 \times$ the $1\frac{1}{2}$ cm ruling is used, for $2 \times$ the 2 cm ruling, for reductions to $0.5 \times$ the $\frac{1}{2}$ cm ruling. By quickly plotting the chief features of the structures to be drawn on their appropriate coordinates on the drawing paper, the outlines are easily obtained.

Increased facility for making accurate drawings is especially apparent in dissection of nervous or circulatory systems, where simultaneous vision of all related parts is impossible without extensive excision of other organ systems. If the tip of the snout, the sternum or other landmark be fixed upon for repeated reference, the details visible at any one time may be plotted in on the coordinates, then intervening structures moved aside, and the deeper ones exposed. Replacing the cellulose acetate sheet with reference to the chosen point allows the drawing of deeper structures to continue with no distortion. This has proven especially valuable where superficial structures are exposed days before deeper ones. The drawing begun with reference to well-chosen points can be continued after deeper portions are exposed even though the superficial struc-

[1] H. H. Heyl, SCIENCE, 89: 540, 1939.
[2] R. M. Melampy and A. J. Stanley, SCIENCE, 91: 457, 1940.