THE Hancock Life Insurance Company, Boston, has made an additional gift of $20,000 to the Harvard Cancer Commission; $5,000 to be used for purchase and installation of a diagnostic apparatus and $15,000 to be placed in the permanent fund. The insurance company previously gave $30,000 toward the building of the Huntington Hospital, which is devoted exclusively to cancer cases. The new gift will be used in the biophysical laboratory, which is also under the direction of the commission.

UNIVERSITY AND EDUCATIONAL NOTES

AT the commencement exercises of Harvard University President Lowell announced the receipt of gifts during the year amounting to nearly four million dollars. This sum includes the payment of pledges to the Harvard endowment of $1,080,619.

THE Tanners' Council of America has voted to erect a research laboratory at the University of Cincinnati, contributing $110,000 for the erection of the building.

TWO bequests, one of £30,000 and one of £20,000, have been made to the University of Melbourne Medical School.

DR. FREDERICK P. GAY, professor of bacteriology in the University of California, has accepted the chair of bacteriology in Columbia University.

PROFESSOR M. C. BURRITT and Professor W. H. Chandler, vice-deans of the New York State College of Agriculture, will retire at the end of the present academic year.

DISCUSSION AND CORRESPONDENCE

THE PREPARATION OF FIVE KILOGRAMS OF DESICCATED EUGLENA[1]

GOTTLIEB (1850), Kutscher (1898), Bütschli (1906) and others have attempted the collection of *Euglena* in amounts sufficient to warrant biochemical investigation of this relatively accessible microorganism. Their interesting results were in each case limited by the very small quantity of material attained by their methods of filtration and sedimentation. The present communication is offered as a suggestion that *Euglena*, and possibly other unicellular bodies, can be obtained in great quantities with less difficulty than might at first be apparent.

In 1921 a heavy scum, or "bloom" of *Euglena* (Sp.) appeared on one of the campus ponds. To concentrate this scum by filtration is impracticable. It was found, however, that the scum is sufficiently tenacious to permit its accumulation with the following device. By means of cords, a wooden float, consisting of a board 1.5 m. long, 10 c.m. wide and 5 c.m. thick, was suspended parallel to and from the small end of a long bamboo pole. To collect the material the pole was swung in arcs over the surface, dragging, or better, pushing, the scum close to a concrete embankment—an effect suggesting the skimming of cream with a gigantic spoon. The scum was then easily gathered with a large photographic developing tray and transferred in five or ten gallon lots to the laboratory.

After sufficient dilution, the euglenae were shaken until a uniform suspension resulted. This was strained through a "10-mesh" brass sieve to remove the gross débris. The fluid was then forced through a "60-mesh" sieve by stroking the upper surface of the sieve with a strip of pliant rubber. The suspension was allowed to stand in the dark for twelve hours in large jars to which cracked ice had been added. It was found that agitation followed by cold and darkness results in the euglenae settling sharply as a bottom sludge. The supernatant liquid, containing most of the foreign protozoa and some other floating particles, was siphoned off. Microscopic examination revealed that the sludge consisted of euglenae in a state of high purity.

The sludge was dehydrated by adding an equal volume of ninety-five per cent. alcohol, allowing the euglenae to settle, decanting the diluted alcohol and adding fresh; this procedure being repeated until the euglenae were in ninety per cent. alcohol. After a Buchner filtration, the filter-cake was granulated with a potato masher. The resulting damp granules were dried at 50°. From roughly 250 liters of

[1] 1850 Gottlieb, J. *Ann. d. Chemie u. Pharmacie* Bd 75 p. 51; 1898 Kutscher, F. *Zeitschr. f. physiol. Chemie* Bd. 24 p. 360; 1906 Bütschli, O. *Arch. f. Protisten.* Bd. 7 p. 197.

scum five kilograms of euglenae were obtained as a non-hygroscopic, dusty, gray-green, granular powder.

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SYRPHID LARVÆ AS PESTS

WE are all accustomed to regard the predacious larvae of several of our syrphid flies as distinctly beneficial insects. It was, therefore, a great surprise to learn, a few days ago, that the larvae of some of these flies were the cause of the closing of several canneries in the Santa Clara Valley, California.

During the past few years the business of canning spinach has grown until it is now an industry of considerable importance in California. Hundreds of acres are sown to this crop, the grower receiving about $20 a ton for the spinach cut and crated in the field. The average yield is four to six tons per acre.

Soon after the spinach began to come into the canneries this spring it was noticed that there was an unusual number of "worms" on the leaves and that many of these were not removed in the usual washing process and that some of them even found their way to the cans that were ready for sealing. The cannery men immediately stopped canning and sent word to the growers that no spinach infested with the "worms" would be received. This meant the loss of hundreds of thousands of dollars to the growers as well as tremendous losses to the cannery men who had already contracted to deliver what they had every reason to believe would be the largest output in their history.

An investigation showed that the principal cause of all this trouble was the larvae of one of our most common syrphid flies *(Lasiophthicus pyrastri)* which were feeding on the aphid *(Rhopalosiphum persicae)* which is a common pest of the spinach. The larvae of other syrphid flies were present also, but this *L. pyrastri* was the most common. The season had been a particularly favorable one for the flies and we found that the larvae were doing a remarkable work in destroying the aphids. But as some of them would stick to the leaves even through the washing process and turn white when the spinach was in the scalding water, their presence on the leaves when it was ready for the can was easily detected and, of course, the product could not be used.

A few days later the number of larvae to be found on the spinach in the field began to decrease very rapidly and at the end of a week they were so scarce that some of the cannery men decided to see whether by using particular care in picking over the spinach in the cannery they could not get a clean product. Even the most careful work, however, failed to dislodge all of the larvae and it was decided not to pack any more spinach this season, as the cannery men are determined that the pack that goes out from their places shall be perfectly clean. This means that the growers in this valley will lose approximately $400,000 because of the presence of this "friendly" insect in their fields.

Spinach that is planted early in the fall and is ready for the cannery in March is not infested by the aphids to any extent and the syrphid larvae are not to be found until the aphids are there. Early planting, then, is the remedy.

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ON THE VITALITY OF COTTON SEED

AMONG our most destructive cotton diseases is anthracnose which is caused by the fungus *Colletotrichum Gossypii Southw.* So widespread and destructive is this disease in the cotton growing states that its literature is now quite extensive. In common with other members of the genus, the fungus infects the seed and in this way is carried over from one season to the next. It is, therefore, necessary in order to combat the disease effectively to secure uninfected seed for planting.

Treating the seed with fungicides has been tried with negative results. The difficulty encountered was the inability of the disinfectant to penetrate the seedcoats and so reach the fungus. The hot water method of treating seed was also tried and promised well but was later abandoned as unpracticable. The thermal death point of the fungus appeared to be too near that of the seed. From the results of previous work it appears that the ordinary method of seed treatment will give unsatisfactory results.