northeastern Georgia and to be new to that section. It had been first observed by Mr. D. J. Pitts, of Bowman, Georgia, and material was later sent me by Mr. Pitts, who also wrote as follows:

I first noticed this clover some five or six years ago in my crimson clover and thought nothing of it at that time, but it stayed on this piece of land without any help, and volunteered each year until it covered a place ten by twenty feet; so I stripped a few seed last spring and sowed them in a field on a strip ten by seventy-five feet; it, also, grew well.

This clover proved to be *Trifolium striatum* L., a species widely distributed in Europe. It seems to be quite at home in northern Georgia since the plants sent by Mr. Pitts were all more than 4 dm in height, one plant with thirty stems from the crown growing to a height of more than 6 dm. Seed ripens about the last of April or early May. This species may become of economic importance.[1]

The species listed below were all sent in by Professor Paul Tabor, of Athens, and Mr. W. J. Davis, of Tifton, Georgia, who with Mr. H. C. Appleton, of Athens, Georgia, collected the plants at Snow Hill, Alabama. Concerning these species nothing is known as regards the length of time they have been in this country nor how widely spread they may be. Professor Paul Tabor wrote under date of May 23, 1923, as follows:

All of these clovers were picked up (on May 13) during an hour's stroll up the railroad from Snow Hill, Alabama. The railroad track has ballast of lime rock. All of these clovers were found growing within a few inches of this ballast but had apparently not scattered to the sides of the embankment or the cuts.

The writer hopes to be able to study these clovers next spring, but meanwhile it seems best to place on record the fact that these European clovers, mostly Mediterranean, have been found growing wild in the United States. Dr. Chas. Mohr in "Plant Life of Alabama," 1901, p. 562, says regarding *T. resupinatum*, "Adventive with ballast. Mobile, June, 1887; not observed of late years." A complete set of specimens has been deposited with the United States National Herbarium and, so far as material was available, with the Gray Herbarium and the Herbarium of the New York Botanical Garden.

Species of *Trifolium* collected at Snow Hill, Alabama, May 13, 1923:

| | |
|---|---|
| *T. glomeratum* L. | *T. resupinatum* L. |
| *T. lappaceum* L. | *T. scabrum* L. |
| *T. nigrescens* Viv. | *T. suffocatum* L. |
| *T. tomentosum* L. | |

A. J. PIETERS
*In Charge of Clover Investigations, U. S. Dept. Agriculture*

[1] Since writing the above Doctor B. L. Robinson has kindly furnished the following record of specimens of *T. striatum* in the Gray Herbarium and in that of the New England Botanical Club.

"Ballast, Camden, N. J., I. C. Martindale, 1880."

"In old field, Eastham, Mass., June 22, 1914, F. S. Collins, No. 2309."

"Forming prostrate rosettes, dry sandy field and borders of woods, Harwich, Barnstable Co., Mass., June 25, 1918, M. L. Fernald, No. 16,960."

"The Collins specimen is in the herbarium of the New England Botanical Club; the others in the Gray Herbarium."

## QUOTATIONS

### THE ENDOWMENT OF RESEARCH

THE new policy of the Royal Society may fairly be called the endowment of maturity; there is no reason to quarrel with it on that account. The society exists, as William, Viscount Brouncker, its first president, said in accepting the charter granted by Charles II, "for improving natural knowledge," and no body more competent to decide how funds can best be applied to this end could be found than the council of the Royal Society, upon which experts in all departments of science sit.

The policy was stated and explained by the president in the anniversary address. The society has been able for a good many years past to make certain annual payments from sums which it receives, chiefly from the Donation Fund and the Government grant. These have been used mainly to assist workers of promise in the early period of their career by providing the cost of apparatus and material, through research studentships, and by the Sorby Fellowship. In recent years the society has come into the enjoyment of certain bequests and gifts—the Foulerton gift and bequest, yielding £5,050 a year, the Messel Fund, yielding £1,575, and the Yarrow Fund, £5,450. Still more recently the death of Dr. Ludwig Mond's widow has liberated his bequest, which, it is anticipated, will yield an annual income of about £2,500. These new sources of income have placed upon the society the responsibility of determining the best way of expending them. The policy it has now adopted is interesting from several points of view. It has decided that the income may best be spent in creating greater opportunities for experienced investigators of already proved first-rate capacity in research. Such men as a rule have hitherto occupied positions in universities or other institutions which require from them manifold duties. In almost all such institutions they must give up much of their time to teaching, and there are many other calls upon them of an administrative kind, and such calls are likely to increase

rather than diminish. Thus they are taken away from research, the field of work in which their capacity has been proved. The society has deliberately inverted the order of precedence of professorial functions; it has placed its new professors in a position to regard research as their primary duty, and thereby has sought to recognize research as a definite profession, and to advance and to maintain the principle that the laborer is worthy of his hire no less when engaged in research than when he is employed in class instruction.

The need for a definite systematized policy was made the more urgent by the munificent gift of Sir Alfred Yarrow to the society early this year. In his letter of last February announcing his gift Sir Alfred Yarrow said that he would prefer that the money should "be used to aid scientific workers by adequate payment, and by the supply of apparatus or other facilities, rather than to erect costly buildings, because large sums of money are sometimes spent on buildings without adequate endowment, and the investigators are embarrassed by financial anxieties." In arriving at its new policy the council of the society has been advised by a committee of which the donor is a member, so that there can be no doubt that it commends itself to him.

The first indication of the new policy was afforded just a year ago when Dr. E. H. Starling was appointed Foulerton Professor. Down to that time he had held the Jodrell chair of physiology in University College, London, and in that capacity his primary duty was to teach undergraduate students. The series of brilliant researches by which he has laid physiology and medicine under so heavy a debt were, strictly speaking, secondary. At the same time let us recognize that he could not have been so good a teacher of physiology had he not himself been, through all the years of his teaching, an active research worker. He is continuing to work in the Physiological Institute at University College, which was brought into existence mainly through his exertions, and will remain a permanent memorial of the trust his character and achievements have inspired. The two Yarrow professors—the one, Professor Fowler, of the Royal College of Science, South Kensington, distinguished for his research in spectroscopy and astrophysics, and the other, Mr. G. I. Taylor, of Cambridge, whose contributions to the mathematical theory of hydrodynamics and to the physics of crystals are recognized to be of the greatest originality and importance—will both, like Professor Starling, continue their researches in the laboratories of whose traditions, as the president said, their reputations are already a part.

The policy the Royal Society has adopted to guide it in the administration of the funds that have recently come under its control may therefore be regarded as presenting two closely related but slightly different aspects. In the first place it recognizes that certain professors should be relieved from the duty of teaching in order to devote themselves entirely to researches in which they have already gained distinction; in the second place it establishes the principle that a man of suitable temperament and abilities should be able to look upon pure research as a definite calling or profession in itself, which holds out to him a prospect that in the full maturity of his powers he may be placed in a position to give all his energies to following up the line of scientific inquiry in which he has already achieved success. It is a serious adaptation of Disraeli's rather cynical epigram that nothing succeeds like success.—*The British Medical Journal.*

## SPECIAL ARTICLES

### THE BEHAVIOR OF THE GERMINAL EPITHELIUM IN TESTIS GRAFTS AND IN EXPERIMENTAL CRYPTORCHID TESTES (RAT AND GUINEA PIG)[1]

THE writer and others have shown that rat and guinea pig testes can be transplanted into other rats and guinea pigs and persist for long periods of time. It is generally admitted by all workers who have observed histological preparations of mammalian testis grafts that the germinal epithelium, the lining of the seminiferous tubules, is without exception degenerate or entirely absent. I pointed out in 1921[2] that all testis grafts do not react in the same way, as indicated by the histological picture; thus (pages 379–382), of two guinea pig testis grafts recovered from spayed females seven and nine months after operation, one consisted of seminiferous tubules entirely devoid of an epithelium aside from a few scattered cells along the basement layer of the tubule, whereas the second one possessed tubules in active mitosis and an epithelium of two to three cells in thickness.

Since the publication of the above results approximately one hundred testis grafts have been recovered from operated rats one to seven months after transplantation. Histological preparations reveal a wide diversity of reactions of tissues following transplantation; differences in the condition of the germinal epithelium as well as of the interstitial cells are very marked. These grafts represent subcutaneous, intramuscular and intraperitoneal transplantations and have been recovered from castrated males, spayed

[1] This investigation has been aided by a grant from the Committee on Sex Research of the National Research Council; grant administered by F. R. Lillie.

[2] *Jour. Exp. Zool.*, Vol. 33.