recruiting and development of the personnel in advanced teaching and research positions." The support of selected fellows for long periods at a low stipend undoubtedly favors the gradual and natural absorption of these men into the various institutions of the country. How often have we seen a young man come to the end of a two-year fellowship with an investigation well under way, and then, for financial reasons, accept some position where his scientific work must be dropped!

The novel features are still more striking in the disposition of the remaining 60 per cent. of the funds. Subsidies amounting to $28,500 were granted to 23 "associates." These "associates" are men of an established scientific reputation who are on the regular staffs of universities or institutes, the subsidy allowing them to go on a "part-time" basis, so that they may have time and energy to continue their investigations. The total salary, however, is never allowed to exceed that of their colleagues on a full-time basis. In this way the foundation endeavors to counteract some of the undesirable results of the system of regular routine promotion and emphasis on teaching which has ruled in the Belgian universities.

Partly due to the policy of the Fellowship Board of the National Research Council, we have tended to concentrate scientific work in a few institutions. This is doubtless a wise policy in dealing with young men who gain very much from association with a group of active co-workers. But science can not exert the proper influence on the educational life of the country if it is confined to a few research institutes. It is easy to imagine the effect of a policy such as that followed by the foundation with its "associates," in giving prestige to serious, scholarly and scientific work in all the institutions of the country and weaning them gradually from contentment with lesser ideals.

A third category contains subsidies to investigators "who have won distinction by their scientific work." Thirty-two received $25,300 for financial assistance in carrying out various investigations; $10,400 was distributed to 32 applicants for expenses in traveling and visiting laboratories in different countries, and $10,000 was used in paying technical assistants for 13 scientists.

In addition, apparatus costing $26,500 was purchased and loaned to various investigators. This apparatus remains the property of the foundation which, as the result of purchases in preceding years, now has at its disposal apparatus valued at $160,000.

The foundation also provides annually a sum of $31,250, which is devoted to paying life annuities, not exceeding $1,250 each, to certain distinguished scientists, selected apparently on the basis of the prizes and honors that have been awarded to them. As the report explains: "The council considers it its duty to create for certain particularly eminent men of science a position worthy of the rôle that they play in the moral and material development of the country." The recognition of such a group probably emphasizes the diversified character of scientific advance and the fact that constant effort is called for on all fronts.

It is apparent that in Belgium the national importance of sustained scientific work and the continuous selection and development of able men in the institutions of the country is vividly realized, and measures are being taken which far exceed in relative magnitude any analogous ones in our country.

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OAK TREES AND THE WHITE GRUB MENACE

THE southern half of the state of Wisconsin is characterized by an oak-hickory climax forest. This area coincides closely with the estimated areas of severe grub damage to pasture and corn land. Further, most of this injury is caused principally by the grubs of four species of June beetles which have a marked preference for certain varieties of oak, notably bur oak. It would appear that a correlation exists in nature between the abundance of certain injurious species of white grubs and certain preferred adult food plants.

In the choice of trees for propagation, either on a small scale or on a gigantic scale such as the U. S. Shelter Belt project, each variety should be considered in relation to its relative attractiveness as June beetle food not only from the standpoint of the successful establishment of the young trees but also from the standpoint of the possible associated increase of harmful insects, such as white grubs. The same extremely harmful species of June beetles so abundant in Wisconsin which have predominant oak feeding preferences are now present in small numbers in at least part of the area to be crossed by the proposed shelter belt. If conditions are made more favorable for these and other pests future farmers may face conditions just as serious as drought.

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THE BIOLOGY OF THE BLACK WIDOW SPIDER, LATRODECTUS MACTANS[1]

DURING the past three years the writers have made numerous collections of the black widow spider in Ravalli County, Montana. During this period there

[1] Contribution from the Rocky Mountain Laboratory of the U. S. Public Health Service, Hamilton, Montana.