

## Government Recruitment of Scientific Workers

THE recent valuable leading articles to NATURE have stressed the need for a scientific approach to many of our present national problems. Experienced men of science are necessary to ensure that scientific knowledge is properly applied and any developments which affect the recruitment of scientific workers should be critically considered.

It has come to the notice of the Association of Scientific Workers that certain Government departments have, since the beginning of the War, engaged scientific workers on a temporary basis at very low salaries. Both the temporary nature of the appointment and the low remuneration demand urgent attention. It is true that many civil service posts are now described as temporary appointments although they carry the same salary and pension rights as before the War; but the new feature of the appointments to which I refer is the absence of pension rights and the unreasonably low level of the salaries.

It appears that new low grades are being created without any reference to the scheme of the Carpenter Report, which formed the basis of the conditions of employment of men of science in Government departments, and which was accepted by the Department of Scientific and Industrial Research. In urging the necessity for an early revision of these temporary 'extraordinary' posts, I would recall the fact that after the War of 1914-18 certain men of science were kept in such temporary posts for periods up to ten years. The second aspect of the matter, namely,

the poor remuneration, is perhaps even more important. In the cases referred to above the personnel was drawn from the Central Register, and possessed qualifications which would normally command a much higher salary than that offered. It appears that there may be two explanations of this state of affairs: either a number of highly qualified people have by mischance been appointed to junior posts, or else it may be a definite policy of the Treasury to recruit men of science to Government service at unusually low salaries. In either case, the matter should receive the attention of all professional scientific bodies.

Lastly, the difficulty of learning the conditions under which appointments are at present being made should be emphasized. The normal practice of advertising scientific posts has been largely replaced by direct approach through the Central Register. The greater facility with which suitable personnel can thus be found is an obvious advantage; but some means should be found whereby scientists in general can take cognizance of the new conditions of employment which are being imposed on them. Since so many of these new appointments are in Government service, it might suffice if there was a regular publication from time to time of the terms of employment. Such information should be pressed for by the Parliamentary and Science Committee.

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## Points from Foregoing Letters

FROM spectrograms of twilight, taken in the zenith and horizontally, L. Vegard concludes that the yellow line of twilight comes from the lower part of the auroral region, and is due to extra-terrestrial sodium, possibly emitted by the sun.

J. Govaerts finds it possible to study the  $\beta$ -ray absorption of  $^{32}\text{P}$  through aluminium by means of a photographic method. The results are in good accord with those obtained by other methods.

The inductive effect of the substituted dipoles does not completely account for the dissociation constants of mono-, di-, and trichloroacetic acids. An explanation is put forward by H. O. Jenkins in terms of resonating structures involving C—Cl bonds of partial double-bond character. A linear relation exists between  $\log n$ , where  $n$  is the number of possible valence bond structures, and  $\log K$ , where  $K$  is the dissociation constant.

Lord Rayleigh writes to point out that the first vacuum vessels were made for Sir James Dewar by his assistant R. N. Lennox, and that they were only made later by C. E. Muller.

It has been asserted that the slowing up of a moving clock cannot be detected experimentally. F. C. Powell describes an experiment that appears to contradict this assertion. In his reply, H. Dingle says that such experiments are possible, but that they cannot confirm or deny the relativity requirement. He still maintains that his 'mass-clock' is a valid instrument.

Deoxycholic acid, one of the acids present in the bile of the higher vertebrates, including man, has been shown by J. W. Cook, E. L. Kennaway and N. M. Kennaway to produce spindle-celled tumours when injected *sub cutem* in sesame oil into mice. Deoxycholic acid has been shown previously to be convertible *in vitro* into the cancer-producing compound methyleholanthrene.

R. J. Best has found that neutral solutions of potassium salicylate inactivate the viruses of tobacco mosaic and of tomato spotted wilt. In the presence of potassium salicylate at suitable concentrations, solutions of tobacco mosaic virus deposit a solid, insoluble, denatured, inactive virus protein, the solution at the same time losing its anisotropy of flow. The rate of inactivation is logarithmic.

A. Eden reports that there are pronounced differences in chemical composition between the 'day' and 'night' faeces of the rabbit, chiefly in crude protein, fibre and mineral content. The close similarity in composition between the dry matter of the 'night' faeces and the caecal contents suggests that the former are derived from material which has been subjected to prolonged bacterial action in the caecum.

It has been observed by W. S. Bullough and R. Carrick that in autumn the bills of female British starlings start to turn yellow, a fact which indicates that the ovary is secreting male sex hormone. Under the influence of this hormone the female bird sings like the male.