average, 1·5 per cent. These values were obtained with bone-marrow. Another group of fifteen values corresponds to the other normal tissues mentioned, seven values being identical with the $^{41}_{19}$K content of mineral potassium and two fairly close to it. The six remaining values are slightly below this level. A more marked decrease, however, was obtained with cancerous tissues: all the eleven values were lower than any of those found with normal tissues. (The two highest values correspond to samples from secondary liver carcinoma.) On an average, the content of $^{41}_{19}$K was by about 1·0 per cent smaller than that of mineral potassium.

It can be said that the results are in general agreement to those obtained with corresponding tissues of animal origin. As in that case, the $^{41}_{19}$K content of potassium in bone-marrow is higher than that of mineral potassium and potassium in other normal tissues, while potassium in cancerous tissues shows regularly a lower content of $^{41}_{19}$K than that of potassium in every tested normal tissue. In particular, there appears to be some lack of agreement, especially if one considers that six of the values found with normal tissues have shown a certain approach to those obtained with cancerous tissues. In accounting for these values one has to remember that potassium in normal rat tissues showed occasionally a similar deviation, and it is further necessary to consider the possible influence of post-mortem changes and of pathological conditions in the tissue other than cancer formation. It is of interest to note, in this connexion, that three of the six tissue samples concerned originated from cancer cases, while the nine other tissue samples belonging to this group were obtained from non-cancer cases only. This might indicate that potassium in non-cancerous tissues of cancer-bearers approaches in its isotopic constitution that in the cancerous tissue: a conclusion which is consistent with previous findings on potassium in muscle tissue from tumour-bearing rats and mice[5].

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Sheep Strike by the Fly, *Phormia terrae-novae* R.-D., in North-east Scotland

DURING May–July, 1941, my colleague, Mr. W. Moore, who is studying pesticides in the North of Scotland College of Agriculture, Aberdeen, accidentally found the fly, *Phormia terræ-novæ* R.-D., attacking sheep in north-east Scotland. In the last week of May, when fly-strike had become fairly general, Mr. Moore decided to clean out and disinfect the breeding-chamber for flies and to restock it with a fresh supply of the sheep maggot fly, *Lucilia sericata* Meigen, bred from maggots found on sheep. The first eleven batches of maggots were obtained from sheep on widely scattered farms. Each batch of maggots was reared under fly-proof conditions. The flies that emerged from the eleven batches of maggots were *Phormia terræ-novæ* R.-D. The species seemed the cause of primary strike in many cases. This is the first record of it striking sheep in north-east Scotland. Not until the second week of July did Mr. Moore obtain maggots of *Lucilia sericata* from sheep, and then he found it mixed with *P. terræ-novæ* in two cases. Later strike by *L. sericata* seemed to become general.

Since strike was very common during 1941 in the north-east of Scotland and since the species responsible for it was not investigated in most cases, it seems probable that *P. terræ-novæ* occurred commonly in strike, at least early in the year. Macleod[1], Haddow and Thomson[2], and Macleod[3] have recorded this fly striking sheep on the mainland of Argyll and in Mull, and in some instances the strike was apparently primary.

Very little is known about the habits and life-history of the insect in Great Britain; for example, the food of the majority of its larvæ is unknown. The insect is abundant in north-east Scotland. Some adults apparently hibernate, for I caught a female in April 1929, a male on March 30, 1930, and a female on April 9, 1930, in the loft of a house in Aberdeen. The flies seem to reach their maximum numbers towards the end of July and to disappear from the open during September–October. Between July 18 and October 10, 1933, I caught in a single trap in my garden in the suburbs of Aberdeen 799 females and 559 males (compared with 863 females, 96 males *Lucilia sericata*), and between June 13 and July 27, 1934, in five traps on a farm of the Rowett Research Institute, Aberdeen, 1,915 females, 1,078 males (compared with 2,249 females, 265 males *L. sericata*).

The traps were baited with carrion, which is highly attractive to the flies, though they rarely breed upon it according to my observations of insects bred from carrion. The only time I bred the insects on carrion—and this is somewhat doubtful, for the flies may have struck the sheep when it was still alive—was at Dornie, Ross-shire, where I found a number of puparia among the wool of a sheep that had died some weeks previously. The puparia were found on May 22, 1940, and flies emerged from them during June 2–10, 1940. Smirnov[4] found *P. terræ-novæ* the chief species of fly visiting baits of meat exposed in the open air in the U.S.S.R.; it seldom oviposited on them; its larvæ occurred chiefly in kitchen refuse.

Evans[5] found it the most resistant of four species of blowflies to high temperature and various humidities. In my trapping experiments I found the fly the most resistant of about thirty species of flies to the effects of chloroform.

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