

in various African airports, notably Cairo, Khartoum and Durban, to minimize or abolish noxious insects from aircraft.

The work of Dr. Park Ross of Durban, Mr. C. B. Symes of Kenya Colony, the Entomological Staff of the Government of India and by ourselves, as well as the valuable work of Mr. Whitfield himself at Khartoum, has served to throw considerable light on this problem and the measures taken to meet it. We² have found that there are at least two efficient aqueous base pyrethrum insecticides on the market which, applied in the dilutions we suggest, will ensure the death of mosquitoes and other flying insects in aircraft within a few minutes of application.

Preparations of pyrethrum are being used all over the world by aircraft companies and ground sanitary authorities, and we may safely say that science has provided the means of abolishing the danger of insect transmission by aircraft, and it only remains for international authorities to insist on these measures being carried out.

The authority responsible for these regulations is the International Sanitary Convention for Aerial Navigation, but this body has unfortunately laid down no precise rules on the subject. The responsibility for doing this and the manner of doing it is at present left to the decision of each authority concerned, with the result that the methods used in different countries vary considerably in their efficiency.

It is hoped that Mr. Whitfield's letter will impress all concerned with the necessity of concerted action to meet this danger, in place of the inco-ordination of effort which at present exists.

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¹ NATURE, 144, 153 (1939).

² Mackie and Crabtree, *Lancet*, 447 (August 20, 1933).

Points from Foregoing Letters

RAPID application of pressure to beech leaves which have coloured vacuoles expresses sap of low osmotic pressure (about one third of the plasmolytic value) containing 80 per cent of the vacuolar pigment. T. A. Bennet-Clark and Dorothy Bexon support the contention of Phillis and Mason that this treatment expresses vacuolar sap rather than water which is filtered from the solutes.

W. Dulière and O. Loewi have found that acetylcholine, when applied after eserine, liberates ionic potassium in the isolated nervous system of the frog.

L. Laszt finds the inhibiting effect of iodoacetate on glucose absorption from the intestine of rats is suppressed by sodium chloride in a similar way as sodium salts counteract the symptoms of adrenalectomy.

J. P. McGowan shows that an important phase in the histogenesis of red blood cells in pernicious and some other anæmias would appear to be the multiplication of the hæmocyto blasts by amitotic division and the subsequent ripening of these into erythrocytes. When nicotinic acid is administered, it is suggested that this forms with the pentose-nucleotides present in the cytoplasm of the hæmocyto blasts—the coenzyme system. The latter then plays an important part in the development and mitotic division of the erythrocytes which are now the cells which ripen to erythrocytes.

4 : 4'-dihydroxystilbene and benzoic acid have been isolated by S. W. Stroud as metabolic products from the urine of rabbits injected with stilbene.

H. Liche and K. Wodzicki describe the vaginal smears obtained during various phases of the œstrous cycle of cats. The similarity between smears for cats and lionesses is pointed out. In both species, the smears may serve for diagnosis of the phase of the œstrous cycle.

By thermal decomposition of cholesteryl oleate, Δ 3,5-cholestadiene was obtained by H. Veldstra. In feeding experiments by Waterman with mice this substance caused papillomas of the stomach, one of which showed infiltrating properties. As cholesteryl ethers normally occur in fats, the formation of carcinogenic substances by heating of fats has to be considered as possible.

Further analyses of solasonine and solasodine are in agreement with molecular formulae, $C_{45}H_{73}O_{16}N$ and $C_{27}H_{43}O_2N$, for these bases, and from chemical evidence a constitutional formula for solasodine is proposed by L. H. Briggs. A comparison of its chemical properties with those of solanidine indicates that solasodine is possibly a hydroxy derivative of solanidine.

By using water containing excess of heavy oxygen isotope J. B. M. Herbert and E. Blumenthal show that the mechanism of hydrolysis of trimethyl phosphate in alkaline solution is the same as that for the hydrolysis of the simple organic esters. That is, that the rupture occurs at the P-O bond of the ester.

By the use of a coincidence apparatus with a variable resolving time, J. Rotblat has found the half value period of radium C' to be 1.40×10^{-4} sec. He has also shown that no γ -radiation is emitted in the transition radium C' \rightarrow radium D. Coincidence observations on the radiations emitted in the process radium C \rightarrow radium C' \rightarrow radium D have also been made, from which deductions concerning the level scheme of radium C' are drawn. The results confirm in general the accepted level scheme, but certain discrepancies remain to be examined.

C. C. Addison finds that the breaks in interfacial tension curves, usually associated with complex systems, are found to occur in the simple benzene-benzyl alcohol-water system; he believes them to be due to penetration of two identical adsorbed layers.

K. Zakrzewski and A. Piekara criticize Onsager's theory of dielectric polarization in liquids, and give a modified expression for Onsager's formula which corresponds more strictly to the assumptions of the theory. This theory, however, yields values deviating considerably from the experimental data.

P. Brough describes a simple method whereby crystal formation, commonly experienced during embedding of plant material in paraffin wax, may be avoided. The essentials of the process are rapid cooling of wax during embedding, the immediate transfer of the blocks to a refrigerator and the gradual bringing of the temperature of the wax to that of the laboratory.