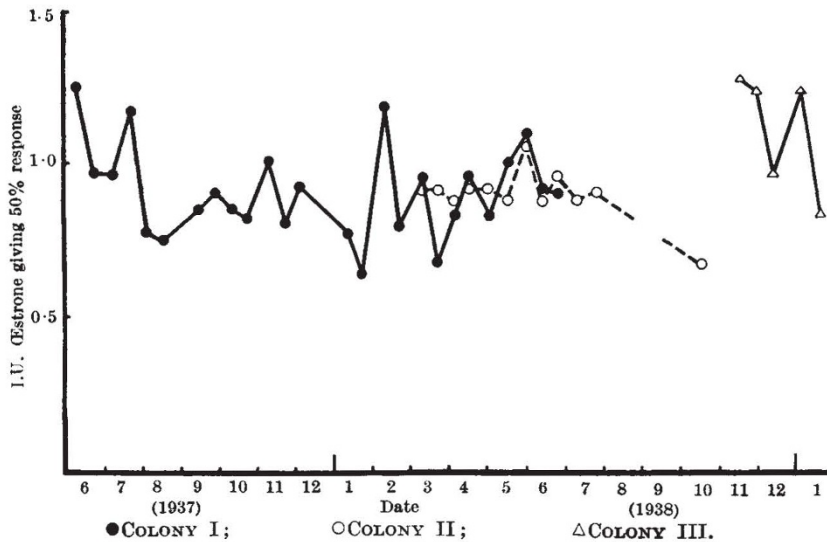


kept in an ice-chest and in continuous darkness give the same response as the normal controls, while those continuously illuminated throughout the test period



show only a slightly decreased sensitivity. The changes which occur spontaneously are clearly greater than can be accounted for by alterations in heating or lighting. It would be interesting to know the exact conditions under which Duszyńska keeps her mice, since the nature of the cycle she finds suggests a correlation with an external factor which is not apparently influencing our own mice in any regular fashion.

C. W. EMMENS.

National Institute for Medical Research,
Hampstead, London, N.W.3.
Feb. 2.

¹ Emmens, *Med. Res. Coun. Sp. Rep. Ser.*, No. 234. In the Press. H.M. Stationery Office, London, 1939.

The 'Fossula Spongiosa' in Reduviidæ

WIGGLESWORTH'S interesting letter¹, in reply to mine² on the subject of the 'fossula spongiosa' in Reduviidæ, induced me to undertake further investigations, which have demonstrated that Reduviidæ which do not have this tibial structure are more or less equally efficient in climbing smooth surfaces, such as the sides of a glass tube, as those in which it is present.

The genera and species used in the experiments were *Mendis semirufa* Stål (larvæ and adults), *Ectrychotes* sp. (adults), *Canthesancus helluo* Stål (adult), *Vesbius purpureus* Thunbg. (larvæ and adults), *Scipinia* sp. (larva and adult), *Velitra rubropicta* A. and S. (adult), *Cosmolestes picticeps* Stål (larvæ and adults), and *Rhinocoris* sp. (adult). Of these, only *Mendis*, *Canthesancus*, *Ectrychotes* and *Velitra* possess a 'fossula'.

My statement that the 'fossula spongiosa' in *Rhodnius* was probably a vestigial organ was based on the likelihood that this genus had not always subsisted on a diet of human blood, but had been, in common with the majority of other Reduviidæ,

predators of other insects. Since the adoption of blood-sucking habits by *Rhodnius*, the 'fossula' would not function, either as an adhesive organ, or as an instrument for facilitating the capture of prey.

So far as I have been able to ascertain, the 'fossula spongiosa' is absent from those genera which possess tibiae and femora armed with spines, and also from diurnal genera which prey chiefly on sluggish insects (lepidopterous larvæ) or stationary insects (Coccidæ—mealy bugs).

Some species of Reduviidæ are said to be phytophagous. It would be of considerable interest if it could be shown that the tibiae of such species lack the 'fossula'.

N. C. E. MILLER.

Department of Agriculture,
Kuala Lumpur,
Federated Malay States.
Jan. 20.

¹ Wigglesworth, V. B., *NATURE*, 141, 974 (1938).

² Miller, N. C. E., *NATURE*, 141, 749 (1938).

Increasing Winter Egg-Production in Spain more than a Hundred Years Ago

WHEN announcing in 1932¹ that the reproduction of a mammal (*Microtus*) could be controlled by the duration of artificial illumination, R. M. Ranson and I published a statement that lights were used in poultry-houses in Spain more than a century ago for the purpose of increasing egg-production. Since then I have from time to time been asked for our authority for this statement. In view of the growing interest in the relation between light and reproduction, it may be worth while to give further particulars.

In 1803, Francisco Dieste published a book in Madrid, in which he described the practice of poultry-farming in Spain at that time. He says, ". . . it is necessary that the keeper disturb them [the hens] in their sleep and make them go to the trough at which there should be lights or torches of wood or other material so that the birds may see the food. In a week's time or so the hens will get accustomed to eat at that hour and come running as soon as they see the light". This translation from the Spanish is taken from Prof. S. Castelló's communication on the subject to the Second World's Poultry Congress and Exhibition held at Barcelona in 1924. Dieste himself considered that the lights were only useful in enabling the birds to eat more than would otherwise be possible during the winter.

I wish to express my obligation to Sir Edward Brown, Mr. E. T. Brown and Mr. Walter Brett (editor of the *Smallholder*) for their valuable help in obtaining this information about the early use of extra illumination in connexion with reproduction.

JOHN R. BAKER.

Dept. of Zoology and Comparative Anatomy,
University Museum,
Oxford. Feb. 11.

Baker, J. R., and Ranson, R. M., *Proc. Roy. Soc.*, B, 110, 313 (1932).