peculiarity—stenogamy—is known to be a characteristic of the above-mentioned species and also of two others, namely, *Aedes aegypti* and *Anopheles maculipennis* var. *atroparvus*.

The following observations recently recorded in our laboratory in regard to the mosquito *Theobaldia subochrea*, Edwards, appear to be worthy of note. It may be mentioned that, in Great Britain, *T. subochrea* is one of the rarer species, having so far been recorded from eight localities only. These are Earl's Court (London), Hayling Island (Hants), Hull (Yorks), Isle of Sheppey (Kent), Letchworth (Herts), Rustington (Sussex), Southampton (Hants) and Studland (Dorset).

On February 1 and 15 last, we collected third-instar larvæ of *T. subochrea* in a brackish pond at Hayling Island. These larvæ (together with some of the water from the pond) were placed in the lower cylinder of a Moscon incubator; the upper cylinder of which (wherein the hatched-out adults forgather) has a volume of about 500 c.c. By the end of February there were six adults (five males and one female) in the upper cylinder. No meal of blood was given to the female.

On the morning of March 7 we found an egg-raft on the surface of the water in the lower cylinder. This raft was composed of 153 eggs, all but four of which hatched into larvæ during the afternoon of March 10.

These observations indicate that *Theobaldia subochrea* is both autogenous and stenogamous.

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¹ E. Roubaud, *Ann. Sci. nat.*, (10), **16**, 5 (1933).

² J. F. Marshall and J. Staley, *NATURE*, **136**, 641 (1935).

Transference of a Mite from Cyclamen to Strawberry

ON November 21, 1935, a number of cyclamen flowers were received from a nursery near Exeter, and were found to be heavily infested with *Tarsonemus pallidus*, Banks, which was causing injury typical of that normally associated with infestation by this mite. A few of these flowers were placed on the crown of a strawberry plant, which was kept in the laboratory. By the beginning of January 1936, the young leaves of this plant were showing symptoms typical of *Tarsonemus* damage. The plant was examined on January 7, and mites were seen to be plentiful between the folds of the young leaves. A more critical examination on January 9 resulted in the discovery of adult mites inside the crown as well as on the young leaves.

Ewing and Smith¹ have recently found that *Tarsonemus pallidus*, Banks, and *T. fragariae*, Zimm., are synonymous. Under the former name, the mite is a pest of cyclamen, begonia, etc., both on the Continent, in America and in England. Under the latter name it has been regarded as a pest of strawberry only². This is one of the few outbreaks of *T. pallidus* on cyclamen that has been reported in Great Britain for some years, though the mites apparently used to be very common on cyclamen and begonias grown commercially under glass.

The transference of *T. pallidus* from strawberry to cyclamen, begonia and raspberry has been attempted

by Masee³ without success. Ewing and Smith¹ recently established mites from strawberry on plants of *Cyclamen*, *Delphinium*, *Saintpaulia* and *Achyranthus*.

The present small experiment is believed to be the first successful demonstration of the ability of the mite to transfer from cyclamen to strawberry.

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¹ Ewing, H. E., and Smith, F. F., "The European *Tarsonemid* Strawberry Mite identical with the American Cyclamen Mite", *Proc. Ent. Soc. Wash.*, **36**, No. 8-9, 267-268 (1935).

² Masee, A. M., "Further observations on the Strawberry Tarsonemid Mite (*Tarsonemus fragariae* Zimm.)", *Ann. Rep. East Malling Res. Sta.* 1932, 20, pp. 117-131 (1933).

³ Masee, A. M., "Some Injurious and Beneficial Mites and Insects on Top and Soft Fruits", *J. Pomol. and Hort. Sci.*, **10**, No. 2, 106-129 (1932).

A Nutritional Deficiency causing Gizzard Erosions in Chicks

IT has been demonstrated by Dam^{1,2} and by us^{3,4} that a dietary disease of chicks, in which the blood fails to clot in normal time and in which extensive hæmorrhage develops, is due to the lack of a new fat-soluble vitamin. Extensive erosion of the gizzard lining has been commonly noted in these investigations^{1,2,3,4}, but the occurrence of this latter disorder has not been closely correlated with incidence of the hæmorrhagic disease. Gizzard erosion has been frequently found in chickens given the usual practical diets⁵. Such erosions have also been observed at this laboratory in embryos in late incubation stages and in day-old chicks. On the other hand, the hæmorrhagic syndrome has not been reported in chickens reared under practical conditions. In view of these facts, we have investigated gizzard erosion with the object of determining whether it is a true portion of the hæmorrhagic syndrome or a separate disease not caused by deficiency of the anti-hæmorrhagic vitamin.

It was found that high levels of a hexane extract of dried kale or dried alfalfa caused an alleviation of gizzard erosion. Quantities of these extracts equivalent to one fourth per cent of dried substance were adequate in preventing deficiency of the anti-hæmorrhagic vitamin, and were shown by assay to be of nearly equal potency in this respect. However, the quantity of alfalfa extract required to prevent or cure gizzard erosion was about a hundred times the adequate anti-hæmorrhagic dosage, while the quantity of kale extract required was about twenty times the adequate anti-hæmorrhagic dosage. It was thus shown that the anti-gizzard-erosion activity of these extracts was not proportional to their anti-hæmorrhagic activity.

Afterwards, it was found that the non-saponifiable fraction of these extracts exerted no appreciable effect on gizzard erosion when fed at levels up to the equivalent of 40 per cent of dried substance, although these levels provided massive dosages of the anti-hæmorrhagic vitamin. Tests were then conducted with both the saponifiable and the non-saponifiable fractions of kale lipids and it was found that the anti-gizzard erosion activity was localised in the saponifiable fraction.

Other dietary supplements tested for potency in prevention of gizzard erosion and found negative were cod liver oil 5 per cent, wheat germ oil 5 per cent,