

up about 1 gm. This rather wide variation has no influence upon the outcome of the routine examinations, and, if desired, corrections for the variation can be made by means of dilution. The fluid absorbed by the tampon can also be used for bacteriological examination.

**Technique.** A piece of gauze, about 15 cm. × 19 cm., weighing about 1.1 gm., is rolled up, tied with ordinary string and wrapped around the end of a thin stick, while the end of the string is tied around the other end of the stick. This swab is then packed in paper and sterilized. For sampling the secretion in the vagina, the tampon is placed in the fundus, for example, through a speculum or by means of a tube made for this purpose<sup>4</sup>. Then the stick and the speculum are removed. After 20–30 min., the tampon is pulled out by means of the projecting end of the string, the vulva being kept wide open. The sample is placed in a glass tube. The secretion is extracted by 4–6 ml. of distilled water or saline. For the various tests, some of this extract is withdrawn by means of a pipette.

This tampon method has proved serviceable in practice in examinations for the presence of antibodies against *Vibrio fetus*. It has also proved practicable in this way to demonstrate the presence of complement-binding antibodies against pleuropneumonia-like organisms isolated from the same tampon samples taken from a herd with pronounced post-œstral discharge and difficulties in fertilization. (On examination of the blood serum, Edward<sup>5</sup> was unable to demonstrate any complement fixation with homologous strains.)

It may be possible by means of this technique also to throw some light on the much disputed question in human medicine about the relation between unspecific vaginitis or urethritis and pleuropneumonia-like organisms.

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<sup>1</sup> Pierce, A. E., *J. Comp. Path.*, 57, 84 (1947).

<sup>2</sup> Stegenga, Th., and Terpstra, J. I., *Tijds. Diergeneeskunde*, 74, 293 (1949).

<sup>3</sup> Christensen, N. O., *Acta Path. Microbiol. Scand.*, 25, 202 (1948).

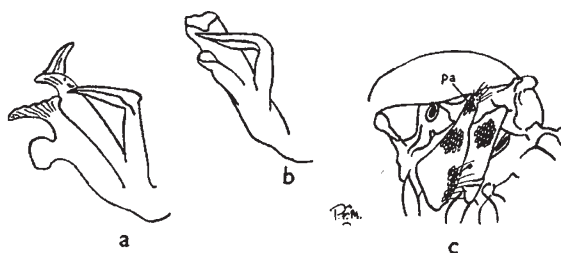
<sup>4</sup> Jepsen, A., and Vindekilde, Th. (unpublished results).

<sup>5</sup> Edward, D. G., *J. Gen. Microbiol.*, 4, 4 (1950).

### *Culex (Culex) torrentium* Martini, a Mosquito New to Great Britain

FOURTH instar larvæ and pupæ referable to *Culex (Culex) torrentium* Martini were taken in some abundance from water-tanks on allotments at Isleworth, Middlesex, by Mr. Bowles, of the Health Department, on June 19 of this year. They were sent for identification, together with emergent adults, to the British Museum. The name *torrentium* is applied provisionally since, as Natvig<sup>1</sup> has pointed out, the synonymy of the group is somewhat obscure and requires further investigation. There can, however, be little doubt that this is the Scandinavian species described by Natvig as *torrentium*.

The principal difference between this species and *C. pipiens* lies in the structure of the phallosome, which is absolutely diagnostic (see diagram). Among external characters the best for diagnostic purposes is the presence in *torrentium*, but not in *pipiens*, of a prealar scale patch at the tip of the sternopleura.



*Culex* spp. a, c, *C. torrentium* Martini; b, *C. pipiens* Linnæus.  
a, b, lateral plates of phallosomes; c, side view of thorax;  
pa, prealar scale patch

This character has not previously been applied to the Palaearctic *Culex* but was used very successfully by Edwards<sup>2</sup> in dealing with the Ethiopian species. It is considered that it will almost certainly prove to be reliable. Natvig considers certain small differences in wing venation to be diagnostic. The stem of the upper fork cell is said to be about a quarter to a third the length of the fork itself in *torrentium* and a fifth to a sixth the length of the fork in *pipiens*. In *torrentium* the radio-medial cross vein is said to be placed about twice its length distally to the medio-cubital cross vein. In *pipiens* it is said to be about one and a half times its length distal to the medio-cubital cross vein. It is not known whether these characters will prove to be constant in British populations.

The Isleworth form is quite strikingly different from *pipiens* with respect to certain colour characters, notably the presence in most specimens of far more numerous dark scales on the abdominal sternites. It is, however, a very dark form as compared with topotypic specimens from Thuringia in the British Museum and, as dark and light forms are extremely common in the genus *Culex*, colour differences are of doubtful value. It exhibits numerous pale scales on the underside of the male palps, as does the Scandinavian form, but these would probably be much less conspicuous in a light variety. A few small larval differences are given by Martini<sup>3</sup>, who refers to *torrentium* under the name *exilis* Dyar. These may or may not prove constant.

It is not known whether *C. torrentium* bites man; but many members of the *pipiens* group do so. The normal breeding places are fresh natural waters of various kinds; but Natvig has a record—comparable with the present one except that in his case the water was very foul—from a garden pail. It is not known whether this is a recent introduction into Great Britain or whether the species has previously escaped detection owing to its resemblance to *pipiens*. The former explanation is thought to be more probable. If this is a rare, though established, species, it is possible that its detection may have been due to a local increase in population arising from some unusual chain of favourable climatic conditions. In either event it seems desirable to direct attention to its presence in Britain, so that a search may be made for it in other localities.

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<sup>1</sup> Natvig, L. R., *Norsk entom. Tidsskr.*, Supp. 1 (1948).

<sup>2</sup> Edwards, F. W., "Mosquitoes of the Ethiopian Region", 3 (1941).

<sup>3</sup> Martini, E., in Lindner, "Die Fliegen", 3, 11, 12 (1931).