to the song of Hyla arborea. The note of our own sounds like the distant croaking of toads (Bufo), at spawning season, but is somewhat feebler. McNeill says he has "been struck with the resemblance of its note to that of *Œcanthus niveus*. To my ear the only discernible difference is that of pitch. This song is a simple chirp, very low in pitch for an Orthopteran, repeated at intervals of about a second." I have also observed its resemto that of Œcanthus, where the latter is heard at some distance.

Gryllus neglectus Scudd. The note of this common cricket, which Saussure regards as only a form of G. pennsylvanicus Burm, is cr-rur-ri, or crrri, or krrrû; the rapidity with which it is uttered seems to vary very much even in a single strain by one insect. Sometimes the notes are produced as slowly as two per second, but they may be twice as rapid; the mean seems to be the usual rate. The note is sharp and shrill and is apparently pitched at E natural, two octaves above middle C.

Fig. 37.—Note of Gryllus neglectus.

In listening one night in midsummer to the chirping of insects, I heard two choirs, one on either side of me, separated by a garden fence. The individuals of each chirped together at the rate of about two notes per second, but whether owing to the influence of a warmer situation, or a fuller exposure to the moonlight, one choir invariably chirped a trifle faster than the other, and fourteen seconds elapsed between the perfect accord of the choirs and their complete discord; from this, fourteen seconds more to their former synchronism. These cycles occurred twice per minute, and followed each other with remarkable regularity for about an hour.

The first notes of Gryllus (species undetermined), were heard in Cambridge, Mass,, in 1867, on June 15; in 1868 on June 13; but in 1880 (if Nemobius was not mistaken for it), on May 16. I think that in New England all fully developed males that go into hibernation die during the winter and that the earliest stridulation comes from those which have hibernated as pupae.

I may add that when in Cairo, Egypt, early in the month of November, I heard a Gryllus chirping in the early evening when the thermometer was about 67° Fahr. at the rate of about 230 notes per minute; when three weeks later at the same hour, the thermometer standing at 61° Fahr., the notes were produced by what was apparently the same insect at the rate of only 130 per minute.

Nemobius vittatus Harr. The chirp of this cricket is very similar to that of Gryllus and can best be expressed by ru or rruu, prouounced as though it were a French word.

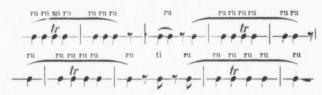


Fig. 38, Note of Nemobius vittatus.

The note is trilled forcibly and lasts a variable length of time; sometimes for several seconds, at others it is reduced to a short sharp click.

I once observed one of these insects singing to its mate. At first the song was mild and frequently broken; afterward it grew impetuous, forcible and more prolonged; then it decreased in volume and extent till it became quite soft and feeble. At this time the male began to approach the female, uttering a series of twittering chirps; the female ran

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