

Mean file Teeth per Teeth per mm CF@25C

Oecanthus stridulatory file characters and carrier frequencies plotted as functions of pulse rate.

n (No. of

Mean no.

PR@25C

Species arranged in order of increasing pulse rate

quadripunctatus

Species group

niaricornis

Species

PR@250

SMFig_OecanthusFiles. The graphs above show for 13 species of North American *Oecanthus* what msFig. 17A, B, C, and E show for 13 North American *Anaxipha*. The *Oecanthus* data come from Walker (1962a, 1962b, 1963). The two genera are similar in having several easily recognized species groups one of which has many more species than the others. A principal difference is in the range of pulse rates at 25°C. For *Anaxipha* the lowest pulse rate (5.1 p/s) is only 6.3% of the largest (79), whereas in *Oecanthus* the lowest (41 p/s) is 51% of the highest (81). Looking at this difference another way, *Anaxipha* has four or five species with pulse rates at 25°C so slow as to make likely a "hold" during each WMC. *Oecanthus* has no pulse rates so slow. Differences in size and forewing form between the two genera are great, with *Anaxipha* being unusually small but having what may be prototypical forewing form; *Oecanthus* are of average size for crickets but have extraordinarily delicate bodies and forewings. Fig. A and B above show that *Oecanthus* spp. decline in file tooth number and file length with increasing pulse rate as do *Anaxipha* spp. in msFig. 17A and B One reason for the greater vertical scatter of values displayed in the Fig. A *Oecanthus* graph is that the y-axis scale displays a lesser range of values in the same vertical distance as the corresponding graph for *Anaxipha*. For *Oecanthus* the highest tooth-count value is only 2.8 times the lowest value; for *Anaxipha* it is 3.9.

Fig. C above fails to show a decline in file tooth density with pulse rate within the *nigricornis* group as is clearly shown in the *exigua* group in msFig. 17C. Instead, with the possible exception of the *rileyi* group, the species within groups remain similar in file tooth density across their range of values on the pulse rate scale.

Fig. D above resembles msFig.17F in that species within species groups tend to be somewhat limited in their ranges of CF@25°C values across their range of pulse rate values.