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The rate of contraction of some striated muscles in *Perodicticus potto*.

Pottos are prosimians which are slow movers. Their muscles are uniformly dark red. They are similar to sloths, as far at least as these two characteristics are concerned.

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Four animals have been used in this study. The ankle and the knee of one leg were solidly fastened by screws driven through the bones. The muscles were left *in situ* with their normal blood circulation. The tendons of the muscles were dissected free, and attached to an ergometer. Records were obtained from oscilloscope displays or from a fast recorder (Sanborn 320). The temperature of the muscles was carefully controlled, and remained within 34 to 36 °C. They were stimulated by electric shocks applied to the sciatic nerve. The fusion frequency was rather low, about 60 to 80/sec.

Twitches had a time to peak of 30 to 41 msec for tibialis anterior, 28 to 31 msec for peroneus longus, 34 to 60 msec for gastrocnemius, 26 to 32 for extensor digitorum longus, 39 to 43 for flexor digitorum longus; their half-relaxation times were respectively 19 to 24 msec, 24 to 34 msec, 25 to 53 msec, 25 to 32 and 35 to 42 msec. The twitches are therefore faster than those of the slow muscles of the cat soleus type; they are also faster than those obtained in the sloth (GOFFART *et al.*, 1962), but they are slower than the corresponding muscles of the guinea-pig or of the rat.

The force-velocity relationship was also studied. It obeys the exponential law described by AUBERT (1956) : $F = F_0 \exp(-V/B)$. The rate constant, B, expressed in muscle length per second, was 1.26 for tibialis anterior (mean of 4 measurements), 1.21 for peroneus longus ($n = 2$), 1.00 for gastrocnemius ($n = 3$), 0.33 for extensor digitorum longus ($n = 1$), 0.85 for flexor digitorum longus ($n = 2$). These rate constants are two to four times smaller than those of the corresponding cat or rat muscles, but are about the same as those of the soleus muscles (rat or cat).

REFERENCES

- AUBERT, X. (1956) *Le Couplage énergétique de la Contraction musculaire* Editions Arsacia, Bruxelles, 320 p.
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