increased after any given event, then there are expected to be more multiple events in some samples than the predictions of the Poisson theorem.

The origin of the MEPP is not yet completely understood. The change in the statistical pattern of release brought about by changing the extracellular calcium concentration suggests that a main determinant of the probability is the state of the presynaptic membrane, which can be modified by calcium ions.

Our experiments illustrate that under normal conditions a spontaneous synaptic event is independent of the preceding one. When the extracellular concentration of calcium is increased this independence no longer occurs. Thus, by changing the concentration of calcium one can transform the spontaneous release from one pattern of statistical behavior to another, from a Poissonian to a non-Poissonian random discharge.

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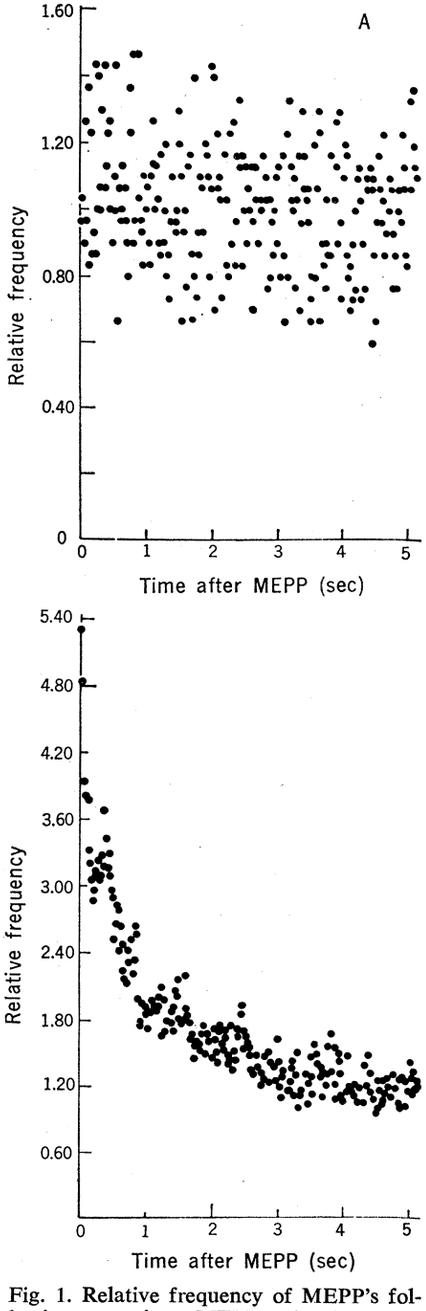

Fig. 1. Relative frequency of MEPP's following any given MEPP. The frequency of the MEPP's was estimated in successive 20-msec periods after each MEPP and divided by the mean frequency (see text). (A) Normal concentration of calcium (1.8 mmole/liter); (B) high concentration of calcium (15.0 mmole/liter).

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Interference of HEPES with the Lowry Method

We, too, have experienced a similar difficulty in the determination of protein in the presence of HEPES (*N*-2-hydroxyethylpiperazine-*N'*-2-ethane sulfonic acid) (*1*). Our resolution of the problem was to measure the protein by a modified version of the microbiuret method (*2*), scaled down in volume such that the color developed from 0.4 ml of protein solution, when mixed with 0.2 ml of reagent, could be determined in silica microcells (0.5 ml). Any interference due to salt crystallization that might arise with buffers of high ionic strength is easily overcome by clarifying the mixed solutions in a bench centrifuge before measurement. The method was unaffected by the presence of HEPES, is relatively nonspecific for the type of protein, and moreover produces a linear standard curve, with sensitivity not much less than with the Lowry procedure.

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Prey Population: A Parsimonious Model for Evolution of Response to Predator Species Diversity

Ricklefs (*1*) proposes a model to account for "clutch size in birds" which seems hardly applicable to birds as a class. The model can be applied comfortably only to those birds which feed their nestlings on animal food, and more specifically to those which feed altricial young on motile prey. Pigeons (Columbidae) produce animal food from their own crops. Brood parasites do not feed their young at all. Young precocial birds feed themselves, many on vegetable matter. That apparent cavil aside for the moment, it is worth while to consider the logical structure underlying the hypothesis, and the consequences logically to be expected from it.

One is immediately struck by the erection of an "adaptive system" which adjusts the strategies of foraging behavior among predatory birds to the productivity of their prey. As what seem to be his only examples of analogous "systems of predator-prey adaptation of diverse species" Ricklefs cites