

special laboratory facilities will need to be provided. The formation of the application service should not be undertaken until the rest of the organization has been well established.

The keystone of the proposed organization is the taxonomic service. Because of the dearth of competent taxonomists it will not be possible to staff it adequately until more young men are persuaded to undertake such work. To attract them, permanent posts carrying adequate remuneration must be created, and, in addition, the organization must be prepared to undertake the cost of the specialized training (and probably the training itself) of the young men selected.

The proposed international organization is viewed as an extension to other countries of the kind of work already being carried out by the United States of America and the British Commonwealth, the organization working in cooperation with all institutes and individuals actively carrying out biological control work.

Action Potentials From Single Auditory-Nerve Fibers?¹

We have in two published communications (*J. Neurophysiol.*, 1943, 6, 39-58; 1944, 7, 287-304) stated, directly or by implication, the following propositions:

(1) It is possible to isolate action potentials from single auditory-nerve fibers of the cat by using micro-electrodes.

(2) Inhibition of activity in these fibers, produced by acoustic stimuli, occurs through a neural mechanism which does not include a synapse, *i.e.* one which presumably acts at the level of the hair cell in the cochlea.

Throughout our experiments on the cat nerve we were disturbed by the difficulty experienced in isolating the response of one fiber in a bundle of thousands of them; on occasion as much as a half-day of careful, continuous probing with the electrode was required before a successful position could be obtained (see *J. Neurophysiol.*, 1943, 6, 41). On the other hand, a contact once established was unexpectedly easy to maintain despite minor mechanical disturbances of electrode or preparation.

We can now supply a piece of important elementary information, inexcusably omitted from our earlier study, which bears upon these problems. We have recently examined the auditory nerve of the cat microscopically, in sections kindly provided by Dr. M. H. Lurie.

The auditory nerve in the stretch from the internal meatus to the medulla contains nerve cell bodies. These cell bodies are present throughout the region into which our microelectrode was ordinarily placed. They vary considerably in number but may amount to as many as 45 per high power field (about 0.1 mm²). Standard anatomical works thus far consulted do not describe these typical ganglion cells; they probably belong to the cochlear nucleus and are therefore second-order neurons in

the auditory tract, although this has not been established with certainty.

There is, therefore, very good reason to believe that most, if not all, the potentials we have described were derived not from the auditory nerve but rather from cell bodies of second-order neurons. If this indeed be true, both of the propositions at the head of this note are incorrect. The first of them needs no further comment. The second, which deals with a peripheral inhibitory mechanism, will probably be discarded gladly by most neurophysiologists. If the potentials were obtained postsynaptically, the observation of inhibition of second-order neurons is interesting but not surprising.

All of our description of single-unit activity in the auditory pathway remains unchanged. The interpretations must be altered, however, to the extent to which we recorded the activity of second-order instead of first-order neurons.

We wish to acknowledge the gentle obstinacy of Dr. H. K. Hartline, who originally suggested we look for ganglion cells in the nerve, and who has never let the matter rest.

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On Obtaining Books From Germany

Dr. Julian Huxley writes:

"Students of biological evolution will, I think, be interested to hear something about the new book by Dr. Bernhard Rensch, *Neure Probleme der Abstammungslehre*, published by Ferdinand Enke Verlag (Stuttgart, 1947), which I have recently received and read.

"It appears to me to be a most valuable work, which treats of the method, and especially the course, of evolution in a comprehensive way. Its most original feature is the number of tables it contains, giving quantitative expression to various rules of evolution. It is also interesting in that the author, though working in complete isolation during the war, has arrived at conclusions in general similar to those reached by American and British specialists in the subject during the same period.

"It may be also useful to set forth the methods by which this, and other German books, may now be obtained. Anyone wishing to purchase books published in Germany may do so by placing his order through any bookseller, who may then apply directly to the publisher in Germany. The transaction is administered through the Joint Export and Import Agency of Military Government, and payment can be made in the currency of the country in which the original order is placed. The delay in obtaining the book may be a matter of some weeks or, of course, considerably longer if the publisher has not previously obtained a license for export from the Joint Export and Import Agency. However, many publishers who foresee a demand outside Germany for a particular book will have obtained the required license soon after the appearance of the book in Germany."

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