a member of the American Association for the Advancement of Science for twenty years and I think I was consulted only once in regard to a suitable candidate for the presidency of this Association. As far as I know the presidents of this Association have always been selected properly and the selections have perhaps been better than they would have been if a more democratic method had been employed, but it is questionable whether the scientific public of America takes as deep an interest in its leading scientific men as it would have taken if it had really had a part in bestowing a high scientific honor on some of them.

I have been a member of the Society of the Sigma Xi for about twenty years and do not think I have ever had any part in the selection of a candidate for national president, although I voted once or twice for the one who was nominated by a committee. It may be said that I could have wielded an influence in the selection of candidates for these high offices if I had wanted to do so but many of us have so many duties to perform that we seldom go outside this range of interests. The question is whether it should not be put in such a way that a much larger number of the scientific men would regard it as a part of their duty to take an active part in the bestowal of high scientific honors. If this is not done these honors will usually be bestowed by a few men who will generally make wise selections but will fail to arouse much general interest.

In some of the national societies devoted to special subjects there seems to be still greater need for thoroughly democratic methods of election in case we are seeking to establish in America a real democracy along these lines. Many of us regard elections as necessary evils which should receive the least possible attention. There are various other means of expressing scientific appreciation and a scientific democracy should by no means be judged mainly by the methods employed in the selection of officers. These methods have, however, their influence in creating a spirit of openness and wide interest, and it is at least conceivable that the extra labor involved in making scientific elections more democratic would be wisely spent. G. A. Miller

ARE ZOOLOGISTS GOING TO USE THE BNA?

It is perhaps as justifiable as it is interesting that scientists are the slowest people to take hold of new ideas and radical changes. Yet there seems to be little justification for a group of men remaining silent and at the same time failing to use modern inventions in their field which have proved useful and effective.

Most zoologists are familiar with the excellent work of the Commission from the Anatomical Society which undertook the revision of the nomenclature of human anatomy. It must be a great source of satisfaction to this body of men to see how well the anatomists have responded to the simplification and standardization of terms, for now all the textbooks and many of the medical men have adopted the BNA, making a bedlam of terms easy to understand.

However, up to the present time the comparative anatomists and zoologists in general have not adopted or used this nomenclature, so that one may read of the "dorsal root" of a spinal nerve in a pig embryo and the "posterior root" of a spinal nerve in human anatomy. Indeed the workers in the field of human embryology still use terms which do not appear in the BNA.

Perhaps the most confusing set of terms are the following: anterior and posterior; dorsal and ventral, and superior and inferior. It would seem preferable to use drosal and ventral instead of anterior and posterior and then use anterior and posterior to mean superior and inferior, for there seems to be no particular need for upsetting the whole of the comparative terms to accommodate only one type of animal. But this is not a matter for one individual to decide and since the Commission has decided differently and their report has been accepted and adopted, there seems to be but one thing to do, and that is follow their nomenclature. If the zoologists wish to use the words "dorsal and ventral"

they should furnish sufficient grounds to justify changing the BNA, but if on the other hand they can not, or rather will not, then it follows that they should use the terms as they stand in the BNA.

If we are willing to stand so firmly in the principles of evolution and if we recognize man as but another animal in the long series, it seems entirely justifiable to use the same terms throughout for homologous structures, and certainly for the general space positions and orientations.

Perhaps an open discussion of the matter might be of some interest and effect; concessions might be made on both sides which will give happy results.

THOMAS BYRD MAGATH
COLLEGE OF MEDICINE OF THE
UNIVERSITY OF ILLINOIS,
CHICAGO, ILL.

RATE OF DESERT DELTA GROWTH

FROM the presence and position of the alluvial fans which so conspicuously mark some of the old shore-lines of ancient Lake Bonneville, that gigantic precursor of the Great Salt Lake of Utah, it is inferred that during the long period of desiccation which that vast water-body underwent the lowering of the lake level did not take place uniformly but experienced more or less protracted pauses. The most notable of these supposed halts in the recession of the waters is thought to be represented by the embankment denominated the Provo Beach.

The Provo terrace, which lies about 600 feet above the surface of the present Great Salt Lake, and 400 feet below the highest water stage of the ancient lake, is distinguished by extensive alluvial cones which are commonly regarded as true delta deposits. The great magnitude of some of these deltas is interpreted as furnishing conclusive evidence of long tarrying of the old lake waters at this level.

That the unusual size of the Provo deltas is not a necessary consequence of long lagging of lake waters at this stage seems demonstrated by recent extensive observations that enable quantitative calculations to be made of the actual time occupied in desert delta formation. The possible rapidity proves to be very much beyond all ordinary expectations. Concerning the formation of the Provo deltas there are several accelerating factors which do not obtain in the normal desert fans of alluvium that so often collect on the piedmonts at the mouths of canyons. These are the great volumes of nearby morainic materials which filled the valleys of the Wasatch and other ranges, the presence of a convenient water-body in which to concentrate the débris washed out of the canyons, and the position of the Provo level on the line where plain meets mountain.

The alluvial fans characterizing the piedmonts of many desert ranges are usually small, owing largely to the fact no doubt that the mountains have little soil material or coarse rock-waste. In some instances the alluvial débris forms merely a thin veneer over a low cone of the rocky substructure. The out-wash of boulders and pebbles serves rather as a protection against the general lowering of the plains surface through eolian erosion. Not a few of the desert fans have thus really a rock floor just as have the intermont plains themselves, and are not, strictly speaking, alluvial cones at all.

In strong contrast are the desert fans sometimes produced by normal water action. Two instances in particular may be cited in illustration of the actual rapidity with which the process sometimes goes on. Near Ivanpah, in southeastern California, a shallow trench was once dug diagonally down a sloping bajada belt in order to protect a railroad grade from possible wash of sporadic rains. Soon a cloudburst happened to come. In an hour's time a great gully 75 feet deep, 50 feet wide and several miles long was excavated in the soft soil. The bulk of the dirt was redeposited at the foot of the sloping plain in a broad fan of more than a mile radius. In another instance, near Socorro, New Mexico, the bank of an arroyo was cut to take care of future storm-waters. In a single night this spillway was deepened to 50 feet and an alluvial cone nearly 100 feet high and nearly three miles radius was formed.