6. Granted, of course, that there are many streams which can not be seined (excepting in places) because of numerous boulders, logs, rapids, falls or dense vegetable growth along their banks. There are also streams which can be seined in many places. The fish commissioner for Ontario in 1925 dumped trout fry into two hundred and ninety-one ponds and streams. Not one stream out of the lot could be seined throughout its length. Parts of every one of them could be seined. It must be the average number of surviving fry in these streams which will determine the utility of fish hatching. In engineering problems, averages must be relied upon, otherwise estimates of cost would be pure guess work. There need be no guess work in approximating the losses in trout fry, if only the seining is carefully and repeatedly done.

The people of Canada and the United States have in the past sixty years spent millions of dollars upon fish culture. They have, therefore, a right to know the approximate average cost of the artificial propagation of fry, fingerlings and adult trout in any given year. And they have also a right to know what becomes of them after they are spread in lakes and streams.

If seining is not a valid method, perhaps some of the fish culturists will suggest a better one and furnish the public with a description of its working and a statement of the losses which it uncovers. The fish culturists are spending the money. It is their duty to show that fish rearing is worth the money which is being spent upon it.

Any sensible man with a government at his back can run hatcheries and distribute fry, especially if there is to be no accounting for dead fry, and if in effect no instruction is given to the superintendent except: "Turn out fry and damn the cost."

A. P. KNIGHT

KINGSTON, ONTARIO, CANADA

THE USE OF THE TERM ALLOTYPE

THERE seems to be a diversity of opinion as to whether the term allotype should be employed for the first described specimen of the sex opposite to that of the holotype in case it is subsequently described. In the last analysis only the holotype can fix application of a specific name, and it is an academic matter as to whether the other sex be associated at the time of the original description or later. If there has been an error in associating the supposed sexes, the one will be just as incorrectly considered part of the species represented by the holotype if described with it, as though described a century later. Nevertheless, it is important to have the specimen from which the description of the second sex was taken, distinguished in some way, even though the fate of no name may hang thereon; for it is desirable at times to have a source from which the exact meaning of an author can be determined for other than nomenclatorial reasons. Without multiplying terms, allotype should suffice. If the allotype is described with the holotype it is also a paratype and has no more nomenclatorial significance than any other paratype, probably less value than a paratype of the sex of the holotype for there is greater likelihood of its actually representing a different species. If the allotype is described subsequently to the holotype it is not a paratype, and that is sufficient distinction.

R. A. Muttkowski (Milwaukee Publ. Mus., Bull. 1, p. 10, 1910) first proposed the term allotype. His original definition of it is quite in accord with my understanding of its proper use and does not sanction its restriction to paratype. It reads: "*Allotype*—(ἄλλος—other) for the sex not designated by the holotype. The allotype need not be described by the protologist (first describer); it can be contained in the original as well as any subsequent description by other authors. Thus if the protolog describes only a holotype male, the first female subsequently described is to be called the allotype."

J. C. BRADLEY

CORNELL UNIVERSITY

CONSIDER THE USER OF BULLETINS

FEDERAL and state experiment station publications of various types constitute one of the principal reservoirs of stored knowledge regarding agricultural arts and sciences. They are the most common form of original record of experiment or research related to agriculture and, as such, become important tools for all professional workers in both agricultural and related biological lines. Lacking ready access to them the teacher and the experimenter find themselves seriously handicapped in their efforts.

Because of their constant and frequent use, most of these workers maintain private files of such station publications as relate to their specific subdivision of agriculture and quickly discover that, because of their great and ever-increasing numbers, some system of cataloguing is necessary to render ready reference possible. Two common bases for cataloguing of this type are in use: (1) the title or subject-matter of the publication, and (2) the name of the author. Arguments favoring either of these bases could be advanced but whichever is chosen the name of the author is nearly always recorded on the catalogue card. It is nearly as important to the user of the publication as is the title itself. It sometimes carries more definite information.