PROFESSIONAL EDUCATION

By K. A. ARMSON¹

There is a great deal of discussion these days about the necessity for increasing specialization in the training of foresters, particularly in view of the shoals of technical information spewed forth each day.

One of the main reasons for this great interest is that many of the old courses of study have been found wanting; many of the foresters trained in the past have concluded that their training has left them inadequate in facing many of today's problems. Often foresters have gone on to further studies and this has given them a realization of weaknesses in their undergraduate training.

I would like to raise the question of what is a specialist. Should a wood technologist be considered a specialist in his own right or a kind of specialist in forestry? What of logging and forest engineering? Many foresters become primarily administrators; are we warranted in assuming that the universities should therefore develop special courses in administration for foresters at the undergraduate level? Does this imply specialization? For the purposes of my discussion I am going to assume that by "specialist" we mean someone who has taken advanced formal studies in a technical branch of forestry.

I would agree that we do need more specialists, but not at the expense of either a decrease in the number of general practitioners or, and more important, a removal of the basic general education which a specialist should have. We must also recognize that the body of professional foresters in this country is barely 2,500 strong and glib talk of the necessity for specialization often ignores this simple fact.

A critical appraisal of our present general undergraduate courses and their strengthening are the most important things to do. We shall find I think that many courses and their instructors have become purveyors of factual pap. Others which were set up in the years past to palliate the cries of those graduates calling for increased specialization are museum pieces. When we consider the training of students in the field, i.e. summer work, we find that the universities entrust this critical and most crucial task to literally anyone who by the remotest stretch of the imagination can say he is engaged in forestry or deals with wood.

If we set out to educate foresters with the basic knowledge available, but with a major emphasis on the understanding of principles and processes, with ample opportunity to work at first hand with trees and forests under expert tutelage and if we imbue them with a spirit of enquiry—of seeking to frame the proper questions and a scientific endeavour to find the answers—

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then I think we have the proper basis for specialization and coping with the technological problems of this and subsequent years.

Specialization at the undergraduate level in our educational institutions tends to encourage the proliferation of courses, unless continually guarded against. Many of these courses are filled with facts hot off the presses of the latest scientific journals and dispensed by young Ph.Ds fresh from graduate school. The knowledge storehouse increases; facts in themselves are of little value. Dr. Joel Hildebrand² tells of a professor who said he always asked the same questions in his final examinations and his companion said, "Doesn't that make it easy for your students?" "Oh no!" the professor replied, "we change the answers."

I think that there is much room for improvement in university courses as they presently exist. For example, if we agree that a knowledge and understanding of soils is essential in the training of a forester, why do we attempt to do it in one or two hours a week of lectures or laboratory during the period of the year when field examination is very difficult to make, i.e. the wintertime? Why do we even continue such idiotic things as a course of a one hour lecture each week through the year?

As the trend towards more intensive management increases, we need management foresters with first rate education in the pathological and entomological situations that exist or will prevail in their forests. I think the strongest indictment of specialization per se is to be found in this country where over the years there has developed an extremely competent and indeed world-renowned research organization in the fields of forest pathology and forest entomology but concurrently we have, to my knowledge, an abysmal lack of evidence of the intelligent appreciation of the interactions of diseases and insects in our silvicultural practices.

So much for the undergraduate. I think that there is a great need for the provision of special courses by our forestry schools designed to acquaint graduates with new facts, skills and techniques and viewpoint. This would do a great deal to alleviate the large gap which sometimes exists between current advanced procedures and the antiquated ones which may be in existence—not that what is new is necessarily an improvement but we should at least know what is new or purportedly so.

² J. H. Hildebrand, 1963. "To tell or hear some new thing." *Amer. Scientist*, 51 : 1 : 2-11.