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Forest Education.

Practical education is the primal need in connection with forestry—a fact which has already been recognized in the old world, and to some extent by our Education Department, and, of course, by the University authorities who, in co-operation with the Government, have established the first school of forestry in the Commonwealth—the institution so ably conducted by Mr. Corbin. As the Melbourne Director of Education pointed out in an official paper in February, 1923, in discussing an endowment scheme which had been introduced into his State schools—“There is no better way of arousing interest in forestry than to begin in the schools. Here . . . the schools can give the community a lead. Our schools claim that they promote the highest quality of citizenship. Can there be a better evidence of this citizenship than present-day effort and sacrifice to secure a great benefit to the generations which shall succeed us? . . . Teachers will naturally ask whether the labour involved in making a plantation is not too great for a school, and whether capital costs are not in the first stages prohibitive . . . There is no more difficulty in raising seedling pine trees than in raising tomato or cauliflower plants. There is actually less spade work in making the pits for the reception of the young pines than in preparing vegetable or garden plots in the school farm. There is less need of attention to the growing stocks than is given to the flower garden . . . I shall be abundantly satisfied if a dozen or so schools should have, at the end of the year, begun to form plantations in accordance with a definite scheme of rotation.” Particulars of specific endowment schemes are published in The Victorian Education Gazette and Teachers’ Aid of February 20, 1923, and in the records of the League of Tree Lovers in Victoria. Independently of instilling scientific knowledge into the minds of learners in forestry, one of the greatest endeavours of teachers is to emphasize the urgent need for preventing waste of trees and their products. There is a consensus of experienced opinion to the effect that, in order to develop our forests efficiently, it is necessary to have trained men. Consider here this quotation concerning the College of Forestry at Cornell University, in the United States of America:—“The Cornell College of Forestry was established by the State of New York to pave the way for the introduction of technical forest management. A demonstration was proposed on a small scale to show how a forester would manage a forest property, harvesting and reproducing the wood crop. In order to remove this demonstration, which would naturally require a considerable time, from the danger of political vicissitudes, its management was referred to the Cornell University, and a College of Forestry was instituted as the agency to carry out the experiments and at the same time educate the forester who would, in the future, manage the States forest property. The same Act accordingly made provision for a demonstration forest of 39,000 acres in the Adirondacks. “While a State institution, the college is administered by the University, and its students profit by courses of study in the University classes and laboratories. The college forest is managed to fulfil in the broadest sense the functions expressed in the act creating it—to conduct upon such land such experiments in forestry as it may deem most advantageous to the interests of the State, and the advancement of the science of forestry, and may plant, raise, cut, and sell timber at such times, of such species and quantities, and in such manner as it may deem best, with a view of obtaining and imparting knowledge concerning the scientific management and uses of the forests, their regulation and administration, the production, harvesting, and reproduction of wood crops, and earning a revenue therefrom.” An interstate conference of forestry, attended by the heads of departments in Australia decided:—1. “That a high standard of education and learning is essential for the successful pursuit of forestry.” 2. “That a forest school be founded, the course of training in which will be so thorough and practical, that its diploma and certificates will be accepted and recognised throughout Australia.” The select committee on forestry in the British Empire supports the principle of the universities fostering the science of forestry and opposes the ideas of the “School in the bush.” Directors of forestry, at any rate, should rank as professional men, and possess the university hallmark. In estimating the economic considerations involved in great schemes of afforestation and regeneration, when properties worth eventually hundreds of thousands of pounds are being built up, the salaries paid to the principal men should be adequate to the responsibilities. One man at £1,000 or £1,500 a year may be worth half a dozen at half the salary. Nurses cannot do doctors’ work, or stokers the work of engineers, simply because they have not had the qualifying training and knowledge. Research is absolutely required with all our species, soils, and other varying conditions. Competent judges have expressed the view that the operations now being conducted at Kuitipo, subject to these governing principles, have

proved to be remarkably successful. a comparatively short time magnificent forests have been built up by elimination and regeneration, with broadcasting. These results have been attained by research and experiment. Although private enterprise, rightly encouraged, especially by education, could relieve the State of a great part of its forest burden, practically nothing has been done in this direction. A complete reorganization of the whole forest system of South Australia is urgently needed; and this statement does not reflect upon the present management. The root cause of the trouble is a lack of general understanding and appreciation of the vital importance of the forestry problem—a fact which limited the resources, and, therefore, the possibilities, of the officers in charge of the forests. Laboratory work is of indispensable importance.

No Waste.

The recently declared ideal of forestry in the United States of America is to “utilize every scrap of the tree, from sap to bark.” At present only 13 per cent of the finished products of forests are made available for industrial purposes, and even among individual trees of some varieties the effective percentage of sawn produce is not more than 22 per cent. With jarrah it is only 25 per cent. In straight-grown pinetrees, however, the product is 60 per cent of the tree, except the top, which is only a few inches. In New Zealand, through the policy of the Department of Forest Service, and the employment of skilled forestry engineers, there is reason to hope that soon all waste products from the trees will be garnered for the public good—an achievement which would tremendously increase the economic value of the forests. An immense gain is beginning to be realized through the knowledge that in the past superior timber has been used for inferior purposes, as in the case of our own stringybark, for instance. It has been proved that a ton of conifer timber yields from 20 to 25 gallons of 90 per cent alcohol, and even the sawdust—that hitherto perplexing problem of the forester—can be converted by chemical treatment into a nutritious stock food. Regarding possible gains in other forms of utilization it should be sufficient to mention such commodities as paper pulp, turpentine, resin, oils, tar, pitch, gums, charcoal, dyestuffs, and gas. The maintenance of a forest policy should have as a fundamental basis a definite relation between the timber needs of the community and the visible supply in the forests. The soft woods particularly should be, after a systematic forest survey, developed, and the establishment of an arboretum in each State would be a creation essential to this and other beneficent ends. On this point too much emphasis cannot be given to the warning which has been uttered by responsible scientists and business men:—“The timber resources of the Commonwealth are within measurable distance of exhaustion.” This dangerous condition can be altered by easily accessible remedial devices, which could be applied readily if only the opportunity were given in due course following the adoption by Government and Parliament of a policy animated by courage, vision, and enterprise—a policy not wholly unconnected with the businesslike proposition that it is a good investment to sink a few thousand pounds for a short time with the certainty of the sum returning hundreds of thousands by a legitimate process of development.

Public Opinion and Practical Suggestions.

Popular opinion would endorse such a policy, no matter what Government might introduce it, and whether its administration were under the direction of a Forest Board or a Ministerial department. As The Register pointed out in an article some time ago—“Australians are only just beginning to understand what an already great and potentially greater asset they possess in their natural forests, how much wanton destruction has been wrought among trees, and what almost unlimited capacity there is for improvement and expansion.” The pressing immediate requirement at this moment is a systematic reorganization of the department—in the light of past experience, and its co-ordination with the University in forest education and research. The department should have a chief officer to direct the general scheme of conserving natural forests, and establishing others of species apart from these forests. Detailed administration could be left to subordinate but responsible officers in various localities. There should be, either with or without a Forest Board, a Minister for Forests, a chief forest officer, and an assistant chief forester for the Woods and Forests

public men—lawyers, statesmen, etc.—of the various States, to become acquainted with one another; to understand and appreciate the thought and sentiment current in the unit States of our great Commonwealth. Friendly mental encounters in debate open up lines of reasoning formerly unrecognized, and induce a broader outlook and a sympathetic understanding of another’s position, which all makes for social and national harmony. Thus there is no reason why interstate debates should not be extended to international debates. The various countries of the world compete with each other in the physical realms of sport; why not in the mental realms of debate? It is obvious that a great deal of international friction is caused by the failure of the various countries to comprehend the psychology and lines of reasoning of other countries. Whereas if questions of international interest were thrashed out in public by representatives of the various nations, the sharp angles due to national

prejudices would stand a good chance of being rubbed away.

Most of the world’s evils, both physical and mental, are due to the failure to drag the causes out into the open and punish them, and the great value of debate is that it performs this hygienic task.

THIS STATE LEADS.

However this may be, it is exceedingly gratifying that South Australia has not remained behind the other States in the production of orators.

Though the gift of brilliant speech has often been used for degenerate means, it must not be forgotten that it is also the chief instrument of reform. It is to men, then, like those which compose the Adelaide team that Australia must look for her future statesmen, for they possess the great gift which enables them to control collective or crowd emotions, namely, silver speech, the reasoning of which, thank heaven, rings true.

Registered

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WOODMAN, SPARE THAT TREE.

A FORESTRY REVIVAL.

V.—By the President S.A. Branch Forest League (Sir William Sowden).

Forestry and Taxes.

An American writer remarks:—“Few men will plant forests and maintain them for a crop of trees which will not be directly profitable for 30 years or more. Such planting requires an incentive which only the State can provide. Provision for one’s children can supply that incentive, but not while a system of taxation prevails which would destroy all the accruing values of growing timber. The State’s part in such practical incentives should be through the abatement of taxes on land actually devoted to re-forestation and proving it through scientific care and maintenance of patrols against fire and other destructive forces. Gradually taxation should begin as the growing value of the timber justified, but with strict care not to remove the incentive for growing. . . . In cases where no thought of a future generation would provide incentive, and cut-over or otherwise non-productive land is left barren and idle, there should be escheatment to the State by statutory arrangement for re-afforestation under State supervision.” It may be well to repeat that in some old-world countries the State does not regard the owner of forest land as necessarily the unrestricted owner of the trees on it. Reservations of cer-

tain kinds of trees useful in national emergency are enforced, and—as previously stated—in England during the Great War estates were by State authority despoiled of some of their finest giants for war purposes. It seems, therefore, that nobody could fairly object to a policy of State-aid on business lines where such a definite reciprocal advantage is manifest. In New Zealand the Government helps the planters of trees not by subsidies—nor, as in South Australia, by the free gift of trees, for these are sold in the national forest reserves—but by constantly giving advice concerning the right trees to plant, and the right times and places for them. To this end its officers visit proposed forest areas, and provide the owners gratuitously—apart from actual cost of service—with scientifically devised plans of the intended groups. The planting operations are superintended, and the growing forest is inspected occasionally. In enumerating the positive advantages of tree-growing on private estates no reference has been made to the great benefit derived by the grower from the effect of trees in preventing good soil from being washed away, in the pitiable fashion recently witnessed in our own metropolitan area during the winter floods, or to the shelter and shade for animals provided by the forest clumps, or to the use esthetic and sanitary effects which follow (as well as commercial and industrial) the afforestation of previously barren tracts.