logs were used in preparing the fire. At the time of 'walking', the surface temperature (measured by a representative of the Cambridge Instrument Co., Ltd.) was 800° C. This high temperature (the hottest fire we have managed to produce at any test) was due to the exposed position of the trench, and to the fact that a stiff breeze was blowing.

The first to walk was Ahmed Hussain (weighing 126 pounds), who took four steps in 1.6 sec. His feet were uninjured. Then Mr. Reginald Adcock (weighing 160 pounds), a young Cambridge graduate, walked the trench in 1.8 sec., taking three steps. His feet were not blistered or injured in any way. This was the third occasion on which he has done the fire-walk for us. Both walkers started off with the right foot. The slow-motion film I took of the demonstrators reveals no apparent superiority in walking technique on the part of the professional.

In the report in *NATURE* of our last fire-walking experiments, it is stated that "two steps with the same foot could only be done without injury by the practised professional". But Mr. Adcock demonstrated to us at Alexandra Palace that he, too, can take two steps with the same foot on a very hot fire without the slightest injury. Although he took three steps against the Indian's four, the time taken was 0.2 sec. longer; and the Englishman weighed 34 pounds more than the Indian. The times were taken by Dr. E. J. Dingwall, and Prof. J. C. Flugel, and I washed and examined the feet of the walkers both before and after the walks.

It is interesting to compare Mr. Adcock's feat with that of Kuda Bux's when the latter gave us his performance at Carshalton on September 17, 1935¹. Bux walked on a trench 11 ft. long, with a surface temperature of 430° C. He weighed 120 pounds. Each foot was in contact with the embers twice. Adcock's performance surpassed that of the Indian's because the surface of the fire was nearly twice as hot, he walked farther, and the Englishman weighed 40 pounds more—the extra weight being a great disadvantage in fire-walking.

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See Bulletin 2, Univer. Lon. Council for Psy. Invest., 1936.

Instructional Tours for Students of Forestry

THE review of the future policy of the Imperial Forestry Institute in *NATURE* of May 1 contains a criticism of the proposal to replace tours of instruction in Germany, France and Switzerland by tours in the Scandinavian countries where forestry has not reached such an advanced or specialized stage. It is pointed out that whereas students in British forestry schools probably receive sufficient grounding in European forestry, those officers whose training has been outside Europe should be given an opportunity of seeing the best examples of organized forestry in countries like Germany, France and Switzerland, where the ecological, economic and sociological foundations have been most fully worked out.

On this point everyone who has kept in close touch with the developments of European forestry in recent times will, I think, be in agreement with the writer. Broadly speaking, it is possible to divide practical instruction in Continental forestry into two parts; (1) the essential grounding in well-established

systems, to be obtained in France, Germany and certain other countries, (2) 'extension tours' to countries where forestry is in a less advanced stage. Without a good grounding in the methods covered by (1), extension tours must lose much of their value, and this would apply to the projected tour in Finland, however interesting and instructive it may prove to be on its own account.

In effect, the future policy of the Institute aims at substituting tours of the second category for those of the first, and the fear expressed in the article in *NATURE* that this may prejudice the chances of giving the essential grounding referred to above to those who have not already received it, is a very natural one. Fortunately, the machinery exists for meeting this difficulty. A good grounding in the fundamental principles of Continental forestry has always been a tradition of the Oxford School of Forestry, and, in order that these principles may be demonstrated on the spot, annual instructional tours have been organized by the School for many years past in France, Switzerland, Germany and occasionally in Austria and Czechoslovakia. Apart from undergraduate members of the School, it has been the regular custom in the past to include on these tours forest officers on leave and others who may wish to take advantage of them. Similar facilities will continue to be afforded in the future, and it is hoped, therefore, that the new policy of the Imperial Forestry Institute will in no way prevent those who desire to do so from obtaining a grounding in, or refreshing their knowledge of, the essential principles of European forestry.

The principal reason for selecting France, Switzerland and Germany for these School tours is that there is probably no region in the world, of similar size, which can show so great a variety of conditions, ideas and methods, whether from the point of view of administration and policy, economic conditions, silviculture and forest management, extraction and utilization of timber, or any other branch of forestry. Practically all the standardized silvicultural systems are to be seen, with various modifications to suit different species and conditions. These systems have formed the basis of scientific forestry in India, and their application is being extended to other parts of the Empire; it is therefore important that those entrusted with the management of our vast forest estate should be well grounded in the fundamentals of the subject.

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THOUGH the study tours of the Oxford Forestry School, and perhaps also those of other schools, offer opportunities to forest officers who have had their training outside Europe to obtain a first-hand acquaintance with some of the standard systems of forestry in France, Germany and Switzerland, the fact remains that the officers in question have to go outside the Institute for these facilities. The disturbing thing is that there is nothing in the declared policy of the Institute to encourage them to do so; rather are such tours criticized on the ground that "the highly specialized forms of forestry seen have little application to average conditions overseas". Prof. Troup says "it is hoped . . . that the new policy of the Imperial Forestry Institute will in no way