

busily employed in preparing a scheme of re-organization, which has, doubtless, since been introduced; and provides for the entertainment of a suitable staff of forest officers, with adequate salaries, to be divided into control and executive, with the requisite number of subordinates; the definition, and, where practicable, the extinction of servitudes; and the more systematic conservancy and working to the best advantage of all the Government forests and communal woodlands under Government control.

By the introduction of these and similar measures there is no doubt that Austria will ere long possess a forest department on a par with those existing in other continental states, both as regards knowledge and organization.

The State forests, notwithstanding the extensive sales which have taken place from time to time to meet State necessities, extend over an area of 1,784,037 Austrian *yochs*, equal to 2,230,046 English acres, of which 522,678 *yochs* (653,347 English acres) are classed as unproductive. This latter extent will probably be greatly reduced and brought under crop under the new *régime*, with a better knowledge of the resources and methods of culture of modern forest science.

The *état* or estimated annual yield of this large area is given as 65,838,200 cubic feet of timber, firewood, &c.

The budget for 1872 shows a gross income of 4,148,653 gulden, with an expenditure of 3,049,476 gulden, leaving upwards of 1,000,000 gulden (say £90,000) as clear profit to the State. The income is exhibited under three heads; 1. Sales of timber, firewood, &c.; 2. Renting of lands not covered with forest (this is a very small item); 3. Forest products and miscellaneous receipts. The expenditure divides itself, as with us, into "ordinary" and "extraordinary," the former including, 1. Charges for felling and transport of timber and charcoal, planting, repair of forest buildings; 2. Charges incurred on account of lands not covered with trees (a small item); 3. Charges for collection of forest produce, &c.; 4. Establishments; and, 5. Taxes and burdens for religious and educational purposes. Under "extraordinary" are classed purchase of lands, purchase and erection of new buildings, and extra establishments. The value of existing forest rights or servitudes is estimated at 530,711 gulden (say, £50,000) per annum.

The existing establishments are not uniform throughout the Empire, each of the twelve provinces or divisions of the Empire having a separate organization and establishments, differing widely in nomenclature, strength, duties, and emoluments. All that can therefore be stated on this subject is, that there are in all 1,170 employés on fixed salaries (amounting to 392,644 gulden per annum), and of this number twenty-two are forstmeisters, or officials holding a corresponding position, in charge of divisions or circles. The extent of these circles and nature of the duties to be performed varies widely. Some are, I was told, almost sinecures, whilst in others there is work for six controlling officers instead of one, and it is much the same with the executive.

The Austrian Forest Academy is situated at Mariabrunn, near Vienna. The course lasts three years, and there were, when I visited the institution, thirty-five students.

The museums or collections are particularly fine and interesting to the forester, particularly the sections known as "*Forst Betrieb*" and "*Ingenieurs-Museum*." In the former are collected specimens of all instruments and appliances made use of in felling, squaring, sawing, carting, and preparing timber; models of saw mills and machinery of all descriptions, from the rude and simple apparatus of former centuries, still in use in some of the remote mountain forests, to the more effective, but at the same time more complicated, methods of modern times. Here are also plans of river beds improved and embanked for floating, sluices of all sorts, dams and weirs for directing rafts in their course and catching firewood, which is floated in billets, accurate models of the rafts themselves, showing exactly how they are constructed, and specimens of timber of all sorts prepared in various ways, and containing many samples from foreign lands, not a few being from Madras and Ceylon, brought by the Austrian expedition which sailed round the world in the frigate "*Novarra*," three years ago. These last are only now being arranged, and there is some difficulty in mastering the nomenclature, which having only been noted in the vernacular, is very confusing.

The damage done by animals and insects to timber trees is also exhibited here in a comprehensive manner; though in this the collection falls short of that at Neustadt-Eberswalde, which, however, it surpasses in other respects.

The value of such collections to the forest officer or student cannot well be over-rated, and I hope we may not be long in commencing their formation in Madras. In fact, no divisional or range office should be without one. This has, I am aware, been repeatedly enjoined, and a commencement was made in the Salem district; but it is impossible to expect much progress in this respect until adequate accommodation is provided at the head-quarters of each range and division.

There is also a forest or botanical garden attached to the academy for the instruction of the students. The staff of the academy consists of the director, Herr Newald, to whom my best thanks are due for the attention and civility I received; seven professors, including one honorary teacher, and six assistant professors, with subordinates in the account office, laboratory, &c. There is also a forest school at Brühl, for training young men as practical foresters, which is under Herr Newald's supervision and the immediate charge of the local forest officer. The course extends over ten months, and there were eight young men going through it when I was there.

The training in both establishments is said to lean too much towards *theory* in comparison with *practice*, but this will doubtless also be improved under the new managements. I was astonished to find that the greater number of those trained in both institutions are intended for private and not Government service; their actual expenses for board and lodging being in many cases paid by noblemen and large proprietors, from whose estates they come, and to which they return as forest officers and workmen. The State defrays the expenses for the up-keep of the institutions, including salaries for the professors, &c., and there are no extra fees. This cannot fail to have a marked effect in tending towards the intelligent management of the private forests of the Empire, which are very extensive. The absence of numerous candidates for the Government forest service, and preference evinced for private employment, is very noteworthy, especially when compared with the state of things