

increased facilities for metallurgical education and to the growing importance of metallurgy. Difficulties are still met, however, when the research worker neglects to express himself simply and intelligibly, or the practical man may be unduly conservative as regards new ideas. Sir Henry quoted one example from his own experience in which prejudice was likely to obstruct the application of research in practice. In 1922 he heard incidentally that a small percentage of copper increased the corrosion-resisting properties of steel. Owing to the story, apparently, that if a puddler wished to get a fellow-worker into trouble, he threw a penny into the puddling furnace, it was difficult to get the material made. Finally, Sir Robert Hadfield accepted the order for a small cast of 'copper-bearing steel'. The metal was required for the smoke-box and ash-pan plates of locomotives, and it took a further six or seven years to show that better results were obtained than with ordinary steel, thus emphasising another point, that the practical test of a discovery should be started as quickly as possible without awaiting its full development. The research associations are invaluable in bringing together those directly engaged in industry and those conducting research.

Land Utilisation Survey

THE Land Utilisation Survey of Britain organised by the London School of Economics and the Geographical Association, under the direction of Dr. L. Dudley Stamp, reports considerable progress during its first year. A general report on the work is given in the *Bulletin* of the Survey for February. After fifteen months' work, four counties in England and one in Scotland are completely finished and another eight counties are on the verge of completion. Of the 22,000 quarter-sheets of the 6-inch map of Great Britain, 3670 have been finished. This is good progress, when it is borne in mind that the work had to be organised from the start in every county and is entirely on a voluntary basis. The completed sheets are being reduced to a 1-inch scale, and will then be printed in seven colours and issued by the Ordnance Survey. The numbering of these sheets will be on the basis of the popular edition of the 1-inch map. Sheet 114 (Windsor) is to be produced as an experimental sheet. While work is proceeding rapidly, in parts of the country, particularly in some of the counties of northern England, there are several areas in which little has yet been done. These blank areas include Gloucestershire, Essex, Huntingdon, several Welsh counties, the North Riding of Yorkshire, much of Northumberland, south-west Scotland, and large areas in the central and western Highlands. For these and other regions workers are still required.

Natural History in Church Records

It is strange from what odd quarters knowledge about the history of animal life may be gathered. This was apparently also the opinion of the vicar of Ridge, who refused permission to examine his parish books, on the ground that he found it difficult to conceive that payments for 'vermin' by parish

authorities could be of interest to anyone. Fortunately no other refusal was met by Charles Oldham, and the results of his searches amongst churchwardens' records in Hertfordshire are some odd contributions to the history of vermin (*Trans. Hertfords. Nat. Hist. Soc.*, vol. 19, pt. 2; 1931). Sparrows, which had increased enormously in numbers because of the intensive cultivation of cereals, had a price upon their heads, and a record (Aldbury) of 1720 reads, "Pd for 6 Doz. of Sparrows heads . . . 1s."; and yet, at the same period, others were deliberately encouraging sparrows to multiply by setting up for their use curious receptacles, 'sparrow-pots', from which the young sparrows were taken for food. The most telling of all the records are those relating to the prices paid for the destruction of polecats. In 1721, at Chipping Barnet, 4d. was paid for two, in 1723 "for 4 Polecatt . . . 4s." was paid at East Barnet; these records, giving the extreme range of prices, indicate a common and almost worthless creature, and contrast with the demand in Scotland, where at one stage the price of a furrier's dozen of polecats reached 45s. Long before that time, in the mid-nineteenth century, when fur value of the polecat had made its pelt desirable, the polecats of Hertfordshire had been exterminated as 'vermin'.

Irish Forests

THE opinion was widely held amongst Irish and English historians of the eighteenth and nineteenth centuries that Ireland was densely wooded down to the last five hundred years, and that the disappearance of the native forests was chiefly due to their exploitation by English adventurers, and the effects of the wars and disturbances during Elizabethan and Cromwellian times. According to A. C. Forbes in his paper on "Some Legendary and Historical References to Irish Forests and their Significance", read before the Royal Irish Academy on Feb. 22, a review of the various authors who were responsible for this conclusion has shown that none can be considered sufficiently acquainted with Ireland to have been an authority on the subject. State papers and other documents indicate that the arrival of the Normans in the twelfth century found Ireland much as it is to-day. A point of considerable interest is the exact position of forest land under the forest laws of the Normans. This forest land was the waste or unenclosed portion of the country, and had no direct connexion with woods or timber trees. Two Irish deafforestation charters of the thirteenth century are in existence, but no record can be found of any proceeding for creating a forest, and Mr. Forbes advanced the theory that the wastes of both Ireland and England were normally afforested or subject to forest laws at a remote period, and that these laws were gradually removed by deafforestation, for which money payments were frequently made to the Crown. Manwood's "Laws of the Forest" is a doubtful guide on this subject. A further point of interest is the existence of *Pinus sylvestris* in the Irish flora during the historic period. While the pine was a dominant species when the older