

extents of arable cultivation and grassland within each primary vegetation type are also indicated. The associations shown are for the most part forest types, the twenty-two symbols representing dominants all referring to trees and shrubs. The maps are thus particularly valuable as showing at a glance the types and detailed distributions of woodlands and their relation to topographical features and geographical location. The utility of these finely printed maps to botanical visitors will be considerable, though place-names are not easy to decipher beneath the superimposed colours and symbols. The legends and keys are given in French and German, and each map measures 37 in. by 26½ in. They are printed on stiff paper by Kummerly and Frey of Bern and are obtainable from Hans Huber of Bern at a cost of 12 Swiss francs each.

Ancient Fishing on the River Severn

THE interest in folk museums is growing throughout Great Britain. There are those who would like to see immense parks set aside for folk studies on a national scale on the Scandinavian plan, whereas others are content with more regional establishments, even down to a county basis; but no folk museum of any kind will be of the slightest value unless its collections provoke study and subsequent publication. It is for this reason that a modest little work, "Guide to the Severn Fishery Collections", by J. Neufville Taylor, which has been published by the City of Gloucester Folk Museum, is to be commended, and it is to be hoped there will be many more like it. The various methods used on the River Severn to catch the different fish required will also be of interest to fishermen, even to those who despise all methods except that of the rod, fly and line.

The European Bison

IN recent years, the Society for the Preservation of the Fauna of the Empire has taken keen interest in the efforts made by the International Society for the Preservation of the Wisent [European bison] to save this remarkable relative and possibly forbear of the American bison from extinction. Its ultimate survival is still open to doubt and, in the July issue of the *Journal of the Society for the Preservation of the Fauna of the Empire*, is assembled the latest information procurable on the status of the species. Prof. Jan Zabinski and Miss Erna Mohr contribute authoritative articles from different points of view, and these are prefaced by extracts from a recent paper of Mr. Richard Glover's which both summarizes the known history of the wisent and deals with its contrasts to and similarities with the American bison. If suitable action is taken, there seems to be reasonable hope that the wisent may survive under protection in the right conditions of forest space to bring its numbers up to those which existed before the First World War.

The Molluscan Stomach

IN continuation of his studies on the alimentary canal of Mollusca, Prof. A. Graham has described the stomach of typical lamellibranchs and prosobranch gastropods, discussed the functions and homologies of the parts and compared them with those of the Polyplacophora and Cephalopoda ("The Molluscan Stomach", by Alastair Graham. *Trans. Roy. Soc. Edin.*, 61, Part 3, No. 27; 1949). The molluscs considered range from the ciliary-feeding microphagous lamellibranchs to the browsing

macrophagous gastropods; but only to the more primitive members of the latter class, which exhibit, at least in the trochids, a close resemblance to the lamellibranch type of stomach, with its style sac, major and minor typhlosoles, caecum, grooved sorting area and gastric shield. A simplification of this structure is to be expected in carnivorous gastropods, and does, in fact, occur. One effect of torsion on the primitive form of the stomach is the displacement of the oesophagus from an anterior to a posterior position, so that eventually, in tectibranchs and pulmonates, the oesophageal and intestinal openings are adjacent to one another, and as a result the stomach itself becomes a caecum receiving the ducts of the digestive gland. The stomach of *Patella* is peculiar in that it is small, ill-defined and devoid of a caecum or gastric shield, but it possesses two typhlosoles. The paper is illustrated by twenty-three figures of outstanding merit, prepared by a skilled use of scraper board combined with mechanical stippling.

The Backward Adult

IN the latest of a series of articles in *Army Education* (23, No. 2, June 1949), Dr. W. D. Wall describes the case studies he has made with backward men. His inquiries with adults are supported by investigations which have been made with groups of backward children in schools and show that the majority of the educationally retarded are below the general level of the population in intelligence; any group of poor readers is likely to contain between a half and two-thirds of men whose level of intelligence is subnormal. On the other hand, there are many near-illiterates whose mental level is nearly normal or even supernormal. Some of these often have difficulty in distinguishing the shapes of similar letters like *b* and *d*, *m* and *n*, *p* and *q*. In other cases there is a tendency to reversals, either of single letters or of words, showing that the habit of attacking a word from left to right is not established. Some backward adults of average intelligence have marked difficulties in recalling material presented aurally or visually, or in synthesizing into whole words syllables which can visually or auditorily be discriminated quite well. A third class of defects is physiological, and, in a group of a hundred backward readers studied by Wall, defects of hearing and vision were nearly twice as frequent as among a group of normal readers of otherwise comparable background. Speech defects—stammering, lisping and marked hesitations accompanied by disturbance of breathing—and left-handedness or a tendency towards it also seem to operate as handicaps in learning. The factor which, apart from intelligence, is of greatest significance in leading to backwardness is that of personal adjustment. In Wall's inquiries nearly two-thirds of the men showed that they were not adjusting themselves to the demands of even a relatively simple existence. It is, however, difficult to estimate how far emotional disturbances during and after school life inhibit learning and how far educational failure contributes to adult maladjustment.

Measuring Productivity

THE 1948-49 Winter Proceedings of the British Institute of Management have been presented as a report. The fourth meeting was addressed by Sir Ewart Smith and Dr. R. Beeching who, in a joint paper, discussed the means of measuring the effectiveness of the productive unit. After defining the meaning of