perhaps a similar mechanism regulates enzyme activity in the cell. Of considerable interest is the article by G. A. van Klinkenberg of Oss on the specificity of diastase, which the Germans term amylase, developing Kuhn's striking discovery that there are two forms of this enzyme—one setting free α-maltose and the other yielding β-maltose from starch. This work has scarcely as yet received general recognition, though it is possibly the most important step forward of recent years in relation to the whole vexed question of the structure and hydrolysis of starch. The author considers in a summary that starch hydrolysis is brought about by two enzymes rather than by several: he emphasises the great variability in the physical character of different starch preparations.

There follows a lengthy account of the breakdown of starch and protein by the enzymes of malt by Albert Hesse, this being a well-studied industrial operation about which there is always something new being discovered.

The same applies to oxidation-reduction systems as catalysed by enzymes described by Hans von Euler, who comments among other things on the yellow flavine enzyme and vitamin B_2.

Robert Sonderhoff describes yet another yeast enzyme—the dehydrating system—whilst K. Bernhauer of Prague deals at somewhat greater length with the important oxidising fermentations caused by the lower organisms, particularly mould fungi and bacteria. Such reactions include the formation of gluconic acid, also acetic, fumaric, citric and oxalic acids, some of which are to-day technical manufacturing processes: in this field there is a fairly clear understanding of the course of events.

Phosphagen and its place in muscle biochemistry is described by P. Eggleton of Edinburgh, whilst there is a comprehensive article by H. A. Krebs from Cambridge on urea formation in the animal body, which gives a most useful summary of the urea synthesis from ammonia. The latter author emphasises the twofold significance of urea formation, namely, the conversion of the very poisonous ammonia into an extremely indifferent substance by a means avoiding the sacrifice of organic acids which, without urea synthesis, would be necessary to neutralise the ammonia formed in protein metabolism.

An article on catalase by Zeile is followed by one by F. J. W. Roughton on the newest of the enzymes, namely, carbonic anhydrase.

This volume contains a subject index to itself and to the two previous volumes. E. F. A.

Short Reviews

Extra-Sensory Perception. By J. B. Rhine. Pp. xiv + 169 + 3 plates. (Boston, Mass.: Boston Society for Psychic Research, 1934.) n.p.

DR. RHINE has published in the volume before us the record of some 90,000 trials conducted at Duke University, North Carolina, in what the author terms "extra-sensory perception (E.S.P.)". The phenomena described by these words are substantially the same as those usually named in England 'clairvoyance' and 'telepathy'. The ability of the subjects is tested by the use of certain designs on cards, packs of the latter being 'called through' under various conditions (clairvoyance), or the design is merely imagined by the agent and thence transmitted (telepathy). The results of the guess are recorded in every case, and when subjected to mathematical analysis, are found to exclude entirely the chance factor as an explanation of the high scores obtained.

The object of the experiments was to answer the question as to the occurrence of E.S.P. by mathematically indisputable evidence, and also to gain some insight into the conditions of that occurrence. Dr. Rhine claims to have demonstrated the first conclusively and to have made some headway towards his second objective. He appears to have been fortunate in obtaining so many subjects who were able to demonstrate their remarkable gifts, although it is possible that other investigators have been more critical in their requirements, for Dr. Rhine, it would seem, was convinced of the reality of E.S.P. before he started his own experiments, mentioning such suspicious tests as those formerly given by the Creery Sisters as contributing to his conviction. Moreover, his own report is singularly lacking in those details which are vital to a proper understanding of his methods, as for example a full description of the cards employed and the means adopted thoroughly to shuffle them. A repetition of the experiments under much more stringent conditions would seem desirable, as it is clear that, if confirmed, the phenomena present problems of great interest and complexity.

The Flora of Iceland and the Fœroes. By C. H. Ostenfeld and Johs. Grøntved. Pp. xxiv + 196. (Copenhagen: Levin and Munksgaard; London: Williams and Norgate, Ltd., 1934.) 6*s.* net.

THE appearance of a modern flora of Iceland and the Færoes in English will be much appreciated by tourists and also by those botanists who are interested in boreal and arctic floras but cannot read Danish or Icelandic. The text follows Engler