earliest known Greek inscriptions, and by six or seven the first dated record of Phœnician script. In addition to the linear tablets others of a contemporary age were discovered inscribed with characters of a hieroglyphic nature, probably of an entirely different language. Excavations have also been carried on at Praseos, the capital of the ancient Eteocretans, and have yielded an inscription in Greek characters of the fifth century B. C., but composed in the Eteocretan language, and excavations at Zakro, in the extreme east of the island, revealed about 150 clay impressions of Mycenæan gems and signets, some of which throw new light on the early religion of Crete.

In connection with the meeting of the Section a pleasing incident was the formal opening of the new Anatomical Laboratory of the University of Glasgow, erected with the aid of a bequest from the trustees of the late Mr. J. B. Thompson. The chair was occupied by Lord Lister, and speeches were made by Mr. Barr in behalf of the Thompson trustees, Principal Story on behalf of the University, Sir William Turner and Professor Cleland, who has presented to the University his large collection of anatomical preparations. At the close of the speech-making the guests were entertained in the new laboratories by Professor and Mrs. Cleland and were given an opportunity of examining the arrangement of the rooms and the collections.

THE PHYSIOLOGICAL SECTION.

The opening address of the Physiological Section, delivered by the President, Professor J. G. McKendrick, was a consideration of the dilemma suggested by Clerk Maxwell in his article on the Atom in the Encyclopædia Britannica. The dilemma was to the effect that a germ cell cannot be structureless, yet it is too small to contain a sufficient number of molecules to account for all the characteristics which are transmitted by it. Professor McKendrick, on making calculations based on more modern data concludes that Maxwell's estimate of the possible number of molecules in an ovum is too small and instead of containing only something like a million the fecundated ovum may start with as many as twelve million million organic molecules, a number probably sufficiently great to account for the transmission of all hereditary characters. He also suggested that since the physicists conceive of molecules as being more or less in motion, it is possible that the activities of living matter may be due to a certain *kind* of motion as yet unknown to physicists.

Sir John Burdon Sanderson described the application of the telephone to the investigation of the rhythmic phenomena of muscles and detailed the results obtained by this method by Miss Buchanan, working in the physiological laboratory at Oxford, and which have already appeared in the *Journal of Physiology*. Professor Sherrington gave an account of experiments upon the cerebral cortical centers in two chimpanzees, the first experiments of the kind which had been performed on animals higher in the scale of life than monkeys. In one of the animals the cortical center for the hand was delimited and excised, the result being an immediate paralysis of the hand, which, however, in a few weeks completely passed away. In the second animal the center for the foot was similarly treated, with similar results. A study of the degenerated tracts in the first animal revealed the existence of a direct pyramidal tract in the spinal cord, a group of fibers which has hitherto been supposed to occur only in man. The degeneration resulting from the extirpation of the foot center did not affect this tract.

Dr. Kennedy, of Glasgow, described, with lantern views, a case in which a long-standing spasm of the facial muscles had been

greatly relieved by dividing the facial nerve and grafting its distal end upon the spinal accessory, the operation being an application of results obtained by experiments in nerve grafting performed on lower animals.

Professor Reed, of Dundee, pointed out that the assertion that proteids in solution exerted osmotic pressure was in all probability due to the use of impure preparations, since by using carefully washed recrystallized proteid no trace of such pressure could be obtained on a membrane formed of formalized gelatine. It would appear from this result that the so-called solutions of proteids were not true solutions but merely suspensions. Professor Reed also called attention to an observation he had made that the absorption of glucose by the intestine was favored by the presence of potassium salts as compared with those of sodium, and attributed the result to an ionic effect.

Dr. W. Brodie Brodie, of Glasgow, gave the results of experiments he had made on the action of oxalates on muscle tissue. He pointed out that it had been shown that the presence of calcium salts was necessary for the rhythmic contraction of the heart, and from his experiments it seemed probable that at the moment of muscular contraction there was a liberation of calcium from a salt of that metal present in the muscle substance. Oxalates did not destroy the irritability of resting muscles, although they did have that effect on muscles in a state of activity, and the results of previous observers require to be modified to this extent. It was probable that the action of the oxalate was due to the precipitation by them of the calcium liberated during contraction.

Professor Noel Paton reported on the results of observations made in conjunction with Drs. Gulland and J. S. Fowler on the hæmopoietic function of the spleen, and stated that they had not been able to obtain any evidence that the organ took part in the production of blood corpuscles.

Dr. W. H. R. Rivers gave an account of the measurement of a visual illusion in the cases of thirty-eight natives of Murray Island, Torres straits, compared with forty-two Englishmen. The apparatus used was the Müller-Lyer line with reversed arrow-heads, the standard line having a length of 75 mm. The illusion proved to be much less, on the average, among the islanders, to whom the two lines appeared equal when the movable line measured 60 mm. while the same appearance occurred to the Englishmen at 55 mm. Dr. C. S. Myers reported some observations which he had made with Galton's whistle on the same islanders, which showed that at all ages they were unable to hear as high a note as inhabitants of Buchan, Aberdeenshire.

THE BOTANICAL SECTION.

The presidential chair of the Botanical Section was occupied by Professor I. Bayley Balfour, who selected for his address a discussion of the causes which have led the Angiosperms to become the dominant type of the existing flora. Before the appearance of the Angiosperms upon the earth's surface there was a dense vegetation, composed of Pteridophytes and Gymnosperms, but this is now represented by a relatively small number of forms, having been replaced by Angiosperms. What, then, were the causes which have led to the dominance of this latter type, what are the structural peculiarities which have given it the advantage over its predecessors? The climatic differences of our epoch, contrasted with earlier periods, naturally suggest themselves as factors in the change, and of these differences perhaps the most important is the great difference in the relative proportions of the land and water areas upon the globe. "The statement is warranted that the Angiosperms have become dominant in great measure because in their construction the problem of the plant's relationship to