once again to the question of their present condition and their future. Difficulties of the situation, which contribute to the failure to find a solution of a problem—for long a reproach to the Australian people—are set out with due appreciation of their weight by an Australian correspondent of *The Times* in an article in the issue of November 25. After pointing out the gravity of conditions which tolerate "tribe after tribe dying on their feet", and contrasting conditions among the natives of New Guinea, the writer refers to the mentality and character of the aborigines as in no small measure responsible for much for the failure of the Governments to check the degeneration which is taking place. Even such a beneficial, and indeed essential, provision in the organization of aboriginal protection as medical attention is rendered in a degree ineffective through the disinclination of the aboriginal to take advantage of it, owing to magical belief or misunderstanding. At the same time the nomadic habit, as well as the tendency to drift to centres of white civilization, neutralize the advantages of reserves of aboriginal lands. On the other hand, the inadequacy of the financial provision made by the Australian Governments is stressed, its most serious consequence being the lack of a trained body of special officers, such as the service organized by Sir Hubert Murray in Papua. A graver indictment of the Australian people appears in the same issue of *The Times* in the form of a report of a valedictory address by Prof. F. Wood-Jones to the Victorian Anthropological Society, which, notwithstanding a certain lack of restraint in language and certain inaccuracies, cannot be passed over by Australia as ill-founded, even though Prof. Wood-Jones, as well as the writer in *The Times*, as has been pointed out in subsequent correspondence, gives little or no credit to Federal and State Governments for what has been attempted to ameliorate aboriginal conditions.

Marconi School of Wireless Communication

QUITE early in its history, the Marconi Company experienced a need for providing its recruits to the engineering and operating staffs with some centralized instruction in the technique of wireless communication. This technique was naturally ahead of any training provided by the universities or elsewhere, and, accordingly, a residential school for the training of probationary engineers of the Marconi Company was opened in 1901. This event established a notable precedent in industrial training institutions. From this date, the School has been in nearly continuous operation, with modifications and expansion of its activities from time to time to meet the demands presented by the progress in communication. Some two years ago it was decided to make very substantial increases in the facilities provided, and on November 29 last, representatives of the technical press were invited to inspect the new buildings and equipment of the Marconi School of Wireless Communication at Chelmsford. Its premises have been rebuilt and equipped on modern lines, its curriculum has been reorganized and additional appointments have been made to the staff.

As a training institution, the School is a leading example of the higher industrial education, and provides the link between the universities and the Research, Development and Engineering Departments of the Marconi Company. All engineering and physics graduates on their appointment as probationer engineers are given a course in experimental and applied wireless communication engineering at this School, which includes in its syllabus the application of circuit theory, the practice of valve, receiver and transmitter technique and experience in the design, construction and testing of representative aerial and feeder arrangements. A series of lectures is also given during the five months' session covering the whole field of wireless communication and a further series on engineering mathematics. The new School possesses a central college building containing the main experimental laboratory, two smaller research laboratories, a standards room, lecture theatre, library, common room, and general offices ; and in the grounds are a number of detached buildings housing telephone terminal gear, direction finding plant, transmitters and television equipment. About sixty students are being trained at the present time ; the lecture theatre has a seating capacity for seventy-five students and many more than this number can be accepted for work in the various experimental sections of the School. A hostel, with a limited accommodation, is available for those students who desire to live near by. A more detailed description of the School and of the facilities which it provides is given by the principal, Mr. H. M. Dowsett, in the *Marconi Review*, No. 66, May–August 1937.

Iodine in Inorganic and Organic Chemistry

FOR his Friday evening discourse at the Royal Institution on December 3, Prof. Irvine Masson discussed "Iodine". After a reference to the important part played by Sir Humphry Davy in the discovery of iodine (1812–1814) during his honorary professorship at the Royal Institution, the first half of the discourse reviewed the functions of this element in Nature. As a component of rocks, minerals, soils, and dissolved salts, iodine is widespread but is exceedingly scanty. Even in its chief commercial source, the nitrate deposits of Chile, its compounds are present only as minor impurities. It began to be significant, however, when organic life began. Certain marine creatures are rich in it, notably kelp, and in horny sponges (bath sponges) and those corals the skeletons of which are horny, not calcareous. In them, the iodine is in the skeleton, as a well-defined organic compound, di-iodotyrosine, closely related to the fairly simple compound tyrosine, which is a frequent constituent of proteins. Whether the organic iodine is useful to the vital processes of the cell-colony has not been ascertained. The same substance is one of the two iodine compounds in the thyroid gland ; and although it there seems to have little or no direct physiological activity, it appears to serve as the chemical forerunner of the other and more complex iodine compound, which the gland evidently synthesizes from it, namely, the hormone

thyroxine. The second part of the discourse exhibited recent discoveries which show that the carbon compounds of multivalent iodine present a much more extensive field than had been realized, wherein this element is seen to be classed less with bromine and chlorine than with elements such as antimony, arsenic, phosphorus, and nitrogen, yet has specific characters of its own.

Chemistry in the Ancient World

THE fortieth Bedson Lecture was delivered on November 26, at King's College, Newcastle-upon-Tyne, by Prof. J. R. Partington, on "Chemistry in the Ancient World". The lecture dealt mainly with the period 4000–1000 B.C., and showed how the outstanding achievements in applied chemistry during this period were made in three principal regions, namely Egypt, Mesopotamia and Crete. The working of metals appears before 3500 B.C. in Egypt and Mesopotamia and somewhat later in Crete and Cyprus. The earliest metal known was probably gold, although copper was known very early in Egypt. The metals silver, lead and iron were also known in the earliest period but were scarce. Refining of gold appears about 525 B.C. An important copper industry was established in Egypt, the malachite ore being mined in Sinai. The use of iron and steel is found among the Hittites and related peoples at the time of the eighteenth dynasty in Egypt, and iron was freely used by the later Assyrians. Brass was known in Palestine about 1400–1000 B.C., and, since the brass industry was later established in Cyprus, some relation between the two regions by way of Râs Shamra seems to be indicated. The techniques of metal workers differed in different regions. The production of bronze was an important event, and the source of the early tin is still doubtful. Zinc occurs in small quantities only in the Roman period. The production of black-topped pottery in Egypt was described and also the preparation of glazes. In some cases the results have been imitated with difficulty and only recently. Glass itself was known in Egypt and Mesopotamia in 3000 B.C., the Egyptians being very skilled in its manufacture and colouring, although blown glass does not seem to have been made until the beginning of the Christian era. The dyes indigo and safflower were used in ancient Egypt, and in Mesopotamia there were the beginnings of the petroleum industry, with extensive use of bitumen for cement and asphalt.

Meteorites of the Gran Chaco

THE announcement in *The Times* of November 9 by a Buenos Ayres correspondent of the discovery of as large mass of meteoric iron in the Campo del Cielo region of the Gran Chaco in the northern Argentine is puzzling. He refers to a "legendary meteorite" long ago spoken of as the "Mesón de Fierro" (iron inn), and assumed to be the source of the iron tips of Indian spears seen by the Spanish conquerors. The discovery of a large mass of native iron in this region was made by Hernán Mexía de Miraval in 1576. This, or perhaps another large mass, was seen by Miguel Rubín de Celis in 1783, and was described by him in the *Philosophical Transactions* in 1788. The weight of this mass has been variously estimated at from 13½ to 45 tons. Another mass of about one ton, found in 1803, was transported to Buenos Ayres during the war of independence with the idea of manufacturing it into armaments; and a portion, weighing 1,400 lb., of this was presented to the British Museum in 1826 by Sir Woodbine Parish, who described it in the *Philosophical Transactions* in 1834. This is still on view in the Natural History Museum at South Kensington. More recently, a mass of 4,210 kgm. (more than 4 tons) was found in 1923, another of 732 kgm. in 1925, and several other smaller masses. These have been transported to the National Museum in Buenos Ayres. The new report may perhaps refer to the rediscovery of the larger mass seen by Rubín de Celis in 1783; or, not unlikely, still another large mass may have been found. It is suggested that the boundary between the provinces of Santiago del Estero and El Chaco is defined by the position of the "Mesón de Fierro". But as shown on a map of the region (*Geog. J.*, **81**, 238; 1933) masses of iron have been found on both sides of this boundary line. Evidently at this place there was an unusually large shower of meteoric irons. The history of the several masses has been given by Dr. Antenor Alvarez "El meteorito del Chaco" (Buenos Ayres, 1926, pp. 222). But the associated meteorite craters, a group of round and shallow depressions (*hoyos* or *pozos*), still require investigation.

Iron Age Site in the Vale of White Horse, Berks

EXCAVATION of an archæological site at Frilford in the Vale of White Horse, Berks, has afforded interesting evidence of a succession of cultures during a period, which if not prolonged in archæological perspective, was at least of considerable duration, extending from the early Iron Age to Saxon times. The site lies close to the Oxford-Wantage road, where it crosses the River Ock, and is situated not more than a hundred yards from a well-known cemetery of the Roman and Saxon periods. The excavation, which was undertaken by the Oxford University Archæological Society at the suggestion of Sir Arthur Evans, was carried out during last term by undergraduate members of the Society with the co-operation of Mr. D. R. Harden of the Ashmolean Museum. The evidence of early Iron Age occupation, according to a report in *The Times* of December 6, is in the form of a series of pits, circular and irregular, dug in the limestone subsoil. These contain Iron Age *A2* pottery. In the largest found to date was a large hearth on a clay floor with, among other objects, a polished hammer-stone. In this period the district was remote and backward; but during the Roman occupation a small but well-built villa was erected on the site. This had a tiled roof and tessellated floor. Unfortunately, seekers after stone in later ages have left little of the walls but the foundation trenches, and the floors have suffered similarly. Samian pottery and coins point to an occupation from the first to the end of the fourth century. If this villa