In this paper the author discusses the new evidence respecting the palæontology of the Lower Cretaceous and Upper Jurassic deposits of Russia which has come to light since the publication by himself and Mr. Lamplugh of "Les Argiles de Speeton et leurs Équivalents" (Moscow, 1892). He is now enabled to fix with certainty the zones of *Hoplites Riasensis* and *Olcostephanus hoplitoides* of the provinces of Riasan and Simbirsk, and is thus in a position to correct and complete his former classification of the Upper Jurassic and Lower Cretaceous rocks of Russia, and to define more strictly their relationship to the equivalent strata of other countries.

The whole of the Petchorian Series—that is, the zones of *Ammonites stenomphalus* and *Amm. Keyserlingi*—is now regarded as Lower Neocomian of a hitherto unknown boreal type, notwithstanding the affinity of its fauna with that of the underlying Jurassic (Aquilonian) strata. The author is thus led to carry up into the Cretaceous the corresponding stages in Western Europe, including the upper part of the zone of *Belemnites lateralis* of Speeton and Lincolnshire, the Upper Berriasian of South-eastern France, and probably the Hils Beds of Germany, instead of classing these with the Jurassic as he had previously done.

A table is given in which the detailed correlation of the rocks between the Kimeridgian and the Aptian of the various regions is attempted.

The comparison of the beds of England and Germany with those of Russia is supported by some new evidence based on the *Aucellæ*, four species of which are described as occurring in the Claxby Ironstone and Spilsby Sandstone of Lincolnshire.

In conclusion, the author shows that in the period under consideration the shore-lines of Europe have been shifted by slow progressive movements passing latitudinally through the region, and that these movements did not affect the whole area simultaneously. Hence many complicated interchanges of fauna were brought about, which can only be unravelled by studying the whole course of events over wide areas.

OBITUARY.

HON. WALTER BALDOCK D. MANTELL, F.G.S.

BORN IN 1820. DIED SEPT. 7TH, 1895.

THE Hon. Walter Baldock Durrant Mantell, F.G.S., was the eldest son of Dr. Gideon Mantell, F.R.S., F.G.S., the well-known Sussex geologist and discoverer of the Iguanodon. He was born in 1820, and left England for New Zealand about 1840, where he became a man of great public importance, holding the posts of Minister for Native Affairs, Postmaster-General, and Secretary for Crown Lands. He was ever mindful of the interests of the Maoris, and sought to serve them to the utmost of his power.

In 1847 Mr. Mantell sent home the first remains of *Notornis*. These were described by Owen as belonging to an extinct form; but two years later, in 1849, Mantell obtained from some sealers on the

south coast of Middle Island (now called the South Island, where he was Government Commissioner for the Settlement of Native Claims) a skin, together with the skull and some limb-bones, of a *Notornis* recently hunted down with dogs, and killed and eaten by these men. Not long afterwards another smaller skin was obtained. Both these specimens are preserved in the Natural History Museum.

The bird was apparently unknown to the Maoris, but there are traditions of a "Swamp-Hen," called on the North Island *Moho*, and in the South *Takahé*, which may have been the *Notornis*.

In 1868 Mantell read a paper before the New Zealand Institute[1] "On the Moa," in which he insisted that these birds were contemporaries of man, their remains being found charred and broken in the Maori ovens, together with stone implements. He also discussed the cause of the extinction of the Moa, and ascribed it chiefly to the agency of man, a view now generally accepted.

In a later paper read before the Wellington Philosophical Society, 1872, he discusses statements that had been made, that Moa-bones had been found beneath marine deposits with extinct shells; and states that this idea arose from a misapprehension of some information supplied by him to his father, who employed it in his paper before the Geological Society.[2] He also gave an account of some new localities in which Moa-remains had been found, including Waikonaiti and Te-Rangatapu. In the latter he obtained a large number of fragments of Moa eggs, several of which he succeeded in restoring. Some of these specimens are now in the Natural History Museum.[3]

Mr. Mantell was elected a Fellow of the Geological Society in 1858. He died on September 7th, 1895, at the age of 75 years. He was in correspondence with Sir William Flower at the time of his death, as to a further donation of his remaining private collection of Moa-remains to the British Museum, which it is hoped may still be made by his representatives at Wellington, New Zealand.

MISCELLANEOUS.

Geological Survey.—We learn that Mr. J. R. Dakyns, M.A., who joined the Geological Survey in 1862, has just retired from the Service. Mr. A. Strahan, M.A., has been promoted to the rank of Geologist on the English branch of the Survey, and Mr. C. T. Clough, M.A., is similarly promoted on the Scottish branch (in the room of the late Hugh Miller). The two vacancies on the Staff of Assistant Geologists are filled by the appointment of Mr. T. Crosbee Cantrill, B.Sc., in England, and of Mr. E. H. Cunningham-Craig in Scotland.

[1] Trans. New Zealand Institute, vol. i, 1868.

[2] See Quart. Journ. Geol. Soc., Feb. 2nd and 22nd, 1848, vol. iv, pp. 225–241. [The woodcut which gave rise to the misapprehension is probably that on p. 240.]

[3] See Notice of the Remains of *Dinornis* and other Birds, and of Fossils and Rock-specimens, recently collected by Mr. Walter Mantell in the Middle Island of New Zealand. By G. A. Mantell. With Notes by E. Forbes, and Sketch-map and Notes by Walter Mantell. Quart. Journ. Geol. Soc., vi (1850), p. 319.