Not being versed in astronomy, I dare not even venture to criticize the first of these hypotheses; but as regards the second, I cannot but regard it as in the highest degree visionary and improbable, if for no other reasons than, firstly, because the now generally received theory of meteors teaches us to regard them as bodies which have been revolving probably for countless ages in space devoid of atmospheric conditions requisite to sustain life; and, secondly, because the meteorites we are acquainted with have in their descent had their external surface actually melted by the intense heat produced by the friction and oxidation of the air, so that the very supposition that any vegetable or animal being, seed or germ, could by any possibility retain its vitality or reach the earth unconsumed, seems to me in the very highest degree improbable.

NOTICES OF MEMOIRS

Austro-Hungarian Coal Supply.

Das Vorkommen, die Production und Circulation des mineralischen Brennstoffes in der österreichisch-ungarischen Monarchie im Jahre 1868. Von F. Foetterle. (Jahrb. der k. k. geol. Reichsanst., 1870.)

THE distribution, the production and consumption of coal in this monarchy is clearly shown by a large and well-executed map, which appeared a short time ago, published by order of the Austrian Government, and drawn by F. Foetterle, who also gave a short explanation of it. The map is on the scale of 1·1,296,000, and the formation to which the coal belongs is shown by five different colours. A glance at the map will convince every one of the scanty distribution of this important mineral over the enormous surface of the Austro-Hungarian dominions, and that most of the coal belongs to the western and the central districts.

a. True Coal-measures Coal is found in Bohemia, in Moravia, and Austrian Silesia, in the Alps and in the Hungarian dominions.

b. Trias and Lias Coal in the Alps, in Hungary and in the Banat.

c. Cretaceous Coal in Moravia, in the Alps, and in Hungary.

d. Eocene Coal (sometimes still showing the structure of the wood, then called Lignite, but generally a good black coal, which, when burnt, cakes, and is excellent for gas manufacture) is chiefly found in the *Alps*, where it is embedded in Cosina beds, below the Nummulite Limestone; Carpano near Albona, the large Coal-basin of the Marburg district, Sotzka, Eibiswald. The coal of Häring, in Tyrol, belongs to a higher horizon of the Eocene, as does also the coal of Monte Promina and of Scbenico in Dalmatia. The coal of Gran, in Hungary, is also of Eocene age.

e. Neogene Coal forms large basins in Moravia, Bohemia, Galicia, Bucovina, and in the north and south zones of the Alps and in Hungary.

A glance at the accompanying map of the distribution of fossil fuel in Austria shows at once how insignificant is the extent of her

coal-basins in comparison with the Coal-formations of England, North America, or even Prussia.

England has - - - -	8,960	square miles of coal.	
North America - - - -	100,528	,,	,, ,,
Province of Silesia in Prussia -	1,280	,,	,, ,,
Austria (as near as possible) -	1,200	,,	,, ,,

The whole produce of coal of all formations in Austria and Hungary amounted during 1868, in round figures, to 6,300,000 tons.

C. L. G.

REPORTS AND PROCEEDINGS.

Geological Society of London. — March 6, 1872. — Prof. Duncan, F.R.S., Vice-President, in the Chair.—The following communications were read:—1. "*Prognathodus Güntheri* (Egerton), a new Genus of Fossil Fish from the Lias of Lyme Regis." By Sir P. de M. Grey-Egerton, Bart, M.P., F.R.S., F.G.S. In this paper the author described a new form of fossil fish, having a broad premaxillary plate somewhat resembling the incisor tooth of a gigantic Rodent, a single maxillary plate like that of *Callorhynchus*, and a mandibular dental apparatus closely resembling that of *Cochliodus*. For this form he proposed the establishment of the new genus *Prognathodus*, and named the species *P. Güntheri*. *Ischyodus Johnsoni*, Agassiz, also probably belongs to this genus, as it agrees with *P. Güntheri* in the characters of the premaxillary teeth. The author was doubtful as to the exact position of this genus, which had a head extended in a horizontal instead of a vertical plane, suggesting a resemblance to *Zygœna*, but covered with hard plates like the head of a sturgeon, and exhibited in the dental apparatus the curious combination indicated above.

Discussion.—Dr. Günther pointed out the interest attaching to the dentition of this fossil fish as being an additional evidence in favour of the connexion between the Ganoid and Chimæroid forms. The existence of three teeth instead of one on each side of the jaw, as in *Ceratodus* and others, presented in it a generic character; but the type was still the same. On one point he slightly differed from the view of the author, and that was as to the application of the terms maxillary and premaxillary to the teeth. He thought the former belonged rather to the pterygo-palatine arch, and that the teeth in the front of the jaw should be regarded as vomerine. He illustrated this by reference to the jaws and dentition of sharks, Chimæroids, and certain Ganoids. In these the teeth, instead of being connected with the maxillary and premaxillary bones, were, in fact, connected with the pterygo-palatine arch. He considered that this furnished additional grounds for including all three forms in one subclass.

Mr. Etheridge made some observations as to the horizon in the Lias in which these fossil fishes occurred. He believed that nine out of ten of the Lower Lias species came out of the upper part of the *Bucklandi* limestone series. At the base of the cliff at Pinhay, Lyme Regis, are the black shales of the Rhætic beds; above them the White Lias, in which there are no fish, though they occur in the same horizon elsewhere; above these a series of shales, with *Ostrea*, and above these again shales and limestones with *Lima gigantea* and *Ammonites Bucklandi*, the whole forming the *Bucklandi* series. The fish-beds, some 8 or 10 feet thick, contain about eighty species of fishes. Above this horizon fishes are almost unknown in the Lias of Dorsetshire. At Barrow fish also occur in the *Bucklandi* series, though somewhat lower down. In other cases fish-remains seemed also restricted to certain horizons; and the exact position of such remains as these was, in his opinion, an important feature in determining their distribution both in time and space.