said to yield a bright, hard, porous coke; the hygroscopic water was estimated by the loss in weight by drying at 100° C., and the specimen analyzed had been previously dried at that temperature. It is stated that there are also twenty seams of what is locally termed "rough coal," with which a large proportion of clay is intimately mixed. A specimen of this variety yielded, after air-drying at 37° C., 52·37 per cent. of coke, containing 29·98 per cent. of ash, which contained 0·532 per cent. of phosphoric acid, and of which 65·48 per cent. was insoluble in hydrochloric acid, and consisted chiefly of silica. Specimens of the Bovey lignite in my possession have split more or less on exposure to the air. An admirable account, by Herr, of the fossil flora of the Bovey beds, will be found in the "Transactions of the Royal Society," for 1862, pp. 1039–1086.

2–6.—Are of tertiary origin. 2. Finely fibrous brown coal. 3. Not fibrous. 4. Pitch-black; powder brown; lustre of fresh surface often vitreous; structure here and there wood-like; breaks in rhombic pieces. 5. A caking coal; black-brown to light-brown; powder brown; woody structure distinct; hard and difficult to pulverize; it contains a peculiar resin. 6. Black; powder brown; lustre imperfectly fatty; fracture uneven schistose, often conchoidal or rhombic; no trace of vegetable structure; resists exposure to the air.

7.—Wood-like. The coke was obtained by slow heating; by rapid heating the yield was from 2 to 3 per cent. less. The dry coal absorbed from the atmosphere 10·8 per cent. of water in 24 hours, that is, only 7·3 per cent. less than the total amount expelled by desiccation at 100° C.

8.—Black-brown; wood-like. The dry coal absorbed from the atmosphere 12·7 per cent. of water in 24 hours.

9.—Wood-like; much fissured. The dry coal absorbed from the atmosphere 15·9 per cent. of water in 24 hours.

10.—Described as brown coal.

11.—Dark black-brown.

11A–11C.—These specimens were received from Sir Richard Griffith, the veteran Irish geologist. 11A. From the St. Richard pit. The ash is light, and contains silica, alumina, sesquioxide of iron, and lime; it fuses on platinum wire before the blow-pipe into a black substance. 11B. This was labelled "Komotau coal." The ash is light-brown; it contains silica, alumina, sesquioxide of iron, and lime—the last substance in less proportion than in No. 11A; it fuses before the blow-pipe. 11C. This was labelled "Eger coal from bore-hole." The loss by desiccation at 110° C. was estimated as water.

12. Described as brown coal.

13. Described as "black coal" (*Schwarzkohle*). Black variety of brown coal.

14–18.—Brown coal from the Prussian province of Saxony. 14. "Fossil wood," *i.e.* presenting a wood-like structure. 15, 16, 18. Earthy. In determining the specific gravity and water, coal fresh from the workings was operated upon. Colour of ash—Of 14, reddish-white; of 15, yellow-brown; of 16, greyish-white; of 18, greyish-white.

17.—Earthy; from the same locality as No. 16, but the analysis is by another operator.

19–21.—Described as brown coal.

22–23.—Brown coal.

24.—Wood-like.

25.—Brown coal.

25A.—Ash, bright orange-red, easily blown away.

26.—Brown coal.

27.—Occurs rather more than half a mile from the sea, at Goneza, province of Iglesias, to the west of Cagliari. An analysis was made at Turin by Abbene and Rossi, and the mineral was also examined at the Ecole des Mines, Paris, and described as black coal, schistose, and pyritic, yielding a pulverulent coke and very ferruginous ashes. Sir Roderick Murchison informed me that this mineral probably belongs to the true coal-measures, in which case it presents an interesting illustration of the fact that a coal of the coal-measures may remarkably resemble a true lignite in composition.

27A.—Since the publication of the first edition of this work, I received from a mercantile house in the City, in 1862, a sample of coal from the same locality as No. 27, with a label attached bearing the inscription, "Iglesias, west of Cagliari, Island of Sardinia." This coal differs widely in composition from that last described and analyzed at the Ecole des Mines, and its characters are as follow:—It is tender and easily frangible; black; lustre not bright, yet not dull or earthy; it contains much intermixed shale, and is seamed throughout with thin layers of a substance which effervesced on the addition of an acid, and was therefore regarded as carbonate of lime; it does not cake when heated. The percentage of ash in the best part of the seam was 13·60. In composition there is nothing to distinguish this coal from that of the carboniferous system.

28–29.—Brought by Dr. Hector. 28. From the Saskatchewan Plains, La Roche Percée, lat. 49° 7′ N., long. 115° W.; tertiary (?); specimen taken August, 1857; analysis made June, 1861; dark brown, compact, in part wood-like and in part resembling coal of the carboniferous system; fracture more or less conchoidal. 29. 6-foot seam. From the right bank of the Saskatchewan, at Fort Edmonton, lat. 53° 33′ N., long. 113° 20′ W.; lower cretaceous (?). Cracked in small pieces during desiccation by exposure to the air, and much resembled coal of the carboniferous system in appearance.

30–34.—The Dranista coal field is situated near Kateri or Katerina, on the west side of the Gulf of Salonica. 30. 16-inch vein. Fracture, pitch-black; very fissile; powder almost black. 31. Laca vein. Black, rather dull; powder brownish-black. 32. Loftacarria vein. Fracture jet-black; powder almost black. 33. Demolaca vein. Dull-black; powder brown. 34. Panaya vein. Easily fissile; powder brown.

35.—Black, and bright; firm, but splintery; fracture uneven; powder almost black.

Lignite from Trinadad.

G. P. Wall, formerly a student of the Royal School of Mines, in the course of an official survey of the geology of the island of Trinidad, collected specimens of lignites which present many points of