

ration of the wood into wedges is an evidence of their having existed, that the difference in minute structure between *Sigillaria* and *Stigmaria* involves no serious difficulty if the former be regarded as allied to Cycadeaceæ, and, further, that we do not know how many of the *Stigmariæ* belong to *Sigillaria* proper, or to *Favularia*, or to such forms as *Clathraria* and *Leioderma*, which may have been more nearly allied to *Lepidophloios*, that the fruit figured by Goldenberg as that of *Sigillaria* is more probably that of *Lepidophloios*, or may be a male catkin with pollen, and that he has found *Trigonocarpa* scattered around the trunks of *Sigillariæ* and on the surface of the soil in which they grew. He agreed with Mr. Caruthers in regarding Mr. Binney's *Sigillaria vascularis* as allied to *Lepidodendron*.

DISCUSSION.

Prof. MORRIS thought that *Clathraria* and *Lepidophloios* ought to be discriminated from the *Sigillariæ*, as being rather more nearly allied to cycadeaceous plants, especially the former. He pointed out the manner in which certain vascular bundles communicating between the centre of the stem and the bark in *Sigillaria* and allied genera might be mistaken for medullary rays.

3. *Note on some new ANIMAL REMAINS from the CARBONIFEROUS and DEVONIAN of CANADA.* By Principal DAWSON, F.R.S., F.G.S., Montreal.

(The publication of this paper is deferred.)

[Abstract.]

THE author described the characters presented by the lower jaw of an Amphibian, of which a cast had occurred in the coarse sandstone of the Coal-formation between Ragged Reef and the Joggins Coal-mine. It measured 6 inches in length; its surface was marked on the lower and posterior part with a network of ridges enclosing rounded depressions. The anterior part of the jaw had contained about 16 teeth, some of which remained in the matrix. These were stout, conical, and blunt, with large pulp-cavities, and about 32 longitudinal striæ corresponding to the same number of folds of dentine. The author stated that this jaw resembled most closely those of *Baphetes* and *Dendrerpeton*, but more especially the former. He regarded it as distinct from *Baphetes planiceps*, and proposed for it the name of *B. minor*. If distinct, this raises the number of species of Amphibia from the Coal-measures of Nova Scotia to nine.

The author also noticed some insect-remains found by him in slabs containing *Sphenophyllum*. They were referred by Mr. Scudder to the Blattariæ.

From the Devonian beds of Gaspé the author stated that he had obtained a small species of *Cephalaspis*, the first yet detected in America. With it were spines of *Machairacanthus* and remains of some other fishes. At Gaspé he had also obtained a new species of *Psilophyton*, several trunks of *Prototaxites*, and a species of *Cyclostigma*.

DISCUSSION.

The PRESIDENT objected to the term Reptiles being applied to Amphibia, from which they were totally distinct. He questioned the safety of attributing the jaw to *Baphetes*, of which no lower jaw had been previously found.

Mr. ETHERIDGE remarked that the *Cephalaspis* differed materially in its proportions from any in either the Russian or the British rocks.

4. NOTE on a CROCODILIAN SKULL from KIMMERIDGE BAY, DORSET.
By J. W. HULKE, Esq., F.R.S., F.G.S.

[PLATE IX.]

A CLOSER examination lately made by Mr. Davies, Sen., of the fossils presented to the British Museum last year by J. C. Mansel, Esq., has led to the identification of a large crocodilian head with the Saurian the lower jaw of which I described last session, and identified with *Dakosaurus maximus* of Quenstedt. Covered with matrix, this head had been previously put aside as Pliosaurian, other Pliosaurian remains having been presented to the Museum by the same munificent donor; but now that its identity has been correctly established, a short account of it seems to be a fit sequel to my last paper.

The general agreement of their dimensions, and their discovery near together (in a reef exposed at low water in Kimmeridge Bay), make it highly probable that this head and the lower jaw both belonged to one individual.

The considerable part of the head discovered by Mr. Mansel includes the back of the skull, the left upper temporal arcade, and the entire snout. The extremity of this latter is completed by the præmaxillæ figured in the last number of our Journal, the sutures in which so exactly coincide with those in the broken end of the snout that there cannot be any doubt of the correctness of this restoration.

The shape of the head is a long triangle; its sides converge from the occiput to the end of the snout, with a slight outcurve of the temporal arcade, a moderate incurve in front of the orbits, and a very slight inbend behind the nostril. Its base, a narrow occipital crest, slopes downwards and outwards from a lofty sagittal crest to the truncated mastoid angles.

The skull has the characteristic narrowness of the temporal region, the extremely large crotaphite foramina, the lofty sagittal crest, and the lateral orbit which mark Geoffroy Saint-Hilaire's subgenus *Steneosaurus**.

The sagittal crest, in its present mutilated state, rises two inches above the brain-cavity; a coarse diploë fills the interspace. The crotaphite

* Geoffroy Saint-Hilaire, "Recherches sur l'organisation des Gavials," &c. Mémoires du Muséum d'Histoire Naturelle, t. xii. pp. 148, 149 (Paris, 1825).