

formations from various localities and of various composition, in which he has detected organic structure, and to which he therefore assigns an organic origin; and he protested against the application of the term "concretionary" to such bodies.

3. "On the Maxillary Bone of a new Dinosaur *Priodontognathus Phillippsii*, contained in the Woodwardian Museum of the University of Cambridge." By Harry Govier Seeley, Esq., F.L.S., F.G.S., Professor of Physical Geography in Bedford College, London.

The bone described in this paper was indicated by the author in his "Index to the Aves, Ornithosauria, and Reptilia in the Woodwardian Museum," under the name of *Iguanodon Phillippsii*. Further examination and the detection of successional teeth resembling those of *Scelidosaurus*, and those referred by Prof. Huxley to *Acanthopholis*, induced him to regard the species as representing a new genus, most nearly related to *Hylæosaurus*. The specimen consists principally of the external and alveolar portion of the left maxillary bone, which is $4\frac{7}{8}$ inches long, the alveolar part being $4\frac{1}{2}$ inches, and the remainder made up by a posterior spur for connexion with the malar. From the middle of the upper margin springs an ascending nasal process separating the orbit from the nasal aperture. The presence of the posterior spur, or jugal process, seems to indicate an affinity to the Iguanodontidæ, notwithstanding the resemblance of the teeth to those of *Scelidosaurus*. The teeth, which are seen in their sockets, have their crowns resembling those referred to *Echinodon*, *Scelidosaurus*, and *Acanthopholis*, especially the last, differing chiefly by being relatively narrower, by having only 5-7 denticles on each side, by wanting the thickening at the base, and by terminating in a sharp point. The author described in detail the characters presented by the fossil, and indicated their bearing upon its systematic position. It was imbedded in a small slab of yellow sandstone, which also contained a specimen of *Pecten vagans*, and is probably of Great Oolite age.

4. "Description of a new species of the genus *Hemipatagus*, Desor, from the Tertiary Rocks of Victoria, Australia; with notes on some previously described species from South Australia." By R. Etheridge, Jun., Esq., F.G.S.

In this paper the author described a new species of the genus *Hemipatagus*, under the name of *H. Woodsii*, and appended to this description some remarks on the characters of *Psammechinus Woodsii*, Laube, and *Microraster brevistella*, Laube, and *Monostychia australis*, Laube; and also a Synoptical List of the Australian Tertiary Echinodermata hitherto described.

CORRESPONDENCE.

SUBMERGED FORESTS.

SIR,—In your Number for May, 1868, Vol. V. p. 244, I had the honour to state that what are called "submerged forests" occur without any sinking of the land or rising of the sea, and that "they are all *choked-up estuaries*." More at large, this was first argued in the chapter on the "Travelling of Sea-beach" in "Rain and Rivers." I endeavoured to show that, before the engineer with

his iron pipes and sluices *let* the streams out at low-water, and *kept* the sea out at high-water, Nature, in millions of cases, had partially done the same by running pebble banks across the mouths of small estuaries; that she had thus drained land below high-water mark, and had grown trees thereon. Mr. Kinahan (Valleys, and their Relation to Fissures, Fractures, and Faults, p. 208) replies that oak and most other trees cannot be grown except on drained land, which could never exist naturally below high-water mark." Lest people should take this unsupported *ipse dixit* negative for granted, may I state an imaginary case in exemplification of my theory? We all see the volume of water which passes under our bridges in London during the flood-tide, and most of us would at once allow that, directly as this flow was checked, the volume of water and the height of high-water would decrease. Suppose that at low-water Puck were to replace London-bridge with a bank of pebbles higher than high-water, The flood-tide, instead of flowing, would filter through the pebble-bank. Suppose this filtration and the river water to rise only to half-tide mark, and that the water then filters out with the receding tide. The slopes between the former half-tide and high-water mark would become "drained land," and would grow any trees to any size. Now suppose Puck to shift his pebble-bank to the site of Southwark-bridge. The trees between that and London-bridge would die from being flooded every twelve hours, and their roots would be seen below high-water mark. In nature this results from the sea eroding the line of coast, driving the pebble-bank landward, and exposing the roots which it had covered.

So-called submerged forests may be seen on the south coast opposite the middle of Hastings; at the mouth of Mantell's "Diluvial valley" at Pebblesham; at the west end of St. Leonard's; at Pevensy Level, near Eastbourne; and at Torre Abbey, near Torquay. Roman remains on Dover beach prove no submergence for nearly 2,000 years, while raised beaches prove ancient upheaval.

BROOKWOOD PARK, ALRESFORD.

GEORGE GREENWOOD, Colonel.

ON A NEW LAND-SHELL FROM THE GAULT OF FOLKESTONE.

SIR,—I have the pleasure to announce the discovery of (if I am not in error) the first land-shell of the Upper English Secondary Deposits. The specimen in question is a *Helix*, closely resembling the common garden snail, *H. nemoralis*. It is somewhat depressed without being flat, and is not quite symmetrical in outline, as it is longer one way than the other. Test thin, nearly smooth; sutures well defined, giving the whorls a flat concave appearance; lip, slightly reflected. As the upper portion of the specimen only is exposed, I am unable to say if the shell is umbilicated or not. Formation, Gault; locality, Folkestone.

Should it prove a new species, as I believe it to be, I propose naming it *Helix Woodwardi*.

ALFRED BELL.