metatarsus of a horse, to have terminated in a point, and not to have supported a rudimental claw. The outer side of the outermost metatarsal shows no mark of any other bone, rudimental or otherwise, having been there attached. The co-articulating surfaces at the proximal ends of the metatarsals show them to have belonged, as their position in the matrix indicated, to the same foot.

The innermost supports a toe of three phalanges, the middle metatarsal one of four phalanges, the outermost one of five phalanges. Only the ungual phalanx of the middle toe is wanting: and that no other phalanx is absent from this toe is shown by the modification of the distal articular surface of the penultimate phalanx; which, like that in the adjoining toes, is less concave transversely, or is more uniformly convex, than the distal trochlear surfaces of the more proximal phalanges.

The modifications of the claw-phalanx of the outer and inner toes accord with those of the larger and previously discovered claw-phalanges of the Iguanodon.

Guided by the analogy of the number of phalanges in the toes of the hind-foot of the Iguana, we may infer that the three toes that are normally developed in the hind-foot of the Iguanodon, are the second, third, and fourth; that the first or innermost is represented by a rudimental metatarsal, which was concealed beneath the skin of the foot; and that the fifth or outermost was entirely suppressed.

This modification of the hind-foot is interesting by its analogy to the tridactyle hind-foot of the Rhinoceros and Tapir; and still more so by its correspondence in the varying number of the phalanges, and their progressive increase, from the inner to the outer toe, with the foot of birds.

It adds to the probability of Mr. Beckles's idea of the Iguanodontal nature of the large tridactyle impressions which he has discovered and described in certain Wealden formations, and suggests caution as to inferring that tridactyle impressions, showing a progressive increase of digital joints from three to five, from the innermost to the outermost toes, must, therefore, necessarily belong to the class of Birds.

10. *Notice of the Discovery of a LARGE FEMUR of the IGUANODON in the WEALD CLAY at SANDOWN BAY, ISLE OF WIGHT.*
By T. F. GIBSON, Esq., F.G.S.

[Abstract.]

IN the year 1829 a paper was read before the Society by Dr. Buckland, giving an account of the first discovery in the Isle of Wight of the bones of the Iguanodon. The paper described particularly a metacarpal bone of this animal discovered by Dr. Buckland in Sandown Bay, "in the iron-sand," to use his own words, "which forms the shore there, a little east of Sandown Fort, between high and low water," and he states his belief that it was the largest bone of this description that had then been found.

In the month of October last, an unusually high tide and violent

sea washed away a portion of the low bank which forms the boundary of the shore a little to the west of Sandown Fort, so as to render the section of the Weald Clay, which comes out at this point, perpendicular to the height of about 15 feet. This bed of clay lies immediately above the ferruginous sandstone in which Dr. Buckland discovered the metacarpal bone. About midway between the bottom and the top of the clay-bank, I found, lying in a horizontal position, a fossil bone of such unusual dimensions, that it appeared worthy of notice, as being the largest of its kind yet recorded. It measures four feet ten inches in its extreme length, and fourteen inches in diameter near the centre. It has suffered much from pressure, but is so far perfect, that Professor Owen, on inspection of a small clay-model of the bone, pronounced it to be, in all probability, the femur of an *Iguanodon*. Owing to the kindness of my friend Mr. Tite, who happened to be at Sandown at the time, and assisted me in some researches for further remains of the animal, which proved fruitless, I am able to exhibit the drawing of the bone, of the actual size, on the wall.

The clay-bed in which the bone was found is near the centre of the arch which, as is well known, is formed by the Wealden in Sandown Bay, dipping slightly westward. Where the same bed occurs on the reverse, or eastern dip, at a distance of about half-a-mile, large vertebrae and other portions of bone are frequently found, but always much rolled and broken.

On the GEOLOGY of the NORTH-EAST PART of the DOBRUTCHA.
By T. SPRATT, Captain R.N., F.R.S., F.G.S.

On the FRESHWATER DEPOSITS of the LEVANT. By T. SPRATT,
Captain R.N., F.R.S., F.G.S.

[The publication of these memoirs is unavoidably deferred.]