2. *On a FOSSIL FISH from the TABLE-LAND of the DECCAN, in the Peninsula of INDIA.* By Colonel SYKES, F.R.S., G.S. *With a DESCRIPTION of the Specimens.* By Sir P. DE M. G. EGERTON, F.R.S., G.S.

[PL. XV.]

GENERAL FRASER, the British Minister at the Court of the Nizam at Hyderabad, in a letter to me dated the 31st July 1850, mentioned his having transmitted some specimens of fossil fish, with impressions of leaves, in a matrix which Dr. Walker, whom General Fraser had employed in Statistical and Natural History researches in the Nizam's territories, considered as appertaining to a coal-formation. General Fraser had previously caused specimens to be sent to the Asiatic Society of Calcutta; but the reports upon them not satisfying Dr. Walker, a second series of the specimens were sent to me by General Fraser, with a request that I would ascertain their possible relations with true coal-strata.

Considering the enormous development of trap, covering some 200,000 square miles in the Deccan,—the granitic basis of the whole Peninsula of India,—the area occupied by laterite,—the want of sedimentary rocks,—and the hitherto total absence of organic marine fossils in the Deccan (for a few shells brought to notice by the late Dr. Malcolmson were either fluviatile or lacustrine),—the discovery of fossil fish on the margin of the trap region was a novelty necessarily of great interest, as indicative of the former submerged state of the Peninsula of India. The fossils arrived in October last, and a glance showed that the remains were imbedded in bituminous schist. The specimens were met with, General Fraser mentioned, near to the confluence of the Wurda and Godavery Rivers, north of Hyderabad and south of Nagpoor. But as the Wurda runs into the Wein Gunga, and the latter runs into the Godavery, General Fraser probably meant the confluence of the Godavery and the Wein Gunga. The junction of the Wurda and Wein Gunga is about 170 miles north-easterly from Hyderabad, in latitude $19^{\circ} 87'$ N., and longitude $79^{\circ} 50'$, and the junction of the Wein Gunga and Godavery is about 115 miles north-easterly from Hyderabad, in latitude $18^{\circ} 49' 30''$ N., and longitude $79^{\circ} 56' 30''$. I have reason to believe these localities to be from 1200 to 1400 feet above the sea-level.

The Curator of the Geological Society inspected the specimens of fossil fish, and he considered that they belonged to a genus which in European latitudes is usually associated with the oolitic formation. The oolitic rock nearest to the locality of these fossils is in Cutch, fully 1000 miles distant, and with a thickness of from 4000 to 5000 feet of trap intervening for a couple of hundred miles; nevertheless, many of the European associates of oolite exist upon the Wurda and Godavery; namely, bituminous shale, wood-opal, calcareous spar, rhomboidal quartz, agates, chalcedony, hornstone, &c., and the rock itself may be overlaid by the prodigious flow of trap. It was not until the arrival in town recently of my friend Sir Philip Egerton, whose acumen and critical knowledge of fossil ichthyology render his

opinion so valuable, that I was enabled to get the specimens examined with deliberate attention. But Sir Philip, with that readiness which makes him at all times anxious to render his knowledge available to others, instantly responded to my appeal, and I am permitted by him to make use in his own words of the conclusion at which he arrived after an examination of the fossils. He says,—

“The specimens, with one exception, are much broken, and the materials scattered confusedly over the schist, but there is sufficient evidence to show that they are all referable to the genus *Lepidotus*, and most probably all to one and the same species, *that being a new one*. It is remarkable for the slender proportions of the anterior part of the trunk, and the thickness of the posterior part between the anal fin and the tail. The scales are perfectly smooth, and the free posterior margins entire, without any trace of serration. A ramus of the lower jaw is seen on one specimen, showing the teeth to be conical, with rather elongated bases. There is little doubt but that it is a true Oolitic form, and apparently of the date of the Lias. The schist in which the fish are imbedded reminds me strongly of the bituminous shales of the Lias of Seefeld in the Tyrol. It is very desirable that more perfect specimens should be obtained, since the only one showing the form of the fish wants the head, and exhibits only the under surface of the scales.”

In a second note Sir Philip adds, “The genus *Lepidotus* extends from the Lias to the Chalk, both inclusive; but your species bears evidence of being one of the earlier members of the race. It was probably an estuary or in-shore fish, from its frequent association with terrestrial vegetable remains, as in the Hyderabad specimens.”

Sir Philip Egerton has so ably and completely exhausted the subject, as far as the specimens permitted, that it only remains to me to name the new fish; and as it was very much my practice in my Natural History investigations to associate new species with the localities or provinces where they were met with, I would propose to call the specimen *Lepidotus Deccanensis*.

I have written to India for more specimens; but as the discoverer, Dr. Walker, has lately unhappily lost his life by a fall from his horse, I am not very sanguine about their receipt.

3. *On the Physical Evidence of an EXTREME ARCTIC CLIMATE during the Formation of the ERRATIC TERTIARIES of ENGLAND and WALES.* By J. TRIMMER, Esq., F.G.S.

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Jos. Dinkel, del. et lith.

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LEPIDOTUS DECCANENSIS.