

inhabiting the deep sea, was very deficient. In some parts of his writings, however, he leans to the opinion that species had been lost; and in speculating on this subject, he even suggests that there might be some connection between the disappearance of certain kinds of animals and plants, and the changes wrought by earthquakes in former ages. Some species he observes, with great sagacity, are "*peculiar to certain places*, and not to be found elsewhere. If, then, such a place had been swallowed up, it is not improbable but that those animate beings may have been destroyed with it; and this may be true both of aërial and aquatic animals: for those animated bodies, whether vegetables or animals, which were naturally nourished or refreshed by the air, would be destroyed by the water," &c.* Turtles, he adds, and such large ammonites as are found in Portland, seem to have been the productions of hotter countries; and it is necessary to suppose that England once lay under the sea within the torrid zone! To explain this and similar phenomena, he indulges in a variety of speculations concerning changes in the position of the axis of the earth's rotation, "a shifting of the earth's centre of gravity, analogous to the revolutions of the magnetic pole," &c. None of these conjectures, however, are proposed dogmatically, but rather in the hope of promoting fresh inquiries and experiments.

In opposition to the prejudices of his age, we find him arguing against the idea that nature had formed fossil bodies "for no other end than to play the mimic in the mineral kingdom;"—maintaining that figured stones were "really the several bodies they represent, or the mouldings of them petrified," and "not as some have imagined, 'a *lusus naturæ*,' sporting herself in the needless formation of useless beings." †

It was objected to Hooke, that his doctrine of the extinction of species derogated from the wisdom and power of the Omnipotent Creator; but he answered, that, as individuals die, there may be some termination to the duration of a species; and his opinions, he declared, were not repugnant to Holy Writ: for the Scriptures taught that our system was degenerating, and tending to its final dissolution; "and as, when that shall happen, all the species will be lost, why not some at one time and some at another?" ‡

* Posth. Works, p. 327.

† Posth. Works, Lecture, Feb. 15. 1688. Hooke explained with considerable clearness, the different modes wherein organic substances may become lapi-fied; and, among other illustrations, he mentions some silicified palm-wood brought from Africa, on which M. de la Hire had read a memoir to the Royal Academy of France (June, 1692), wherein he had pointed out, not only the tubes running the length of the trunk, but the roots at one extremity. De la Hire, says Hooke, also treated of certain trees found petrified in the "river that passes by Bakan, in the kingdom of Ava, and

which has for the space of ten leagues the virtue of petrifying wood." It is an interesting fact, that the silicified wood of the Irawadi should have attracted attention more than one hundred years ago. Remarkable discoveries have been made there in later times of fossil animals and vegetables, by Mr. Crawford and Dr. Wallich.—See Geol. Trans. vol. ii. part iii. p. 377. second series. De la Hire cites Father Duchatz, in the second volume of "Observations made in the Indies by the Jesuits."

‡ Posth. Works, Lecture, May 29. 1689.