view of the claſſification of ſtones. Here we will only make a few obſervations concerning their natural history.

As philoſophers have perplexed themſelves much about the origin and formation of the earth (a ſubject certainly far beyond the ken of the human intellect, at leaſt if we believe that it was made by the Almighty power of God), ſo they have alſo propoſed theories to explain the origin of ſtones. When philoſophers limit their inquiries within the boundaries of ſcience, where they are led by the ſober and ſafe conduct of obſervation and experiment, their concluſions may be ſolid and may be uſeful ; but when, throwing experiment and obſervation aside, they rear a theory upon an airy no­thing, or upon a ſingle detached fact, their theories will vaniſh before the touch of true philoſophy as a roman­tic palace before the rod of the enchanter. Sometimes from whim, or caprice, or vanity, they attempt to con­found every thing : They wiſh to prove that the ſoul is mere matter, that plants are animals, and that foſſils are plants, and thus would banish two subſtances, ſpirit and dead matter, entirely from the world ; as if the Author of Nature were actuated by ſordid views of parſimony in the works of creation, though we evidently see that a generous profuſion is one of the characteriſtic marks of theſe works. We leave the taſk of con­founding the different claſſes of being to thoſe philosophers whoſe minds are too contracted to comprehend a great variety of being at one view, or who pre­fer novelty to every thing elle. We content ourſelves with the old opinion, that the ſoul is a ſpiritual ſubſtance; that plants are plants, and that ſtones are ſtones.

We have been led into theſe remarks by finding that ſome philoſophers ſay that ſtones are vegetables ; that they grow and increaſe in ſize like a plant. This theory, we believe, was firſt offered to the world by Μ. Tournefort, in the year 1702, after returning from his travels in the eaſt. It was founded on a curious fact. In ſurveving the labyrinth of Crete, he ob­ſerved that the names which viſitors had engraved upon the rock were not formed of hollow but of pro­minent letters like baſſo relievos. He ſuppoſes that theſe letters were at firſt hollowed out by knives ; that the hollows have ſince been filled up by the growth of the ſtone ; and hense he concludes that ſtones vegetate. We wiſh we were fully assured of the fact that the let­ters were at firſt hollowed, before we attempt to ac­count for their prominency. But even allowing the ſuppoſition to be true that they were at firſt hollow, we reply it is only a ſingle fact, and that it is altogether unphiloſophical to deduce a general ſyſtem from a ſingle fact.

In the *ſecond* place, this protuberancy of the charac­ters is very improperly called vegetation, for it is not produced by a proceſs in any reſpect like the vegetation of a plant. Vegetation ſuppoſes veſſels containing fluids and growth by expanſion ; but who ever heard of veſſels in a ſtone, of fluids moving in them, or of the different parts expanding and ſwelling like the branch or trunk of a tree ? Even the fact which Tournefort mentions proves nothing. He does not pretend to ſay, that the rock itſelf is increasing, but only that a few ſmall hollows are filled with new ſtony matter, which riſes a little above the ſurrounding ſurface of the rock. This matter evidently has been once liquid, and at length has congealed in the channel into which it had run.— But is not this eaſily explained by a common proceſs, the formation of ſtalactites? When water charged with calcareous matter is expoſed to the action of air, the water evaporates, and leaves the calcareous earth behind, which hardens and becomes like a ſtone.

Having thus examined the principal fact upon which Μ. Tournefort founds his theory, it is unneceſſary to follow him minutely through the rest of his ſubject.— He compares the accretion of matter in the labyrinth to the consolidation of a bone when broken, by a callus formed of the extravaſated nutritious juice. This obſervation is thought to be confirmed, by finding that the projecting matter of the letters is whitiſh and the rock itſelf greyiſh. But it is eaſy to find companions. The difficulty, as Pope ſays, is to apply them. The reſemblance between the filling up of the hollow of a ſtone, and the conſolidation of a broken bone by a cal­lus, we confeſs ourſelves not philoſophers enough to ſee. Were we writing poetry in bad taſte, perhaps it might appear. The circumſtance, that the prominent matter of the letters is whitiſh, while the rock is greyiſh, we flatter ourſelves ſtrengthens our ſupposition that it consiſts of a depoſition of calcareous matter. Upon the whole, we conclude, we hope logically, that no ſuch theory as this, that ſtones are vegetables, can be drawn from the ſuppoſed fact reſpecting the labyrinth. We have to regret, that the account which we have ſeen of the ſubject is ſo imperfect, that we have not ſufficient materials for a proper inveſtigation. Tournefort has not even told us of what kind of ſtone or earth the ac­cretion conſiſts; yet this single information would pro­bably have decided the queſtion @@(a).

@@@(a) To give a more diſtinct notion of Tournefort’s theory, we ſhall ſubjoin his concluſions : From theſe ob­servations (he ſays) it follows, that there are ſtones which grow in the quarries, and of conſequence that are fed ; that the same juice which nouriſhes them ſerves to rejoin their parts when broken ; juſt as in the bones of animals, and the branches of trees, when kept up by bandages ; and, in a word, that they vegetate. There is, then (he ſays), no room to doubt but that they are organized ; or that they draw their nutritious juice from the earth. This juice muſt be firſt filtrated and prepared in their ſurface, which may be here eſteemed as a kind of bark ; and hence it muſt be conveyed to all the other parts. It is highly probable the juice which fill­ed the cavities of the letters was brought thither from the bottom of the roots ; nor is there any more difficulty in conceiving this than in comprehending how the sap ſhould paſs from the roots of our largeſt oaks to the very extremities of their higheſt branches. Some ſtones, then (he concludes), muſt be allowed to vegetate and grow like plants : but this is not all ; (he adds), that probably they are generated in the ſame manner ; at leaſt, that there are abundance of ſtones whoſe generation is inconceivable, without ſupposing that they come from a kind of ſeeds, wherein the organical parts of the ſtones are wrapped up as thoſe of the largeſt plants are in their ſeeds.