

## Lamarck versus Weismann.

MR. WALLACE'S note with the above title in NATURE (vol. xl. p. 619) contains an illustration of a kind of reasoning that is so common with the post-Darwinians (I know of no other concise expression to designate this class of thinkers) that I desire to call attention to it. His remarks are *à propos* of the twist in the skull of the flat-fishes, and of Dr. Lankester's comments on the explanation of its origin offered in his book "Darwinism." Mr. Wallace has, as it appears to me justly, ascribed the rotation of the eye of these fishes to the "transmission of a series of slight shiftings of the eye acquired in successive generations by the muscular effort of the ancestors of our present flat-fish" (Lankester, in NATURE, vol. xl. p. 568). This, observes Lankester, pointedly, is "flat Lamarckism." Now Mr. Wallace explains that he has added the following language, which he thinks negatives the explanation cited by Dr. Lankester; "those usually surviving whose eyes retained more and more of the position into which the young fish tried to twist them." Mr. Wallace then says that the "survival of favourable variations is even here the real cause at work."

In the three sentences cited from Mr. Wallace, we have the whole question at issue between the post-Darwinians and the neo-Lamarckians in a nutshell. We have stated the "origin of the fittest" and its probable cause; the "survival of the fittest"; and the *non sequitur* of the post-Darwinians closely following. I point expressly to the words of Mr. Wallace, that the "survival of favourable variations is even here the real cause at work," as containing the paralogism (as Kant would say) which constitutes the error of post-Darwinian reasoning. That survival constitutes a cause is clear enough, since from survivors only, the succeeding generations are derived. But it is strange that it does not seem equally clear, that if whatever is acquired by one generation were not transmitted to the next, no progress in the evolution of a character could possibly occur. *Each generation would start exactly where the preceding one did, and the question of survival would never arise, for there would be nothing to call out the operations of the law of natural selection. Selection cannot be the cause of those conditions which are prior to selection; in other words, a selection cannot explain the origin of anything, although it can and does explain survival of something already originated; and evolution consists in the origin of characters, as well as of their survival.*

The attempt to produce variations by mutilations, or by abrupt modifications of the normal conditions of plants and animals, is not likely to prove successful, as it has evidently not been Nature's way of evolving characters, although some well-authenticated instances of such inheritance are on record. And the fact that we have not as yet an explanation of inheritance, may be applied with equal force against any and all theories of evolution that have been entertained.

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