

with his right hand clings the left of his comrade, who is in this manner led down to the nets. Did any one ever see such a performance? The theory advanced on p. 89 is account for the true condition of the shallow lands northward from the mouth of the river and on the island of Brazil, in the immediate neighborhood of Brazil timber, but not extending eastward application. These meadows are flooded for a portion of the year, but become very dry during the season of low water. The author says "they are alternately soaked and baked; hence the forest trees will not grow on them, but they flourish well on the banks, where their roots are only covered during three or four weeks of each year." Flooded forests are not uncommon, and in California, with its seasons of wet and dry, there are magnificent forest-grounds. There is a striking similarity between the conditions in the meadows of the Amazon and in the peat-grounds of the Mississippi Valley. Level, grass-covered tracts, with soil so fine as to be almost impervious, sink by the side of groves and forests on soil more coarse and broken. When the river overflows, the coarse detritus is deposited near the bed, and a bank is built up which is covered with twigs (forth set), in the still waters covering the meadows, the fine sediment settles to the bottom and on this the grasses flourish. The case is a good one in support of Professor Whitney's theory of the origin of the prairie—namely, that the character of the soil prevents the growth of timber; it is too fine. We are told on p. 82 that "a river valley can only be scooped out when the land is above the surface of the sea; but as this valley sinks the sea fills an entrance, and a long bay is the result," etc.; and that the Amazon has no true delta because "it has hardly had time yet to fill in the ordinary bay. Moreover, the sea-beds beyond the mouth must have sunk with the river valley, and the river will require a vast period to build it up to the level of the surface." According to Agassiz the reason why there is no delta is that "the sea is sinking away the land much faster than the river can build it up." He also proved the island of Brazil a portion of the mainland, and suggested that if the entire process should continue for countless ages there is a possibility of the valley being cut away as far as the Andes.

Mr. Smith is enthusiastic in his descriptions of the beautiful and picturesque. His book is much above the average of popular works on similar subjects; few are so carefully written.

The *Refutation of Darwinism, and the Growth Theory of Development*, based exclusively on Darwin's Facts, etc. By T. Warren O'Neill, member of the Philadelphia Bar. (Philadelphia: J. B. Lippincott & Co. Inc., pp. 424, 1886.)—This is a thoroughgoing book. "The design is to show that the very same facts which Darwin confuses his facility to explain, yet upon which he relies to sustain his theory, may be explained in a way which signally disproves the theory that man and other species of animal, and species of plant, were evolved from lower types."—All of Darwin's facts are taken for granted, as are all of his scientific facts. The same facts, however, are differently apportioned, with but a slight variation from Darwin's mode of distribution of them. This new reading of the facts which Mr. Darwin has laboriously accumulated has resulted in two discoveries: one of these reverses the common estimate of Mr. Darwin's character, the other reverses his theory.

The first discovery is that Mr. Darwin cannot be the ignorant and would-be person he has had the credit of being. He "confesses, how frankly we do not know" (p. 40). A few pages farther on we are told of something which "might suggest to the reader that Darwin, in being so complacently content with his ignorance of any cause for variation, was governed by the fear that, if he availed any great altitude to find a cause, the cause might be only too ready in furnishing to the signal discomfiture both of himself and his theory." On p. 96 the author "cannot refrain from delicately intimating that either a dim or a well-defined consciousness, that something which Darwin will know "would sound the knell of Darwinism, alone prevented him from disclosing" the fatal fact. Darwin "has settled in his own mind that all the improvements which arise are due to reversion," though he says the contrary, having, "to all seeming, thought it discreet" to say, in short, the opposite of what he believed; and when Mr. Darwin refuses "to explain the variations by means of reversion," Mr. O'Neill says he does it with a "coincidence" more "wonderful," which is certainly true if he is all the while believed the opposite. In similar tone Mr. O'Neill gets up an imaginary argumentation (pp. 75-76) at the end of which "Mr. Darwin . . . departs to assume his triennial Tynard that his theory about . . . going the religious sentiments of mankind reasonable satisfaction" is altogether untrue.

The author is a member of the Philadelphia bar—we judge one of the youngest, from these and other specimens, and from the excellent look-

upness of the whole treatise. We can understand the old counsel's advice: "A bad case; abuse the plaintiff's attorney"; but we do not understand why a lawyer bringing a civil action, with perfect assurance of a verdict, should think it needful to abuse the defendant personally. Moreover, the whole review of the book is in the other direction, namely, that what is called variation is reversion, that in all variation there is no acquisition of something new but a recovery of characters which the species once possessed and had lost by degeneration. Now, a less modest man than our author would have taken credit to himself for this discovery, the illustrations of which fill the volume; but instead he ingenuously awards to Mr. Darwin the credit of having found it out, and the blame of having tried to conceal it for a sinister purpose.

We like to think fairly well of our fellow-creatures, both for sense and honesty, as, so it is evident that Mr. Darwin had pondered this matter of reversion, and explained a good many things by it, we would suggest a possible reason (over and above the assigned one) that it would have spoiled his theory why he did not adopt the doctrine that "the variations or improvements in each species are limited in number and kind to the number and kind of the characters previously lost by each species under nature"; and that, "although the type is susceptible of modification, its countless ways," this is "only at the cost of evil results which now lead to the sterility, lowered constitutional vigor, and consequent extinction of the line of individuals which have so departed from the true models of their respective species." For Mr. O'Neill's hypothesis contemplates throughout organic nature either a degeneration which exceeds the reversion, and so will end in the evils above said, or else a reversion which will in time gradually repair all the degeneration, and so make the future a complete reproduction of the past. Mr. Darwin, not being a pessimistic philosopher, but quite the contrary, would reject the first alternative—namely, that the organic world is trending from good to bad; also the second, on the ground that, even if made out, all the questions he is considering now would be merely transferred to an anterior state of things. For Mr. Darwin to ascribe all change to reversion would be laying himself open to the same criticism which a Kentucky lawyer passed upon a painter who had argued sound in a circle—viz., that he came out of the same hole he went into.

Regarding the ordinary view, our author insists that the prototype of each species was an organism of a higher state of development than the type of such species as now found under nature. Adverse conditions entailed the suppression of the characters, and the mere restoration of the favorable conditions secured their redevelopment. With him all reduction from the typical number of parts and suppression of function counts as a degeneration of the animal or plant, and their recovery as an improvement, which favorable conditions may secure. In the past—however it may be in the future—circumstances have largely wrought degeneration, and every abortive organ is a specimen of it. Still Nature endeavors to regenerate and restore. Under this view the reproduction occasionally met with of one of the supposed toes of a horse into an accessory hoof would be an advantage rather than a blunder, and, of course, in the good time coming when all abortive organs are to be restored, horses should have at least their three toes again, and—as has more than once happened—distasteful may again come home to men's business and houses.

Chalmers's Beginnings, by Francis W. Miller. (Chalmers: Peter G. Thompson, 1886. Pp. 225.)—This book is rather a history of the "Miami Purchase" than of Chalmers. Of the nine chapters of the body of the work only the last two may be said to be devoted to "Chalmers's Beginnings." The first seven chapters give a pretty full and connected account of the origin and progress of the first attempt to plant settlements of white people in what was then known as the "Miami country." The originators of the scheme (as was best speculated) were John Clevins Symmes, of New Jersey, and Benjamin Sikes, of Red Bank, in western Pennsylvania. In 1793 Symmes (having associated with himself Jonathan Dayton, also of New Jersey, and perhaps others) made application to the Government, in his own name, for the purchase of the entire territory lying between the Little Miami and the Great Miami Rivers, supposed by him to contain about two million acres of land. A contract was finally closed, October 15, 1796, for one million acres. The quantity of land between the two Miami Rivers proved to be much less than was at first supposed, and Symmes never paid and retained patents for more than about six hundred thousand acres. Symmes removed at once (1798) with a number of followers to his purchase, settling at the point to which he gave the name of North Bend, near the