

very words employed by the earliest and ablest of all the American writers on the opposite side.

3. "Our species of the Equine Genus which we call, *p. r. excellencia*, the horse," is next advanced as exhibiting very great differences of size and shape. But to quote only a single authority, Col. Hamilton Smith, in his "Natural History of the Equide," arrives at this conclusion as the result of very extensive inquiries into the natural history of the horse, that horses may be separated into five primitive stocks, constituting "distinct though oscillating species, or at least races separated at so remote a period, that they claim to have been divided from the earliest times of our present zoology."

4. "The dog furnishes us," the writer in the *Journal* next remarks, "with examples even more remarkable of deviations from his *own common type*." But here, again, the common descent of all dogs from one pair is taken for granted as an undisputed truism. Yet on what grounds? If our eye is to guide us, on what principle shall we separate the horse and the ass, not only into different species, but, as Gray and other distinguished naturalists do, into distinct genera, and yet hold as one the bull-dog, greyhound, setter, terrier, and spaniel? In truth, there is not a shadow of ground for this gratuitous assumption of the one common dog type and species. It is opposed by the ablest living Naturalists, such as Mr. James Wilson for example, without any reference to its applicability to the argument of Human Unity. It is opposed, in like manner, by all monumental and historical evidence; the paintings and sculptures of Egypt and Babylon showing the mastiff, the greyhound, the bloodhound, &c., as distinctly defined by their modern characteristics in the dawn of history as now. The wolf, the fox, and others of the *Canidae*, are not themselves single species. Yet the wolf, fox, and jackall have been found to breed without difficulty with domestic dogs; inasmuch so, indeed, that Mr. Bell, directing his attention too exclusively to one of these, inclines to the opinion that the wolf is the original source from whence all our domestic dogs have sprung.

5. "The union of the various races of human beings has always been productive of a progeny perfect in every physical function, fully capable of continuing the race." Even this is by no means the undisputed dogma here assumed. Dr. Knox, for example, in his "Races of Men," says: "No mixed race can stand their ground for any long period of years. A mixed race may be produced, but it cannot be supported by its own resources, but by continual draughts from the two pure races which originally gave origin to it," and the question, as broadly exhibited on this continent, is one of the most difficult of all the unsettled questions in physiology. It is affirmed that, alike in the half-breed Negro and Indian, a speedy degeneracy becomes apparent, along with an aptitude to diseases of a peculiar type, from which the pure races are altogether or nearly free. Certainly, it is impossible to say at present, if the coloured population of this continent keeps up its numbers, much less increases. No census discriminates between the additions it receives annually by means of a white paternity, and those directly proceeding from the mixed race. In truth, every step we take in this inquiry is on uncertain and debatable ground. Meanwhile, what is affirmed of the mixed races of men is almost precisely what does result from fertile hybridity among the lower animals.

6. Finally, the argument of the philologist is referred to, "drawn from his perception of a single source and root of all existing languages." But who is the multi-lingual philologist possessed of such comprehensive perception? A vast step has been achieved in establishing the affinities of the great Indo-

European group of tongues, and in tracing remoter relations connecting these with the semitic languages. But who has proved the relation between these and the Hottentot, the Australian, or the Chinook languages, or even acquired the means of testing them? Certainly no one, as yet, pretends to have done so; and, in discussing so grave and momentous a question of modern science we must build on a firmer foundation than vague generalisations, *petitio principii*, and sacred texts construed according to the preconceived ideas of the writer, with perchance as little real grounds as those formerly employed to upset the science of Geology, which now finds its foremost advocates among the Sedgwicks, Hitchcocks, Millers, and others most distinguished among the Divines and Christian laymen of the age. In all honest scientific controversy the truths of sacred scripture have nothing to fear. All other truths will ultimately be found reconcilable with these. But meanwhile this new question of "The Unity of the Human Race" is not ripe for controversy. It is open only, as yet, to earnest inquiry; and it will be well for the cause of religion if our divines and theologians seek to master it in all its bearings, in the simple teachable spirit in which scientific, as well as sacred truth, can alone be mastered, before it do ripen into a controversy which will only be characterised by danger in so far as it is stamped with the intolerant spirit of ignorant assumption. The writer whose remarks have suggested the above observations, justly says:—"experience has taught us not too hastily to charge any scientific theory with being contradictory to scripture. Freedom of speculation is rightly privileged. Revealed truth is not endangered by discussion and investigation;" and it is a gratifying confirmation of this, to learn from a recent notice in this *Journal* that the speculations and inquiries of Agassiz on the profoundly difficult question here referred to, have in no degree diminished his reverential belief in the revelation of God through His Word.

D. W.

#### On the formation of a Canal between Lakes St. Clair and Erie

*And the foundation of a Town and Harbour at the mouth of the Two Creeks, in the Township of Romney, in connection with the establishment of an extensive system of Drainage, by which near a Million of Fertile Acres would be redeemed in one District. With an illustratory Map.*

BY MAJOR R. LACHLAN, MONTREAL.\*

(Read before the Canadian Institute, March 10th, 1855.)

No object being more worthy of the attention of a patriotic Philosophical Association than the investigation of the physical character of a country, with the view to an improved application of its natural resources and capabilities, it was with much satisfaction that I had from time to time hailed various laudable movements of the Canadian Institute, having that tendency, and especially its late exertions in conjunction with the City Corporation, for the improvement of the important harbour of Toronto. It is true that this praise-worthy course was naturally to be expected from such a Society on the very spot; but it was still not the less commendable as an influential move in the right direction, which, it was hoped would in time be creditably followed by Members of the Association residing in, or connected with, other parts of the extensive region within

\* A large map of the Western District accompanied Major Lachlan's paper, exhibiting the general physical features of the country and showing in the Township of Colchester the extent and distribution of the Inland Marshes adverted to in the text. The map of the Western District, published by Maclear & Co., Toronto, may be referred to with advantage in the perusal of Major Lachlan's paper.