

'neotenis' (persistence of embryonal forms) recently observed among the Urodela find at least a partial explanation in the artificial transformation of the axolotl as here described: for it has been shown that the tendency to continued development can be suppressed by suitable influences; and such influences may make their appearance naturally, and involve a persistence of the larval condition.

The importance of this series of investigations on the primitive transit of the vertebrates from the water to the land has been already pointed out. It must not be forgotten that the remarkable tenacity of life of the amphibians is a capital element, both in such natural transit and in the successful result of the experiments described. With insects the case is very different: their metamorphosis has in certain cases been suspended, both naturally and experimentally; but all attempts which we have made to induce the reversion of an insect to a larval condition have so far miscarried.

HAS MAN A TAIL?

HAS man a tail? It is a question under dispute. Anatomists have failed to agree as to what constitutes a true tail. A tail is generally understood to be a distinct posterior prolongation of the body, containing a greater or less number of vertebrae. This at once excludes all the cases of a caudal appendix of a fleshy character, such as are found among the rarer abnormalities of human structure. Where does the tail end in front? The comparative anatomist is obliged to designate all the vertebrae behind the sacrum as caudal; so that we are led to the conclusion that the four or five vertebrae of the human coccyx constitute a true though not a protuberant tail. In the embryo, however, during the second month of gestation, the coccyx does form a distinct conical projection, which properly answers to all the requirements of a true tail; so that there can be no question that man has a genuine though rudimentary tail, — a survival from his simian ancestors.

But as man is descended from long-tailed animals, we ought to find evidence in the human embryo of additional vertebrae. Professor Hermann Fol of Geneva has shown (*Comptes rendus*, 1885) that this is the case. He has found, that, besides the thirty-three or thirty-four vertebrae which persist into adult life, there are other temporary ones. In an embryo five and six-tenths millimetres (about twenty-five days), Fol found only thirty-two vertebrae: Prof. W. His had found thirty-three vertebrae in an embryo a little larger, — seven millimetres. This led Fol to suspect that there might be a still further increase, although in the adult there are only thirty-three or thirty-four vertebrae. He examined two embryos of eight or nine millimetres. One of them was divided into a series of three hundred and twenty sections, and every section was drawn with a camera lucida. Upon counting up the series, it was found that there were thirty-eight vertebrae. Comparison with other embryos satisfied Fol that this condition was perfectly

normal. With the exception of the last two, all the caudal vertebrae had a blastema like their anterior fellows. The last two segments were indicated only by the perfectly distinct muscular segments (myotomes). The extremity of the tail was formed solely by the medullary tube, covered only by the skin. The notochord extended almost to the end. The terminal vertebrae have only an ephemeral existence. In embryos of twelve millimetres (six weeks) the thirty-sixth to thirty-eighth vertebrae have fused into a single mass. In embryos of nineteen millimetres the last five vertebrae have apparently fused to make the permanent thirty-fourth. C. S. M.

ETHNOGRAPHY OF ANTARCTIC AMERICA.

No inhabited land is found within the antarctic circle; and the title which the learned 'secretary-general of the ethnographic institution' of France has given to his memoir may therefore seem not strictly warranted. But, in the more general sense in which 'arctic' is applied to climate as synonymous with 'wintry,' the epithet 'antarctic' is sufficiently appropriate to the only region of the southern hemisphere in which the climate is severe enough to exert a controlling effect on the habits and character of the people.

Two years ago a little group of Fuegians, comprising four men, four women, and three children, were brought to Paris, and placed, as so many anthropological exotics, in the 'Garden of acclimation.' There they remained for several weeks, and were visited, of course, by many men of science. M. de Lucy-Fossarieu had already made a study of the tribes and languages of California, and naturally did not neglect the opportunity of examining the natives of this more peculiar and less known region. He saw them frequently, and gained much novel information, which considerably modified the opinions previously entertained respecting this people. He was led to examine the works of earlier observers from the time of Magellan to our own, and to gather from their descriptions, combined with his own observations, a view as complete as can now be attained of the ethnology of the southern extremity of our continent. Such, it appears, was the origin of this memoir, for which students of science are under great obligations to the author. It displays in a marked degree the qualities of clearness of statement, and accuracy of deduction, which distinguish the works of the best French investigators. A summary of its contents, with some additions derived from personal observation of the country and the people, will serve to show the importance of the conclusions which the latest evidence tends to establish.

The Rio Negro, a navigable stream of considerable length, divides Patagonia proper from the territories of the Argentine Republic. From this river to the

Ethnographie de l'Amérique antarctique: Patagons, Araucaniens, Fuégiens. Par P. DE LUCY-FOSSARIEU. Paris, 1884. 4°.