

own district to some other portion of the empire, the Incas made it a point never to oblige people accustomed to a high altitude to live at sea-level, nor to make those who were used to living at a low altitude live far above sea-level. In every case the transfers were made to districts where the climatic conditions were as nearly as possible the same as those to which the conquered people had become accustomed. One of the most interesting contrasts in the climates of Peru is seen in the difference between the desert costal strip of the provinces bordering on the Pacific and the forested Amazonian provinces in the northeast. In the former the dry climate prevents vegetable growth, except where man has provided irrigation, and there must be a constant struggle against Nature in order that anything green may grow. In the well-watered Amazonian provinces, on the other hand, vegetation is altogether too abundant, and man must here struggle to keep down what Nature produces too freely. In fact, the exuberance of the vegetation is such as to interfere with the habitability of the region, for almost as soon as a clearing is made in the forests it is again overgrown. In the rainy provinces, therefore, habitability is almost precluded by the superabundance of vegetation, while in the barren desert strip man can only live where his own labor has provided a water supply sufficient for the needs of vegetation. The contrast is a striking one.

R. DEC. WARD.

LIMA, PERU, December 27, 1897.

#### AN INTERESTING MONSTROSITY.

My attention was recently called to the monstrosity pictured in the enclosed photograph. It is a cock, of no pure breed, though carrying some Plymouth Rock blood, having no signs of spurs upon the tarsi, but with well developed ones upon the head, on either side of the comb, just above the eyes. These spurs, neither of which is quite normal in shape, are symmetrically placed, and have every appearance of horns. The right spur, which is less malformed than its mate, is fifteen-sixteenths of an inch in length from its perforation of the skin, and about three-sixteenths of an inch at

that point, tapering somewhat unequally to a blunted point, the whole curved so as to somewhat resemble the horn of a Texas steer.

The left spur, which in diameter and length would be nearly identical with the right, is bent forward so as to form a nearly complete circle, approximately one-half inch in diameter, the point of the spur being in contact with the base of the comb. Both of the spurs are entirely disconnected with the bony structure of the skull, being attached only to the skin and easily movable in all directions.

I could not ascertain from the owner of the cock, in whose possession it had been but a short time, whether this looseness of attachment was congenital or had been brought about by contact with the coop or by fighting.

What makes this specimen extremely interesting is the fact that it is neither a case of dichotomy nor of supernumerary parts nor of atavism, but one in which the normal part is found in an abnormal position without any vestige of representation in its usual place.

In the limited amount of material at my command, I have been unable to find any accounts of cases in many respects similar to this, although Sutton, in his 'Evolution and Disease' (Contemporary Science Series), mentions the successful transplanting (artificially) of the spurs of cocks to the excised comb. I am awaiting with interest the result of interbreeding this specimen, in the hope that more of its peculiar kind may be secured, from which a fertile variety of monstrosities may be obtained.

EDWIN G. DEXTER.

COLORADO STATE NORMAL SCHOOL,

GREELEY, COL.

#### CORRECTION.

OBJECTION having been made to my use of the term 'respiration' in the article 'Some Considerations upon the Functions of Stomata' in SCIENCE, January 7, 1898, page 15, second column, line 12, I wish to substitute for it the expression 'the passage of gases.' Plant physiologists, for very good reasons, wish to restrict 'respiration' to the gaseous exchange which has to do with the catabolic activities of living cells, excluding that exchange taking place in those anabolic activities (known as photosyntax)