

the South American continent about where there is now the Amazonas valley, we should still have a communication between both oceans within the tropics. Just this kind of connection is demanded by the facts that have led to the assumption of an interruption of the isthmus of Panama.

The former connection of v. Ihering's Archiplata with a supposed Antarctic continent is no new theory, but goes back, in this form, as far as Rüttimeyer (1867), and I have no doubt that we should accept it.* But we hardly can accept it in the shape of Forbes' 'Antarctica' (1893). This huge continental mass is simply impossible, and Professör Osborn (SCIENCE, April 13, 1900) has very properly tried to restrict it to a reasonable size; but I think we should still more contract its boundaries. In this respect I should follow Hedley's† views, who practically, but without giving a map, accepts the limits of the present Antarctic continent (as defined by Enderby, Wilke's, Victoria and Graham Land), with only such extensions as are absolutely necessary to connect it with the present southern continents.

A. E. ORTMANN.

PRINCETON UNIVERSITY,
Dec. 7, 1900.

THE LONGEST AERIAL VOYAGE.

TO THE EDITOR OF SCIENCE: The official report just received of the long-distance balloon race from Paris on October 9th, changes somewhat the figures on page 799 of SCIENCE, which were those furnished to the press. It appears now that Count de La Vaulx and a companion traveled 1,200 miles in 35 hours and 45 minutes in the basket of a balloon containing only 57,000 cubic feet of illuminating gas. They reached a maximum height of three and a half miles, crossed Germany and landed in Russia, as did another of the contestants. This is probably the longest continuous voyage in the air ever made, although it was nearly equaled forty years ago by our

* An historical account of the different theories advanced for the explanation of the relations of the southern faunas, and a classification of them, will shortly be published in the *American Naturalist*.

† Proc. Roy. Soc. N. S. Wales, 1895, August 7th.

countryman, John Wise, who, with two companions, went by balloon in 19 hours from St. Louis to Jefferson County, New York, a distance of 1,150 miles.

It is evident that, under the management of an aëronaut, a balloon can be kept longer in the air than an unmanned balloon, but, nevertheless, a balloon of 8,700 cubic feet capacity, carrying only self-recording instruments, which was liberated from Berlin in 1894, after attaining a height of ten miles was carried 700 miles to the borders of Bosnia, at a speed of 62 miles an hour. Still more remarkable, in its way, was the flight of a pair of kites last summer from the Royal Aëronautical Observatory near Berlin. Five kites, which had lifted self-recording meteorological instruments to a height of two and a half miles, broke the wire that confined them to the ground and the two upper kites dragged it across the country for nearly a hundred miles before they were finally checked, the trailing wire, two miles in length, furnishing sufficient resistance to keep the kites flying throughout the night.

A. LAWRENCE ROTCH.

BLUE HILL METEOROLOGICAL OBSERVATORY,
November 30, 1900.

'THE CRIMINAL, HIS PERSONNEL AND ENVIRONMENT.'

TO THE EDITOR OF SCIENCE: Disclaiming in any sense to answer the attack upon my recently published book, 'The Criminal, his Personnel and Environment,' emanating from the pen of Mr. Havelock Ellis and published in your valued journal of the 19th inst., I nevertheless deem it but justice to myself to ask of my critic a verification of the assertion therein made, that: "When he (the author) mentions authorities he is unable in a *large proportion of cases* even to *spell their names*" (the italics and parentheses are my own). Now, as I happen to cite a very large number of names, and while fully conscious of my liability to err, the charge is an exceedingly broad, if not hazardous one, which, if failing to substantiate, will lay my critic open to a grave counter-charge. I respectfully challenge Mr. Ellis to make good his proofs, which, if true, may readily be done. In the event of his ina-

bility so to do, I then ask for a *modicum* of such proofs, and failing in this, and, in view of the fact that I am just completing the proof sheets for the second edition (since March) of my book, I should deem it in the light of a personal kindness as well if he would favor me with the evidence of one or more such errors, naming paragraph and page.

As to any further animadversion upon my work, I am willing to leave its merits to the just judgment of the reading public and my collaborators in the field of practical penology rather than to the dictum of the study and the essay of theorists at long range.

AUGUST DRÄHMS.

SAN QUENTIN, CAL.

At Mr. Drähms's request I have rapidly turned over the pages of his book and noted down a few of the liberties taken with the names of authors quoted or referred to:—Taylor (for Tylor), *passim*; Galt (for Gall) p. 22; Von Homel (for Van Hamel) p. 23; Ferrer, (for Ferrero) *passim*; Tamborini (for Tamburini) p. 46; Tyndale (for Tyndall) p. 51; Masso (for Mosso) p. 69; Gradingier (for Gradenigo) p. 78; Berdier (for Bordier) p. 87; Herman Schaaffhausen (for Hermann Schaaffhausen) p. 95; Lelart (for Lélert) p. 105; Weissmann (for Weismann) *passim*; Thompson (for Thomson) p. 138; Delboef (for Delbœuf) p. 319; Frey (for Fry) p. 334. It would be easy, but is probably unnecessary, to enlarge this list very considerably. Some of the names are so changed that it is hazardous to identify them, more especially since Mr. Drähms seldom supplies definite references. When he does they are sometimes remarkable. Thus I find (p. 95) a reference to Ecker given as '*Crania Germanice*,' *Merid. Occid.*, Freib. i. p.'; it may interest Mr. Drähms to know that this being interpreted, means '*Crania Germaniæ meridionalis occidentalis*, Freiburg, i/Br.'

Mr. Drähms will, I hope, believe me when I say that the other statements in my review may be as fully proved as that to which he takes special exception. He is mistaken in thinking that I wish to 'attack' his book; I have no desire whatever to judge him hastily. But he has chosen to challenge examination of his book as a 'scientific study,' and he must not feel

aggrieved when it is submitted to very elementary tests of scientific precision.

HAVELOCK ELLIS.

LELANT, CORNWALL.

NOTES ON INORGANIC CHEMISTRY.

THE use of acetylene in the blast lamp has been tested by many experimenters, and it has been found possible to obtain easily a heat at which gold can be readily fused. In the October *Moniteur Scientifique*, G. L. Bourgerel has described experiments in replacing air in the acetylene blast lamp with oxygen. When pure oxygen is used the flame becomes highly luminous and deposits carbon in very compact form, much resembling gas carbon. When, however, a mixture of air and oxygen is used with acetylene, the gas is completely burned, and it was found possible to obtain a temperature high enough to fuse platinum. There would seem to be no particular practical advantage in the use of this flame over the commonly used oxygen-coal-gas blast lamp.

HYDROGEN tellurid was discovered by Davy, in 1810, by the action of hydrochloric acid on sodium tellurid, but the gas has never been obtained pure, and beyond its odor and its instability comparatively little has been known of its properties. The problem has been taken up by Dr. Edmund Ernyei, of Budapest, and his results are described in the last number of the *Zeitschrift für anorganische Chemie*. After testing several methods, the best was found to be the electrolysis of 50 per cent. sulfuric acid by a 220 volt current with a tellurium cathode. The apparatus was kept at a temperature of -15° to -20° and the evolved gas dried immediately over calcium chlorid and phosphorus pentoxid. It was then condensed by the use of liquid carbon dioxid, and formed orange-yellow crystals which melt at -54° to a greenish yellow liquid. This hydrogen tellurid proved to be practically pure. Its boiling point is slightly above 0° , but it decomposes quite rapidly below this temperature into tellurium and hydrogen. It is quite soluble in water, but its solution decomposes on contact with the air. In caustic alkalies it dissolves, forming alkaline tellurids, which decompose readily, and on standing these become dark