

bus from Britain and Eastern Siberia, and remarked upon their affinities. The exhibition represented five British species and five corresponding Siberian forms, which differed totally specifically, though they might be considered representative species. One species only, *C. granulatus*, was common to the two extremities of the vast district comprising Dr. Sclater's Palearctic Region, though there are at least fifty known European forms, and fifty others from Siberia. One other species was common to Siberia and Western North America. Mr. Bates was inclined to doubt the advisability of separating the Palearctic and Nearctic Regions, and further he considered the partition of the globe, from a zoological point of view, into great divisions, was, to a considerable extent, based upon arbitrary evidence. He looked rather to the later geological changes, and the present configuration of land and sea, for dates upon which to ground theories of geographical distribution.—Mr. Baly communicated a paper "On new species of exotic *Cassida*."—Mr. Kirby communicated notes upon the butterflies described by Jablonsky and Herbst in their "Natarsystem aller bekannten Insekten."—Mr. Dunning read an exhaustive memoir on the genus *Acentropus*, and after a review of the writings of the various authors who had treated upon this singular genus, he arrived at the conclusion, now almost universally maintained, that the genus is truly Lepidopterous, and further, that the evidence adduced failed to convince him of the existence of more than one species, for which he retained the name *Acentropus niveus*.

Photographic Society, March 12.—Mr. John Spiller, vice-president, in the chair. Mr. Valentine Blanchard read a paper on "Retouching: its use and abuse." While utterly condemning the frequent and elaborate retouching of negatives, such as one sees every day, Mr. Blanchard pointed out that there were occasionally some instances—for example, the correcting of false lights—where retouching was not only allowable, but really desirable, in order to render the picture more true to nature. The camera was at times at fault in reproducing objects in their true character; and under these circumstances the retouching brush or pencil might be fairly used.

CAMBRIDGE

Philosophical Society, February 12.—"Further Observations on the state of an Eye affected with a peculiar malformation," by the Astronomer Royal. In this paper the author showed by the discussion of numerical results obtained during a period of several years that the astigmatism had changed.—"The Comparison of Measures à traits with Measures à bouts," by Professor Miller. A method of comparing these measures without sinking cavities in the bars, was described, and the various processes that had been used were commented upon.

February 26.—"On Teichopsia, a form of transient half-blindness; its relation to nervous or sick headache, with an explanation of the phenomena," by Dr. Latham. The author considered the cause of the affection to be contraction of the vessels of the brain (probably the middle cerebral artery), and so a diminished supply of blood, produced by excited action of the sympathetic; and that the subsequent exhaustion of the sympathetic caused dilation of the vessels and consequent headache.—"A Machine for Tracing and otherwise exhibiting curves in connection with the theory of Vibration of Strings," by Mr. S. C. W. Ellis.

PARIS

Academy of Sciences, March 4.—M. de Saint-Venant read a continuation of his memoir on the hydrodynamics of streams.—M. Guibal presented a memoir on a ventilator applied to the aeration of mines.—M. H. Sainte-Claire Deville presented a note by M. D. Gernez on the absorption-spectra of chlorine and chloride of iodine.—M. W. de Fonvielle communicated an explanation of three cases of fulguration in which the lightning-conductors proved to be insufficient.—M. Sainte-Claire Deville presented a note by M. E. H. von Baumhauer on the origin of auroras, in which the author called attention to an explanation of these phenomena given by him in a work "De ortu lapidum meteoricorum," published at Utrecht in 1844. The author ascribes the production of auroras to the penetration into our atmosphere of clouds of uncondensed cosmical matter, the presence of iron and nickel in which, he seems to think, may account for their being attracted towards the magnetic poles of the earth.—A note by M. H. Caron on crystallised or "burnt" iron was read, in which the author treated of the brittle condition produced in a bar of iron when heated to whiteness and allowed to cool in the air. He finds that this effect is not due to an absorption of oxygen as has been supposed. He also states that good iron is not rendered crystalline by exposure to intense cold.—M. Wurtz pre-

sented a note by M. G. Bouchardat upon the acetic æthers of dulcitol, in which the author describes the following compounds:—diacetic dulcitol, diacetic dulcitan, hexacetic dulcitol, tetracetic dulcitan, pentacetomonochlorohydric dulcitol, and pentacetic dulcitol.—M. Wurtz also presented a note by M. Reboul on the hydrobromates and hydrochlorates of allylene, and a note on pyruvate, by M. Schlagdenhauffen. The latter is a glyceride of pyruvic acid obtained by heating glycerine with tartaric acid.—M. Fremy communicated a note by M. E. Landrin, on the reciprocal action of acids and alkaline bases when separated by a porous partition.—M. L. Kessler forwarded a note on a modification of the processes for the determination of nitrogen in a free state in the analysis of organic substances.—M. Decaisne presented a note by M. J. E. Planchon, on *Cratægus aronia* (Spach) and its relations with *C. oxycantha* and *C. azarolus* of Linné. The author regards *C. aronia* as a cross of the other two forms, which are probably distinct races of the same species.—M. E. Robert accounts for the renewed fermentation of wines at the period of the flowering of the vine, by the abundance of germs of *Mycoderma vini* in the atmosphere at that period.

BOOKS RECEIVED

ENGLISH.—The Year Book of Facts, 1872: J. Timbs (Lockwood and Co.).—An Elementary Treatise on Curve Tracing: P. Frost (Macmillan and Co.).—Monograph of the British Graptolitidæ: H. A. Nicholson (Edinburgh, Blackwood and Sons).

DIARY

THURSDAY, MARCH 21.

ROYAL SOCIETY, at 8.30.—New Researches on the Phosphorus Bases: Dr. Hofmann, F.R.S.—On some Heterogenic Modes of Origin of Flagellated Monads, Fungus-Germs, and Ciliated Infusoria: Dr. Bastian, F.R.S. SOCIETY OF ANTIQUARIES, at 8.30.—Ballot for the Election of Fellows. LONDON INSTITUTION, at 7.—How Plants are Fertilised: A. W. Bennett. ROYAL INSTITUTION, at 3.—On the Chemistry of Alkalies and Alkali Manufacture: Prof. Odling, F.R.S. LINNEAN SOCIETY, at 8.—On the Geographical Distribution of Compositæ: G. Bentham. CHEMICAL SOCIETY, at 8.

FRIDAY, MARCH 22.

ROYAL COLLEGE OF SURGEONS, at 4.—On the Digestive Organs of the Vertebrata: Prof. Flower, F.R.S. ROYAL INSTITUTION, at 9.—On the Results of the last Eclipse Expedition: J. Norman Lockyer, F.R.S. QUEKETT MICROSCOPICAL CLUB, at 8.

SATURDAY, MARCH 23.

ROYAL INSTITUTION, at 3.—Demonology: M. D. Conway.

MONDAY, MARCH 25.

ROYAL COLLEGE OF SURGEONS, at 4.—On the Digestive Organs of the Vertebrata: Prof. Flower, F.R.S. ROYAL GEOGRAPHICAL SOCIETY, at 8.30.

WEDNESDAY, MARCH 27.

ROYAL COLLEGE OF SURGEONS, at 4.—On the Digestive Organs of the Vertebrata: Prof. Flower, F.R.S. ROYAL SOCIETY OF LITERATURE, at 8.30.—On some Greek and other inscriptions recently procured in the Haurân: W. S. W. Vaux.

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ERRATA.—Page 379, 2nd col., lines 16, 17, should read thus:—
 Present River 75
 (flow water 8'81 2,400
 (flood water 8'81 2,400
 Line 13 from bottom, for "4.6 per cent." read 4.6 degrees.