ing the anatomy and temperament, the author considers it to be essentially a stupid animal, and incapable of looking after itself, though a model of patience under most trying conditions.

In mentioning the principal breeds of African camels, the Maazee tribe north of Kena is omitted, also the Howetat, who, though now poor and few in numbers near Cairo since the railway has robbed them of the carrying trade between Cairo and Suez, are still a large and important tribe in the Sinai peninsula. The Kabbabish tribe from the neighbourhood of Dongola, mentioned as a powerful and wealthy tribe, has, since the beginning of the Mahdist movement, been practically wiped out.

The author strongly advocates the establishment of stud farms to improve the breeds, as has been done by the French in Algeria, and then goes on to the important subject of watering, strongly combating the common belief that a camel does best on a small supply of water, and that before a desert march they should be watered at intervals, so as to train them, and to make them drink the more before starting. Doubtless many errors on this subject and that of feeding have sprung from information obtained from Arabs, who, though skilled in management, cannot always be depended on for their explanations, as in the case of a Sheikh whom we heard say that "a camel required less food on a hard desert march than when in camp, because the stomach shrunk when in work." Without doubt they should always start on such marches in the best possible condition, and not weakened by previous fasting, while, as the author points out, a main reason of the Arabs' success with their camels on long and arduous marches is that they do not hurry them, and afterwards graze them for days and even weeks to recruit, a thing impracticable on service, where work is at high pressure, and a large reserve of baggage camels is rarely available.

The importance of careful loading and suitable saddlery is strongly insisted on, and this latter point might with advantage have been gone into more fully with figures of the various riding and baggage saddles in use, since we have not yet got a satisfactory service pattern saddle. A diagram of the camel's skeleton might also have been added to the chapter on loading and marching. Chapter iii., setting forth the author's views on the instinct and intelligence of various animals, might have been omitted or greatly curtailed, seeing how little of it relates to the camel.

The subject is of great importance, and, as a practical work, the result of much experience, this book meets a want, though reference would have been greatly facilitated by an index.

Modern Plane Geometry. By G. Richardson, M.A., and A. S. Ramsey, M.A. (London: Macmillan and Co., 1894.)

A CLOSE examination of this small treatise shows at a glance that the usual method of treatment has undergone considerable alteration. The proofs contained therein are of those theorems in the syllabus of modern plane geometry which was issued by the Association for the Improvement of Geometrical Teaching. The range of the subject treated may be gathered to a certain extent from the statement that the work is intended to serve as a sequel to Euclid, or to the "Treatise on Elementary Plane Geometry" issued by the above-mentioned Association, and, as the authors state, as a systematic means of procedure from Euclidean geometry to the higher descriptive geometry of conics and of imaginary points. The chapters treat of the geometry of the triangle, quadrangle and circle, harmonic ratio, geometrical maxima and minima, that relating to the first being fully considered and containing an introduction to more recent work on special points connected with the triangle. Other chapters deal with cross ratios, involution and reciprocal polars, and projection. The authors inform us that there has been practically no departure from the syllabus referred to above, with the exception of a few additions and the interpolated examples and problems. The theorems are for the most part accompanied by clearly drawn figures which considerably facilitate the rendering of the text.

A little familiarity with this treatise will commend it to many of our readers, for the authors are clear and concise in their treatment of the theorems with which they have dealt.

Chemistry Demonstration Sheets. (London: Blackie and Son, 1894.)

IN our opinion, the series of diagrammatic sketches of chemical apparatus just published by Messrs. Blackie may be put to extremely harmful use. "The sheets have been designed," say the publishers, "as a lecture-room aid in the teaching of chemistry. They present, drawn in bold outline, the apparatus used in the experiments of a first course, and underneath each diagram is set down the chemical formula of the experiment. The diagrams are drawn in elevation, and are just what a student requires to sketch in the examination room, while the formulæ, being constantly before the eye along with the diagrams, will become indelibly imprinted on the memory." If the sheets are merely used to describe the arrangement of apparatus for experiments actually performed, no one will, of course, object to them. But if (and this is more likely) the sheets are employed to impress upon the student's memory chemical reactions and apparatus never seen in reality, they could not be condemned too strongly. Teachers are often too glad to avoid experimentation and to refer their classes to text-books for descriptions of chemical changes brought about by various means. Messrs. Blackie's wall sheets will facilitate such a shirking of responsibility.

LETTERS TO THE EDITOR.

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Panmixia and Natural Selection.

MR. WELDON'S letter on this subject, in NATURE of May 3, calls, I think, for a few further observations. He first criticises the statement that "the survival-mean must, on cessation of selection, fall to the birth-mean," by showing that there are probably cases in nature in which the survival and birth-means may coincide, owing to the removal by selection of all individuals above and below the mean, they being approximately equal in number. This is, no doubt, the case with certain characters of a species, but probably never with all or even with most characters. Darwin states that in France and Germany white pigeons are killed off by kites, and that on the coast of Ireland black fowls are also killed off by sea-eagles. These and other analogous facts render it probable that in many species of animals colour is kept to the inconspicuous and protective mean tint by the elimination of all individuals which vary much on either side of it, and thus, as regards colour, the birth-mean and the survival-mean may be almost identical. But with many other characters this is not the case. In sheep, cattle, and horses it has been observed that when the larger lowland breeds are taken to bleak mountain regions they gradually dwindle in size, only the smaller and hardier of each generation surviving the severe winter and spring climate and the comparatively innutritious food. Here the elimination is clearly in one main direction; and the absence of this selection due to the transference of the whole body of such reduced individuals to a milder climate and better pastures, would no doubt lead to a slight increase of average size, indicating that the birth-mean had been above the survival-mean. So also in the case of the half-