

vague, undetermined, dreams and faith. I offer to collaborate with, say, M. Crépieux-Jamin."

"*Graphology is an art of the future.*"

With slight modification one can agree with Dr. Binet in his conclusions.

There is unquestionably a trace of the man left in every act he performs, but the trace left in writing has not been shown to be a better guide to a knowledge of the sex of the writer than a footprint; of the age than a view of the garments; of the intelligence than the weight of the brain; nor of the character than the appearance of his umbrella. It is not within the power of true science to say that such and such can never be attained, but so far as graphology is concerned we may cite the experiments of its greatest investigator to prove that as yet it has furnished no reliable means of attaining to a knowledge of sex, age, intelligence or character from handwriting.

PERSIFOR FRAZER.

PHILADELPHIA, September, 1906.

*Genera Avium*. Edited by P. WYTSMAN. 4to. Brussels: V. Verteneuil and L. Desmet. Part I., Passeres—Fam. Eurylæmidæ. By Ernst Hartert. 1905 (1904). Pp. 8; pl. I. Part II., Picariæ—Fam. Todidæ. By P. Wytzman. 1905. Pp. 4; pl. I. Part III., Psittaci—Fam. Stringopidæ. By T. Salvadori. 1905. Pp. 2; pl. I. Part IV., Psittaci—Fam. Nestoridæ. By T. Salvadori. 1905. Pp. 3; pl. I. Part V., Psittaci—Fam. Cacatuidæ. By T. Salvadori. 1905. Pp. 7; pls. II.

The first five parts of this important work, which is intended to include the birds of the world, are all that have appeared up to the present time. All bear the date 1905, though part one was issued also as a sample number during the first half of 1904. Each part is separately paged and contains but a single family. The introductory portion consists of a short historical account of the group treated, its anatomical characters, general habits, range and bibliography. Then follows a key to the subfamilies, if there are any, succeeded by a systematic treatment of the subfamilies,

genera and species. Under each subfamily there is a key to its genera; while for each genus are given brief synonymy, generic characters, geographical distribution, a key to the species and a list of species with geographical distribution and a little, often incomplete, synonymy.

The Eurylæmidæ—more properly Eurylaimidæ—(part I.) are divided by Dr. Hartert into two subfamilies—Calypomeninæ and Eurylæminæ—the first consisting of a single genus with three species, the second of six genera. One form, *Psarisomus dalhousiæ borneensis*, from the mountains of northwestern Bornéo, is described as new. The accompanying plate represents the heads of several species. The general treatment of this group is very satisfactory, but we are not quite sure that all the forms treated as subspecies are not in reality distinct, though, of course, closely allied species. More careful proof-reading, moreover, would have avoided several very unfortunate errors in scientific names.

The Todidæ (part II.), a family restricted to the Greater Antilles, comprise but a single genus, of which four forms are recognized here. *Todus pulcherrimus* Sharpe is treated as a synonym of *T. hypochondriacus*, and apparently with reason; but we are not at all satisfied that the four admitted forms are merely subspecies, as our author thinks. All are represented on the accompanying plate.

The New Zealand family Stringopidæ—or, as it should be spelled, Strigopidæ—(part III.) has only a single genus of two species, one of which is doubtful—probably but an individual aberration. The plate illustrates various details of *Strigops habroptilus*, including the head of an interesting xanthochroic variety.

Of the New Zealand family Nestoridæ (part IV.) six species, all in the genus *Nestor*, are admitted, but two of these are doubtfully valid, and one is extinct. Four of the forms appear on the single plate.

The Cacatuidæ (cockatoos) (part V.) are divided into two sub-families—Cacatuinæ and Calopsittacinæ. The first is composed of six genera, including provisionally Newton's curious *Lophopsittacus* from Mauritius. In *Ca-*

*catua*, the largest genus, fourteen species are recognized, and four additional subspecies are casually mentioned, although the latter seem worthy of a more prominent place. The second subfamily contains only the single species *Calopsittacus novæhollandiæ*. The two plates depict nine species.

Altogether, these first five parts of 'Genera Avium' are very creditable. The arrangement is good, the exposition clear, and while not so ample as some might wish, is yet probably sufficient for the purpose of the publication. The letter press is quite attractive in appearance; and the plates, all of which are colored, are excellent. This work will prove very useful to all who wish to keep abreast of the times, and will be well-nigh indispensable to the working ornithologist.

HARRY C. OBERHOLSER.

#### SCIENTIFIC JOURNALS AND ARTICLES.

*The American Journal of Science* for October contains the following articles:

A. L. DAY AND E. S. SHEPHERD: 'Lime-Silica Series of Minerals,' with optical study by F. E. Wright.

O. C. FARRINGTON: "Analysis of 'Iron Shale' from Coon Mountain, Ariz."

N. T. BACON: 'Phenomena Observed in Crookes' Tubes.'

I. BOWMAN: 'Northward Extension of the Atlantic Preglacial Deposits.'

H. C. BRADLEY: 'A Delicate Color Reaction for Copper, and a Microchemical Test for Zinc.'

A. HILEMAN: 'Elimination and Alkalimetric Estimation of Silicon Fluoride in the Analysis of Fluorides.'

C. BARUS: 'Note on the Actual Drop of Pressure in the Fog Chamber.'

C. BARUS: 'New Method for Standardizing the Coronas of Cloudy Condensation.'

#### DISCUSSION AND CORRESPONDENCE.

##### STEPHENS'S CALIFORNIA MAMMALS.

IN no part of the world is the effect of segregation and isolation as a factor in species-forming more evident than in California. No other state of our union offers such diversities of physical conditions, or such a variety of barriers to the dispersion of animals. A faunal map of California has been compared

to a crazy quilt, because any such map must recognize the limiting and modifying effects of the different sets of environment connected with the hills, valleys, mountains, lakes and streams of this varied land.

Because of the varying degrees of segregation produced by barriers of mountain and climate, the non-migratory animals of California are especially numerous in species, and many of the recognized species are broken up into numerous subspecies. Each form finds its nearest ally farther on, across the range; and, again, types once differentiated may invade each other's territory, when conditions enable individuals to cross the border.

In a volume called 'California Mammals' (West Coast Publishing Company, San Diego), Mr. Frank Stephens, of San Diego, has brought together compact descriptions of all the mammals thus far recorded from California. The descriptions are carefully written, the accounts of habits are full and accurate, the volume is well printed, and it can not fail to be of great value to the students of California beasts. Two hundred and seventy-six species and subspecies are included in the list. The volume contains also an excellent essay on the 'Life Areas of California.' Under the head of *Homo sapiens americanus*, the most specialized of the indigenous mammals of California, is given a map showing the distribution of the twenty-one linguistic stocks.

DAVID STARR JORDAN.

##### AN IGNORED THEORY OF THE ICE AGE.

LOOKING over the recently issued work on 'Geology' by Professors Chamberlin and Salisbury, I was surprised and disappointed to learn that in this voluminous publication of nearly two thousand pages, many of which are devoted to considerations of causes leading up to the ice age, the name of Dr. Marsden Manson is not to be found.

In a work like this, designed for the use of students and general readers, views antagonistic to generally accepted dogmas and pet theories, should, when endorsed by recognized authority, find fair treatment.