

and droll, but never caustic, and his chivalrous spirit, will always linger in our memory.

We desire to tender to the bereaved family of our lamented colleague our profound sympathy, and we order spread upon the records of the senate this minute, in remembrance of our appreciation of his work and life among us.

WARREN P. LOMBARD,  
MARTIN L. D'OOGÉ,  
Committee.

May 7, 1906.

#### SCIENTIFIC BOOKS.

*Les Révélations de l'écriture d'après un contrôle scientifique.* ALFRED BINET, Docteur ès Sciences, Directeur du laboratoire de psychologie physiologique. Librairies Félix Alcan et Guillaumin réunies. Paris, 108 Boulevard St. Germain. 8vo. Preface. March 24, 1906.

Dr. Binet continues his excellent work, beginning with the 'Philosophie du raisonnement' and 'Recherches expérimentales par l'hypnotisme' (1886), which preceded 'Animal Magnetism' (1888), 'Psychic Life of Micro-organisms' (1889), and 'Les altérations de la personnalité' (1892); by commencing a new series of studies of certain fetishes which have become rooted in the beliefs of a large number of people.

These are graphology, phrenology and chiromancy. A study of such subjects by a master is of the greatest value to the world, and hence a considerable space is given to the review of the first on the list in order that the reader may judge of both methods and conclusions.

The book of 257 pages is a résumé of a series of tests applied by the author to 'Graphologists' as well as lay experimenters (the latter of all ages and degrees of intelligence) as to their ability to determine the sex (first part, 4 chapters, 21 pages), the age (second part, 5 chapters, 15 pages); the intelligence (third part, 11 chapters, 124 pages); and the character (fourth part, 7 chapters,

77 pages); of a writer by his or her chiromancy.

*Part I.: By what marks can sex be determined in writing?*

Dr. Binet proceeds on the ground that if those professing to be graphologists can determine the sex from writing in more than 50 per cent. of cases it raises their ability above that of pure chance, which (*in a large series*) is just 50 per cent.

To avoid suggestion he decided to use the addresses on envelopes. Even here the percentage of error of his experts rises materially when the addresses are from a person of one sex to one of another. The two experts were M. Crépieux-Jamin, of Rouen, and M. Eloy, of Paris.

Amusing experiments to ascertain how much more reliable were professional graphologists than 'ignorants' (those ignorant of the so-called art of 'graphology') resulted as follows. In 180 addresses M. Crépieux-Jamin, by far the most skillful graphologist, was correct in 78.8 per cent. of the cases. He divided his determinations into 'certain' and 'probable.' Of the former were 129 and of the latter 51, that is, he was uncertain twice in seven times. Of his fifty-one mistakes he had marked 28 'certain' and 23 'probable,' while of the 129 correct replies he had marked but 27 replies 'probable' and 102 'certain.'

Those ignorant of graphology gave nearly as great a proportion of correct answers. For instance, a studious girl of seventeen was correct in 70 per cent. of her replies. Four instructors and instructresses in the schools of France reached percentages of 72.9, 73, 73 and 73, though quite ignorant of graphology.

The author concludes with astonishing seriousness, "The gift of recognizing sexual character in writing belongs to nearly everybody, but the ablest of the 'ignorants' are still below the best graphologists"—(by less than 2 per cent. *P. F.*)."

Chapter III. is devoted to photo-reproductions of addresses of which some specimens revealed the sex of the writer to all who examined them (18); others were doubtful; and still others were purposely falsified. One

written by a young girl of eighteen was characterized by M. Crépieux-Jamin as 'Certainly a man of thirty or perhaps less.' Another address written by a woman was ascribed by M. Crépieux-Jamin and by M. Eloy to a man. Dr. Binet considers sexual character in writing demonstrated in the most satisfactory manner. The percentage of error of graphologists in determining sex amounts in the most favorable cases to 10 per cent., slightly less than that of the 'ignorants.' Whether this kind of expert evidence may be used in courts he thinks depends upon the answer to the question 'Is a probable error of one tenth admissible in court expert-evidence?'

In any case, he thinks the judges should not admit the testimony of any expert unless he prove by tests that he is one.

*Part II.: By what marks can age be determined from handwriting.*

M. Crépieux-Jamin, after explaining that it is the physiological and not the actual age which may be deduced, gives four periods which may be distinguished, viz., youth, adolescence, young, and old adults.

In youth the lines are coarse, slow, clumsy and wanting grace; the letters differentiated by increased height.

Adolescents have more expansive and pretentious lines, many inequalities, among others the round of the 'd' turned in. The strokes are firm, distinct and have lost the heaviness mentioned of the very young.

Young adults have a still clearer handwriting, freed from calligraphic forms. Originality of character is evident. Diversity is greater than with adolescents. Each is individual.

Aged adults no longer have the lightness and freshness of line of twenty-five years. Their writing shows lines, thickened angles, marks of hesitation and depressions, *i. e.*, all the graphological indications of diminution of activity.

The following table gives the percentage of errors in the answers of M. Crépieux-Jamin compared with the percentage of errors where the determinations had been made by pure

chance. This comparison is made for five separate age-periods.

Number of Errors.	Crépieux-Jamin, Per Cent.	Pure Chance, Per Cent.
Under 6 years.....	34.6	18
From 6 to 10 years.....	26	20
From 11 to 15 years.....	10	26
From 16 to 23 years.....	8	26
From 24 upwards.....	12	28

Dr. Binet concludes that his experiments support the theory of *intuitive* but not *deductive* graphology in the determination of age.

### *Part III.*

#### Chapter X.: Intelligence in Handwriting.

This determination is thought of greater value than the others. The following graphologists were consulted: MM. Crépieux-Jamin, Eloy, Humbert, Vié, Paulhan, Mmes. Forichon, Ungern-Steinberg and de Salberg. Dr. Binet thinks the probable errors are: (1) uncertainty of establishing the real degree of intelligence of people; (2) suggestions received from the contents of the letters; (3) recognition of some handwritings. Regarding the difficulty of determining an actual order of superiority, twenty-seven names were selected, amongst which were those of Jules Simon, Victorien Sardou, Paul Bert, Renan, Claude Bernard, Alexandre Dumas fils, Dumas (chimiste), Poincaré, Brown-Sequard, Charcot, Brunetière, Lemaitre. The second series (people of average intelligence) had to be selected with great discretion.

He eliminated from consideration those who can not write fluently; the partially and completely illiterate (especially servants); merchants, manufacturers, employees and others whose occupations require legibility and induce calligraphy, that hardest test of graphology. Thus, seven tenths of all the writers in France are excluded by these eliminations.

The two methods of experimenting were: (1) by couples; each couple containing the writing of a great, and of an average intelligence; (2) by two groups of writings, 'A' and 'B.' In 'A' 33 great were mixed with four very narrow intelligences known to Dr.

Binet. In 'B' a large number of mediocrities were mingled with Renan, Cl. Bernard and Daudet. Several experts were selected to sort these names. Average intelligence was classed from 30 to 40; talent, 40 to 50; genius 50 to 60; and the inferior grades, 1 to 30.

To avoid suggestion from the contents of a letter, envelopes were first employed; but the experts objected to the insufficiency of the material "*and their efforts were not brilliant.*" In 80 replies but 61 per cent. were correct."

Dr. Binet then had recourse to personal letters, but in cutting out the signature and significant words the meaning was made obscure. (The fact that a letter was thus mutilated would stamp it as of the superior class. *P. F.*)

Another error was in the recognition of the handwriting by the expert; thus: Mme. Ungern Steinberg recognized Zola's writing.

Dr. Binet submitted to each expert a list of 100 known authors and asked if he knew the handwriting of any of them.

Chapter XII.: How is intelligence revealed in handwriting?

M. Crépieux-Jamin recognizes six degrees. Genius, talent, alert intelligence, mediocrity, insignificance and low intelligence. There are pen-strokes characteristic of each of these classes.

*Genius* manifests itself by power, clearness, simplicity and activity. The strokes are not of common form, but elegant, or well defined, with inequalities not discordant.

*Talent* has the same signs, with less clearness, simplicity and activity. The signs of cultivation (modifications of the ordinary forms of writing as abbreviations or simplifications) are as numerous as with genius.

*Alert Intelligence.*—Clear and Simple. Unevenness (index of intellectual sensibility without discordances) is great and gives the impression of a shudder of the pen. Precision not so great as with genius. There appear indications, absent from genius, of cunning, deception, versatility (*sic*), and violence, though not allied with each other.

*Mediocrity.*—Signs of incompleteness, gaps and discordances. The characters labored or

verging upon vulgarity. Marks of meanness, of clumsiness, exaggerations and inequality of the strokes, lack of harmony, lack of clearness, few and not characteristic signs of culture.

*Insignificance.*—Infantile simplicity of the strokes, lack of energy, activity and signs of culture; even and monotonous with the spaces often exaggerated.

*Low Intelligence.*—Vulgar, confused and exaggerated forms without marks of culture.

M. Paulhan does not believe in the constant value of even general signs. It is the 'ensemble' of the writing. M. Vié prepared a table expressing 57 different kinds of writing with their respective significations, but other graphologists criticized the table, and M. Crépieux-Jamin refused to use it.

Chapter XIII.: A general glance at the solutions.

A table of the 35 pairs of writings representing intelligence and mediocrity are given with the grades assigned by Crépieux-Jamin, Vié and Paulhan. In the 35 cases Crépieux-Jamin gave 32 correct and 3 incorrect replies; Humbert, 28 correct, 5 incorrect and 2 doubtful replies; Vié, 29 correct and 6 incorrect replies; Paulhan, 26 correct and 9 incorrect replies.

This is the author's summary of the conclusions of the graphologists on the coupled writings. Seven experts gave answers. The majority of them were correct 32 out of 36 times. In ten cases all seven were unanimous and right. In three cases the majority were wrong. Taking the average of all as that of an exceptionally good expert, his average of success would have been 90 per cent. Writing, therefore, reveals unequally the intelligence of the writer. Graphic signs of intelligence are incontestable but are not found in the writing of *all* great intelligences. In this the case resembles physiognomies.

Chapter XV. Portraits. Successful and unsuccessful.

Dr. Binet says: "Reading a series of graphologists' opinions, one is alternately charmed by their accuracy and disgusted by their errors. One can not decide whether or not there

is any truth in graphology except by taking the average of those efforts, which (he thinks) answers the doubt affirmatively."

Madame Ungern-Steinberg graphologizes *Bertrand* (great mathematician) as 'cultivated, supple, destitute of great delicacy or clear view of things.' *Dumas* chemist (secretary of the Institut), "Mediocre intelligence, bound to routine, considerable faculties of succeeding, limited horizon. Sees nothing outside of his window pane." *Köllicker* (great German naturalist), "Mediocre mind, not clear, credulous and suspicious. Discouraged and deceitful. By a transparent ruse he seeks to compensate lack of judgment," etc.

*Brown-Sequard*.—"Intelligence below average, destitute of clearness and moderation. Impressionable imagination to the prejudice of judgment. Originally intelligence more alert than cultivated. Sum total, muddled mind" (!).

*Ernest Rénan*.—"Intelligence mediocre and little cultivated (!). Little reflection (!). Credulity, and babbling emphasized. The latter owing to commencing senility."

Crépieux-Jamin says of Rénan's writing: "Clear, delicate and fine mind without attaining talent" (*i. e.*, 38; talent begins at 40 of the scale). Eloy says of the same: "Good average intelligence, some deficiency of reflection but very active. What a good heart!" (He rated another letter of Rénan's similarly.)

Chapter XVI.: Shows the traps Dr. Binet laid for the graphologists.

Crépieux-Jamin, Paulhan and two others were chosen. To these four Dr. Binet sent a lying letter to say that in certain couples they had been completely misled. Among the couples of which this was falsely asserted were two where errors had really been made. Crépieux-Jamin recognized these and corrected them, but he refused to change his judgment of the mental superiority of Rénan to a small provincial lawyer, even when *falsely* told he was wrong; but on the contrary, raised the index of Rénan and lowered that of the other. He did the same when asked to reexamine the writing of Paul Bert and an unnamed official,

which he had already rated 42 and 35. He retained the 35 and raised 42 to 47. "This experiment argues well for graphology," says Dr. Binet.

The others fell into the trap and recanted all they had said. Binet apologizes for lying to them, but says he did not transcend his rights as an experimenter.

His conclusion is that "*graphological reasoning may establish two diametrically opposite conclusions*—like politics and other things. It is to be desired that the reasons for opinion were less open to suggestion and more subject to proof."

Chapter XVII.: Necessity of better defining graphological terms.

Graphologists disagree: (1) by finding different 'signs'; (2) by giving different interpretations to what they find. Crépieux-Jamin says: 'Large writing—imaginative.' Paulhan says: 'Large writing—clumsiness.' Two hypotheses are suggested: (1) Graphology is an intuition, can not be explained or controlled; (2) (which is Crépieux-Jamin's view) it is based upon observation of forms, but these (may) neutralize each other.

Chapter XIX.: The achievements of those ignorant of graphology.

Experiments in judging intelligence from handwriting were made with male and female scholars in the primary schools. The masters and mistresses in four communal schools selected ten of the brightest and ten of the duller scholars between twelve and fourteen.

The 80 envelopes, containing addresses dictated to the scholars, were submitted to 16 persons; 3 of professions, and 13 instructors and instructresses. The majority of the replies agreed with the rating of the instructors in 57, and differed in 20 cases. In 5 the agreement was unanimous; in 6 it was 17 to 1; in 10, 17 to 2. Asked to define the features on which they relied for the opinions, the most frequent replies were: (9) Place and disposition of words, specification, disposition of the address. (9) Accuracy or clumsiness, precision, decision, firmness, energy of the characters. The author asks if these were their real reasons for judging, adding, 'to judge is

one thing and to give reasons for the judgment another.'

The graphologists who tried these same documents only succeeded in 60 to 65.5 per cent. (The 'ignorants' averaged 64.4 per cent. of correct answers practically the same. *P. F.*)

In submitting to 'ignorants' a group of writings from distinguished and from mediocre intelligences the answers were 78 right and 79 wrong, *i. e.*, pure chance. "In fact, how," says Dr. Binet, "is one not endowed with intelligence to discover it in the writing of another" (!).

#### Chapter XX.: Conclusions.

The signs that indicate age and sex are not constant. The 'ignorant' can comprehend these signs, but less well than the graphologists (by about 0.05 per cent., *P. F.*). The same is the case with intelligence. Dr. Binet's conclusion is: "It is *possible* for graphologists (1) to read intelligence (2) in hand-writing. (1) That is, *some* graphologists. Graphology is not to be confounded with graphologists. Had we not employed Crépieux-Jamin, Vié and Humbert the conclusion as to graphology would have been more severe. (2) Certain intelligences are more revealed than others. The degree of intelligence, genius and talent is hard to determine."

'In short *there is some truth in graphology* but the graphologist's method is not infallible' (and is not sufficiently explained to give it a place as a science. *P. F.*).

#### Part IV.: Character in Handwriting.

Chapter XXII.: Experiment with the writing of criminals.

Fourteen honest people and eleven criminals contributed the writing studied. The experts were Crépieux-Jamin, Vié, Eloy, Paulhan, Varinard and Mme. de Salberg.

Chapter XXV.: A gallery of murderers and their writing.

*Vidal.*—Assassin of women. (His portrait is excessively made and repulsive. *P. F.*)

Eight lines of an autobiography written by him in prison. From details of his life Binet portrays him as cunning, cowardly, hypocritical, vindictive, boastful, lazy, violent, with

low intelligence. The following diagnoses of character in handwriting are given with fullness in the translated words of the writers because it is the fairest test of the claims of graphology. The words in parentheses refer to the writing, the others to the writer.

Crépieux-Jamin says: "Vivid imagination without grace (inequalities in direction and size, faulty capitals, backhand, large discordant movements, letters too high) associated with an activity of a low order in which agitation (unevenness in size and direction, etc.), discontinuity (bond of junction of words and syllables retarding movement), mediocre (vulgar without relief) and superficial (hesitating, rounded, without relief). He deceives and procrastinates (uneven size, discordant spacing), purpose behind his expansiveness (back handed and sober with large discordant movements). Lying, from too much imagination, is habitual (very uneven size and direction, sinuous and hesitating, too much raised). Lacks reliability (very uneven size and direction, without relief). Not generous (backhand and studied soberness), not good (backhand, turning left, letters too high), but selfish. Proud (too high), not incapable, accidentally, of heroism. Feeble energy ('t's' feebly crossed if at all, hesitating, slow and uneven). Inconsistent. Gentle and violent (curves with many discordances), sensual and lazy (thick letters, heavy strokes). A nature unbalanced."

Dr. Binet praises the portrait but thinks it does not go far enough.

Vié says of this same specimen: "The writing is of a young girl (?) of temperate character (!). Principal characteristic not sentimentality, though she is capable of affection, and of altruism (?) but her emotions are controlled. Has sang froid and is mistress of herself. Principal desire is to please, (?) natural to her elevated tastes (!). She does not exaggerate modesty, but her pride is subjective, for her simple manner does not abandon her in her conduct of her life. She is timid, her lack of impulse does not permit her frankness to follow its natural course but obliges it to recur to diplomacy.

'Moderation' is her motto (!). Her mind is clear, assimilative, of prompt conception and practical tendency. She has appreciable but not subtle delicacy (!). Reflection, attention, notable care in seeking the best, (!) speak in favor of her judgment. Imagination not without grace, but large rather than high. What is most surprising is that her intelligence, diffuse in most young girls, is distinguished by concise and very condensed sobriety (!). Her will shows gaps. In harmony with the timidity already noted she lacks impulse, but has tenacity and firmness in resistance. Her activity has a quality better than will power, balanced as she is in perseverance. Thus appears this young community of tendencies well disciplined under the unity of their rule—moderation (!).

Eloy: Great impulsiveness. Nature nervous and susceptible. Effort to mark it shows his tenderness of heart, \* \* \* delicate nature \* \* \*. Natural instincts for development, \* \* \* esthetic aptitude give a charm \* \* \*. Is very young \* \* \* sequence of ideas, good logic, good power of assimilation \* \* \* sensitive nature \* \* \*.

He adds with naïveté: "I have felt almost from the beginning of the examination of the eight lines that they were written by M. A. Binet at fifteen to eighteen years. After finishing the study this idea remains. Is this the fact? If so I am ready to give my reasons" (!). Dr. Binet says he is not flattered at this achievement of graphology.

Mme. X.: "Altruism trickles out of the writing. Nevertheless, the writer is not entirely good. Little scratches very feline at the extremities of the strokes and many sharp points show unusual taste for criticism. In spite of his great intelligence (!), etc., \* \* \*. Heart better than ideas and character. Not violent but usually irritable. Nervous-bilious, with health rather resistant than strong. This reflecting, observing man, without hampering bonds, had great aptitude for administration and organization. Both economical and able. Without being a visionary he was original. Much talent but not genius—like Taine (!). In any case he was a *thinker* (!).

*Carron*.—Parricide (killed his mother by blows of a shoemaker's pliers and a hammer. Jested of her agony before the magistrate).

Crépieux-Jamin: "Selfish. Very reserved (turning to the left), yet affectionate (inclined and uneven in size and direction). Active (rapid), but negligent (light 't's' not crossed), profoundly sensitive (very uneven). These qualities joined to a fund of gentleness (!) and even timidity (curved, rapid and expressive, without relief, with uncrossed 't's' and terminals restrained and fine). Passionate, unhappy and restless (very uneven agitated, uncoordinated, light). Not a bad man (!). Has tender feelings (!), but his kindness not expansive, but depends on exalted judgment. Rectitude very complicated, not impeccable. He has a conscience and bursts of loyalty (natural and simple, words increasing in size). Little energy (no relief, 't's' unequally or not at all crossed). Judgment mediocre and not sure of results. Don't inspire confidence because qualities insufficient on one side. Frankness combats timidity. Great elasticity of reserve. First impulse often right, second less sincere and more expansive (enlarging, natural, simple, clear, but turning left). Reflection reduces these qualities. After all, he has attractive sides because of his alert adaptive intelligence and his emotional nature" (!).

M. Vié says of the same specimen: \* \* \* "The writing (of Carron *P. F.*) is young and feminine, whence the conclusion that a young girl wrote it. Pleasantly airy, but commonplace from lack of relief. The labored effort shows breaks not consistent with a careful person. Some pleasing delicacies. These little shades diminish in regarding other moral qualities of this young girl, gentle, (!) modest, (!) and not coquettish (!). Moderately expansive, she enhances her reserve by frankness and naturalness. Very sensitive, but her emotions do not long disturb the serenity of her soul. Of loving nature, she possesses a guarded affection, \* \* \* for her moderated imagination does not rest on the blue clouds in which the dreams of young girls often delight. Her activity is

fragile and can not be put to a rude test. She is imperfectly seconded by will power, but tenacious of truth (!). Very apt to attach herself to the object if it comes to her, but will not seek it" (!).

*Rachel Galtié*.—Poisoner. Killed husband, grandmother and loving brother.

Crépieux-Jamin: "Imagination (large pen movements)? dominates. Mediocre intelligence (graphic discordance, very vulgar and disordered). Lacks judgment and attention. Impulsive, exalted (excessive right and left turns. Words increasing in size), inconsistent (graphic discordances), disordered (disordered and agitated), negligent (uncrossed 't's,' disordered). Like most of those deficient, tries to fill gaps by pretention (ornamental, rolled 'd's,' overheightened). Liar from imagination and disorder (agitated, discordance, 't's' not crossed, right and left turns). Nevertheless, not bad (words increasing in size, small unevenness of direction, curved and clear). Dangerous because passionate and ill-fitted for life (uncrossed 't's' non-coordination of graphic movements) \* \* \* affectionate (inclined, curved with many right-turn movements). Grateful (!) with excess of demonstrations of her very emotional and open (!) nature (very unequal in size—words enlarging—agitated). Has disagreeable rather than odious (?) sides."

The above are selected as samples.

Chapter XXVI.: Measure of individuality.

The author says disagreements of graphologists prove nothing. They disagree just as physicians disagree at the bedside of a patient. Crépieux-Jamin, as the best, is assumed to represent graphology. Of seven portraits he failed in four and succeeded in three. The writings of a batch of really high characters were submitted to him. He was asked to arrange the twenty-two good and criminal in four series of good, medium, wanting and inferior. In the first class he put one good. In the second three murderers and two good. In the third class one murderer and five good. In the fourth seven murderers and two good—dividing the names into two classes, he has seven good and four criminals in the first—

four good and seven criminals in the second.

Arranging the names in couples of one good and one criminal and asking his judgment as to their comparison with each other he was right in eight and wrong in three.

Vié and Eloy erred five times in eleven in the same experiment.

Dr. Binet says the graphologists agreed in nine out of twenty-two cases. They can not decide character as well as they can intelligence, and it is uncertain if they ever will.

Chapter XXVII.: General conclusions by Dr. Binet.

"The principal end is less to ascertain whether intelligence and character can be learned from writing, than to point the path to follow in demonstrating moral phenomena. *Probably there is some truth in graphology, cephalometry (phrenology) and chiromancy.*"

"The most dangerous foe to experiment is suggestion, 'the cholera of psychology,' \* \* \* after the malice of chance. There are answers given by chance which have such a form as to fall out almost always right \* \* \*. Calculation of chance is not alone the province of the mathematician but of the psychologist. \* \* \* The determination of graphologists is always superior to chance and yet not infallible \* \* \*."

"Graphological signs seem to be elastic enough to fit the most contradictory cases."

"The fault lies not in the signs but in the significations assigned to them."

"Graphology is respected more highly by the public because it is mysterious and incomprehensible."

"It is intuitive. One does not reason, one affirms, and *one only affirms with insistence what is doubtful.* \* \* \* If the client is satisfied the performance is said to have succeeded. \* \* \* Yet science in disdaining graphology neglects a domain vaster than one thinks. It stretches beyond the view, and contains all the empiric knowledge which is of such use to us daily, such as characters of men, prevision of their acts, and sentiments, merely from the sound of the voice, etc. When science invades this domain the present priests of half-light will flee to the realms of the

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. Wytsman. 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—Calypptoméninæ 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-*