

pletely Charcot's conception of four more or less independent centers and particularly of a so-called graphic center, and that we may confidently maintain that the zone of language is, as it were, a unit in its action, no part of which may be seriously injured, without in a measure impairing the entire mechanism of speech. These claims are supported by much skilful analysis of reported cases, and a careful reading leaves us with the conviction of the reasonableness of Collins' views.

The greater part of the remainder of the book is taken up with a more detailed consideration of the varieties of speech disturbance, frequently and pleasantly interrupted by the narration either of personal cases or of cases reported by others. In the discussion of motor aphasia much stress is laid upon a distinction too often overlooked, namely, that between *cortical* and *sub-cortical* motor aphasia. In the failure to recognize this distinction—and the same applies to sensory aphasia—Collins sees one of the greatest impediments to progress in our knowledge; and, conversely, the greatest possible hope for more accurate knowledge in the future must lie in the careful microscopic study of the brains of aphasic individuals, particularly when the lesion lies beneath the cortex. The details of differential diagnosis do not concern the present review, but these chapters are to be cordially recommended to those desiring something beyond a vague conception of the real problems of the future.

The diagnosis, etiology, morbid anatomy, treatment and, finally, the medico-legal aspects of aphasia are discussed in a somewhat less complete form, as the scope of the book amply justifies. Collins disagrees with certain other writers as regards the responsibility of the aphasic. His contention here is that in so far as internal speech is unaffected, or put anatomically, if the cortical areas for stored memories are intact, a person must be regarded as responsible, other things being equal. If, on the contrary, such areas are involved, *e. g.*, the area for motor word memories, the person's testamentary capacity should always be called in question. Hence, again, the extreme importance of determining whether the lesion leading to the speech defect be actually in the zone

of language or in that part of the nerve mechanism which simply subserves the emission of words—sub-cortical.

In general the monograph must be regarded as a valuable contribution to American neurological literature. The subject-matter is presented in a scholarly way, and with a directness and certainty of his position which is characteristic of the author. It is to be regretted that Bastian's recent work should have been published too late to be fully included in Collins's critical analysis. On the whole the author's conception and treatment of his subject seem to us sound and representative of the best type of scientific discussion. He gives us few new observations, worked out with the detail, particularly after death, which he so urgently recommends, but this, no doubt, is due to lack of opportunity.

The style is for the most part clear. There is, however, a constant tendency to use unnecessarily pedantic words, for which we can find no excuse. In writing on scientific subjects simplicity of diction is surely a first requisite, and this Collins lacks. The following words and expressions are correct, it may be, but certainly not well chosen: 'Ancientness,' 'super-ambient cortex,' 'speechfulness,' 'cotton rain guard,' 'perishment,' 'disablement.' This is, however, a minor criticism in an otherwise excellent piece of work.

The book is admirably printed on rather unnecessarily heavy paper and the proof reading is almost faultless. An index adds materially to its usefulness and convenience.

E. W. T.

*Codex Borbonicus.* Manuscrit Méxicain de la Bibliothèque Du Palais Bourbon, Livre divinatoire et Rituel figuré. Publié en fac-simile avec une commentaire explicatif par M. E.-T. Hamy. Paris, 1889. ERNEST LEROUX, Editeur. Text pp. 1-24, introduction and 4 chapters. Plates folded screen fashion No's. 2-38 in colors.

This ancient Mexican book, formerly known as the Codex Législatif, is now published for the first time, in exact fac-simile, color, size and form. The original is on maguey paper, and

the drawing is the work of an artist, displaying an accuracy not seen in any of the other Mexican codices. It has been hidden from the world in the recesses of the library of the Chamber of Deputies, Paris. The writer had the privilege of carefully examining it in 1895, in company with the Duke of Loubat, through whose generosity its publication has been made possible. The bright colors with which it was painted are still well preserved, and the whole codex is in excellent condition. The first two pages and probably the last two are missing, undoubtedly having been destroyed, or abstracted shortly subsequent to the conquest. The division and mutilation of the Mexican codices is a well-known fact. This book, folded screen fashion, is painted upon but one side, unlike the majority of the Pre-Columbian codices. The pages bear texts written in poor Spanish, partly explanatory of their meaning. The first 18 pages contain the *Tonalamatl*, the divinatory or astrological calendar of the Aztecs. The contents of the missing first two pages can be supplied by a study of the other ritualistic calendars, of the Codices Vaticanus 3773, Vaticanus 3738, Borgianus, Bologna and the Boturini-Aubin-Goupil *Tonalamatl*. This subject has been exhaustively treated by Dr. Ed. Seler. The *Tonalamatl* of the Codex Borbonicus is far more complete than any other yet published, and helps to clear up some of their obscure points. Pages 19 to 38 contain astronomical, religious and historical material of great interest, and somewhat resemble the paintings found in the Codex Telleriano Remensis of the National Library, Paris, and its counterpart Codex Vaticanus 3738. Pages 37 to 38 are instructive from the historical standpoint. Page 37 represents the two prophets who foretold to Montezuma the coming of the Spaniards to subdue the country. The dates: 1, Tochtli; 2, Acatl; 3, Tecpatl, 1506-7-3, accompany these figures, and suggest that the priests had heard of the appearance of the ships of Diaz de Solis and Pinzon off the coast of Yucatan in 1506, notice of which was undoubtedly carried to most parts of the culture area.

When all the old Mexican codices are reproduced separately then the study will be much simplified, and it is gratifying to note the progress now being made in this direction, at

the present time several unpublished codices being in process of publication.

M. H. SAVILLE.

*Pflanzengeographie auf Physiologischer Grundlage.* Von DR. A. F. W. SCHIMPER. Mit 502 Tafeln und Abbildungen in autotypie, 5 Tafeln in Lichtdruck, und 4 geographischen Karten. Jena, Gustav Fischer. 1898. 8vo. Pp. vi + 876.

The appearance of this text marks a distinctive period in the development of phytogeography. The treatment is primarily ecological, but the floristic is presented so fully and woven in so logically that the arrangement is strictly phytogeographical in the best sense. Such a coordinate presentation of the subject-matter is novel. The standard texts, especially such classic ones as Humboldt's, De Candolle's and Grisebach's, have been almost wholly floristic, while Warming's recent *Lehrbuch der Oekologischen Pflanzengeographie* is, of course, purely ecological. Sketches of particular floras have, likewise, been floristic in character, to the practical exclusion of the ecological standpoint. Naturally, this does not mean that the author is the first to perceive the essential relation between floristic and ecology, a relation practically of cause and effect. The recognition of this fact is as old as Humboldt's first work. It does indicate, however, the advance made in systematizing and in making more thorough the methods of investigating the floral covering. The appearance of the present excellent text evidences the author's realization of his opportunity. The skillful manner in which the matter is handled bespeaks no small mastery of the subject. The volume contains a number of original and suggestive ideas, only a few of which can be mentioned here.

The work consists of three parts, the first treating of the factors in ecology, the second of formations and plant societies, the third of the zones and regions of the floral covering of the globe. The ecological factors considered in the first part are water, temperature, light, soil, atmosphere and animals. The treatment of each subject is as exhaustive as can be expected in a general text, especially in consideration of the enormous mass of detail available. In thorough-