

but "how much it is difficult to say, as observations conflict." Dr. Robinson also makes interesting reference to the winds of the coast, and describes the west winds of summer as greatly intensified by the (diurnal) heat of the interior valley, so that the sea-breeze is unusually strong over the passes that break down the elevation of the Coast range.

It is greatly to be wished that further detail should be presented of facts so interesting in themselves and so valuable in the physical description of our country. The suggestion made above concerning the cyclonic and local control of the weather elements is, it is believed, in a most profitable line for further work. Examples of similar weather-types, as indicated by recurrence of similar distribution of isobaric lines on the signal-office daily maps, should be brought together and discussed in search of their specific characteristics, instead of lost in the indiscriminate average of the monthly mean, itself of true value, but too often the end instead of the first step of the discussion. Local controls are found to prevail during anticyclonic weather, with high pressure and weak baric gradients: imported conditions appear with the approach and passage of cyclonic areas of low pressure and stronger gradients. Here is a wide field for observation and research.

W. M. D.

#### CONSUMPTION IN PENNSYLVANIA.

THE *New York medical journal* of Dec. 4 contains in full the exceedingly valuable contribution to the climatological study of consumption in Pennsylvania, by William Pepper, M.D., which was read at the third annual meeting of the American climatological association. In the inquiry which formed the basis of this paper, Dr. Pepper followed the plan adopted by Dr. Bowditch in investigating the same disease in Massachusetts in the years 1854-62. Dr. Bowditch, it will be remembered, found a law in the development of consumption in that state, which has for its central idea that the dampness of the soil of any township or locality is intimately connected with, and probably a cause of, the prevalence of consumption in that township or locality. Similar investigations, especially those of Dr. Buchanan in England, which were carried on in 1865, 1866, and 1867, confirm the views of Bowditch. In that country, where the subsoil was drained by sewers, and where the water-supply was improved, deaths from consumption diminished, falling 49 per cent in Salisbury, 47 in Ely, 43 in Rugby, and 41 in Banbury. With answers from physicians to twenty-eight questions propounded in a circular

by Dr. Pepper, and the statistics of the tenth census of the United States, together with the topographical map of Professor Lesley as a basis, maps have been prepared showing the prevalence of consumption in Pennsylvania counties, and the relation between such prevalence and elevation, and mean annual temperature and rainfall. One of these maps is given in the journal referred to: the others will be published in the Transactions of the association. It is noticeable that those portions of the state where phthisis is rarest are the most elevated, having a general altitude of 1,500 to 2,000 feet, from 2,000 to 3,000 feet, and that its mortality increases as the altitude becomes less. In Philadelphia the wards having the least elevation, greatest density of population, and most inferior water-supply, furnish the greatest mortality from phthisis. The answers to the inquiries received from the state at large do not seem to indicate excessive soil moisture as the main causal condition of consumption in the state. A number of individual cases are given, in most of which damp and otherwise unsanitary conditions existed in and around the houses in which repeated cases occurred. This inquiry is a most timely one, as the tendency of the times seems to be to ignore conditions such as are here described, and to account for the disease only by the introduction of the bacilli of Koch. That these are the direct cause but few doubt, though unsanitary surroundings and heredity are important predisposing causes.

#### THAYER'S GREEK-ENGLISH LEXICON.

THE only special dictionary in the English language hitherto available for students of the Greek New Testament has been a translation of Cremer's 'Biblisch-theologisches wörterbuch der Neutestamentlichen Gräcität.' This is not only very inconvenient in its arrangement, but is justly chargeable with a certain vagueness in its definitions. We think, therefore, that Professor Thayer has rendered an incalculable service to a numerous class of students by opening to them the treasures of German erudition to be found in Grimm's 'Clavis.' But he has done vastly more than this. Almost every page of the noble volume before us shows such signal traces of his critical scholarship, his profound learning, and his conscientious labor, as to make it only a matter of simple justice that the book should bear his name. In regard to the technical and theological aspects of the work, we have neither the desire nor the competence to pronounce an opinion; but, as a

*A Greek-English lexicon of the New Testament, being Grimm's Wilke's Clavis Novi Testamenti. Tr. by JOSEPH HENRY THAYER, D.D. New York, Harper, 1887. 4°.*

monument of Greek lexicography, we consider that it reflects the highest honor upon American scholarship. After a careful comparison of results obtained from the long-continued use of other Greek lexicons, we feel constrained to pronounce the present one a marvel of accuracy. In his modest preface the editor expresses a keen sense of the shortcomings of his work, and seeks to enlist the co-operation of fellow-laborers to help rid it of every remaining blemish. Surely all who profit by his labors must rejoice to be able to serve him in this way. We will accordingly make such few suggestions as have occurred to us in the course of our examination of the volume.

In the summary of the interminable discussion about the distinction between *βούλομαι* and *θέλω*, which is found upon p. 286, it may be advisable to quote also the opinion of such an eminent Hellenist as the late Professor Shilleto. He states in a note to Demosthenes (*De falsa legatione*, 348, 14) that in *Attic* writers *βούλομαι* implies a *positive wish*, and *θέλω* the merely *negative idea of willingness, having no objection*. This is the view also of Sauppe, on Demosthenes (24, 3), who cites to the same effect Gottfried Hermann (*Zimmermann*, 1835, p. 299).

The very unusual expression *ἐκ τῶν ἰδίων*, which is found in John viii. 44, may be illustrated by the example of the same idiom in Thucydides (ii. 42), where it is opposed in signification to *κοινῶς*. It occurs also upon a bronze tablet containing a decree of the senate and people of Assos, in honor of Germanicus, discovered in the course of the explorations made upon that site by the Archaeological institute of America (*Clark's Report upon the investigations at Assos*, p. 134). It is there translated, 'at their own expense ;' but the rendering, 'in a private capacity,' would seem to be more in conformity with the other instances of its use.

In the text the statement is made that the word *καταργέω* is found frequently in Paul's writings, who uses it twenty-five times ; while elsewhere in the New Testament it occurs only twice ; viz., in Luke xiii. 7 and in Hebrews ii. 14. We recollect that this exceptional use by Paul of one word is referred to by Rev. Robert Aris Wilmott, in his charming little volume on the pleasures of literature, as characteristic of his style. This would seem to make the word a proper candidate for a place among the words *peculiar* to Paul, contained in Appendix iv. 6, unless that term is intended by the editor to be restricted to words used by him alone among the New-Testament writers.

Under the word *πάσχω* we are told that it nowhere occurs in a *good* sense, unless either the adverb *ἐν*, or an accusative of the thing, is

added. Sophocles' *Electra* (v. 169) is an instance to the contrary.

This slight contribution we offer towards the perfecting of a work whose beautiful mechanical execution makes it a delight to use it, and which testifies to a liberality on the part of the publishers as creditable as is the quality of the editing.

H. W. H.

#### THE WINNIPEG COUNTRY.

It is with genuine pleasure that the critic takes hold of a volume like the present, so daintily gotten up with illustrations made for the book, and evidently the work of a practised hand. Then the story is told in such a simple and attractive manner, that one unconsciously drifts into the places of the astronomers, and feels each mosquito-bite as keenly as though he had actually experienced the bites in the flesh.

The journey was undertaken in 1860, before the days of railroads in that part of the continent, or, indeed, of steamboats—with the exception of the solitary stern-wheeler on the Red River, which broke down before our voyagers returned. The portion of the route lying beyond Fort Garry—the site of the now live city of Winnipeg—was made in the North canoe, a giant of its kind, which had been constructed years before for the accommodation of Sir George Stimson. Delay after delay occurred, for in even such a big canoe one could not brave the waves of Winnipeg with impunity. Then the current of the Saskatchewan proved to be unusually swift. The result of this combination was, that on the day of the eclipse the observers had not reached their destination : nor, in fact, had they advanced much beyond the outskirts of the eclipse belt. However, there was nothing for it but to get out on the first bit of solid ground that showed itself above the everlasting flooded marsh. An alcohol can on top of four stakes served as a pedestal for one telescope, while a birch-tree with lopped-off branches did similar duty for the other. Then, while the naturalist carefully beat time with a screw-driver, the clouds obscured the sun so that the astronomers who had dared hunger and mosquitoes could only note the minor phenomena of the last phase. It was provoking, but nothing could be done. By the time the instruments had been repacked, the river had risen higher and submerged the little island. A rest of one day, and then the homeward journey was begun. The delights of that portion of the trip can best be understood from the following : "Our long canoe-voyage of forty-

*The Winnipeg country ; or, Roughing it with an eclipse party.* By A ROCHESTER FELLOW. Boston, Cupples, Upham, & Co., 1886.