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ly, there are several chapters bearing upon the meteorological condition of the planet. The observers were Percival Lowell and A. E. Douglas, assisted by Miss W. L. Leonard and D. A. Drew. The volume is copiously illustrated, most of the plates being facsimiles of drawings by the different members of the staff, and is accompanied by a new map of Mars.

A large amount of what is known of the Resources of the Sea is to be credited to the reports of the Fishery Board for Scotland. The investigations and experiments instituted by this board have been of such character and such extent, and have been conducted in such a manner, as to demand the attention of fishery interests everywhere. And in addition to the discoveries and records of importance in direct connection with the fisheries, science has been enriched by many of the more technical contributions outcoming from the ordinary duties of the *Garland*, or other yessels under the Board's control. The Eighteenth Annual Report, for 1899, is divided into three, the General Report, the Report on Salmon Fisheries, and that on Scientific Investigations. The last is itself an octavo volume of 407 pages, with many illustrations, and is filled with accounts of the influences of trawling, of net and of line-fishing on the abundance of the fishes, with treatises on the parasites and on the fauna generally, and with notes on the life histories of various forms, on the currents, statistics, and other matters pertaining to the interests of the fisheries, the fishermen, and the consumers.

While English scholars have produced a practically perfect map of the cis-Jordan districts of Palestine, the Germans have now undertaken the same task for the territory east of that stream. For several years Dr. G. Schumacher, a civil engineer of Haifa, under the auspices of the German Palestine Society, has been making the necessary surveys, and in the last issue of the Society's *Zeitschrift* (vol. xxii, No. 4) is found the first sheet of what promises to be the classical chart of the trans-Jordan country. The scale is 1:152,000. This first sheet of the series bears the special title "Dschölan und Westlicher Haurän," and covers both the historical and the present period. Its wealth of details is remarkable, but readily understood when we are told that the beginnings of the researches of which the full fruits are here given go back to the year 1885. An illustrated descriptive article by Schumacher accompanies the chart. Both map and article contain an abundance of new material.

The Strassburg *Post* has compiled complete statistics of the attendance of women at the universities of Germany. The total for the last winter semester was 664, and for the summer term now closing 618. This seeming decrease is owing entirely to restrictions enforced in Berlin, where the attendance of women at present is only 233, while during the preceding term it was 431. The total at the other universities is 325, while it was 253 in the winter. In Switzerland the total woman contingent is 937, and of these 555 are full-fledged candidates for degrees. The largest number, namely, 353, is furnished by Russia, followed by 65 from Switzerland, 53 from Germany, 25 from Bulgaria. Only 7 are from the United States. Switzerland has ventured upon a noteworthy innovation by permitting women docents. At the University of Ge-

neva Miss A. Rodrigue recently acquired the right of delivering lectures in the natural-science faculty, and in the Academy of Neuenburg Mrs. M. Zebrowski has announced two courses of lectures for the next term in the literary department.

Scribner's for September has an interesting "Personal Retrospect of James Russell Lowell," by W. D. Howells. To any one who knew Mr. Lowell, this portrait will bring him vividly to mind. It is drawn with all Mr. Howells's delicacy of literary touch, reinforced by a strong sentiment of friendship, and we may, perhaps, say veneration. The article is specially valuable as being written by one who did not sympathize with Lowell at all points. Mr. Howells, coming to Cambridge from that newer America of which Lowell liked to dream, but of which he really knew very little, judged him in his own way, and hence this paper is utterly different from anything that could have been written by a New England friend or neighbor. It is the tribute of a friend, and of a friend who felt all his greatness; but there is less "locality" in it than there could have been in any similar attempt by a New England admirer. Mr. Howells says in conclusion: "He did not, indeed, make one impression upon me, but a thousand impressions, which I should seek in vain to embody in a single 'presentment.'" This sketch is virtually the reflection of impressions of an intimate sort, so that a great part of Lowell's essential variety—inherent power, always showing itself in some new and unexpected form—is not made evident. Mr. Howells's interest is not in his friend as a public man—if it had been, we should not have had the present paper; but what he says might be supplemented and reinforced, if there were any one equal to the task, by some account of the manner in which Lowell seemed to tower above his fellows when he made some memorable appearances in public. If, for instance, he presided at a public dinner, what lingered in the memory was what he said, the witty way in which he called people up to speak, the completeness—possibly in the minds of some of the others, wishing also to cut a figure, too thoroughgoing—with which, through his wit and capacity, he dominated the whole affair. On one occasion, when he went before a Congressional committee to be examined as a witness on the subject of international copyright, it was amusing to see how all the functions of the court and jury gradually embodied themselves in the witness, so that everybody felt, when he had finished, that he not only had testified to the great distinction and entertainment of everybody present, but had also decided the case. We have no doubt that other instances in plenty might be collected; and when they had all been gathered together and compared with Mr. Howells's reminiscences, the total result would only fortify the statement, that he made upon those with whom he came into contact a thousand impressions, and that we shall not again "look upon his like."

—Prof. John Perry, in *Nature* of August 2, has opened a discussion which ought to prove important. His "Calculus for Engineers" was a pretty radical departure in mathematical teaching. It was difficult to approve of teaching only such fragments of mathematics as the engineer could not possibly dispense with; but one must acknowledge that it was a work of thought, of some-

thing like power. Now, in a page and a half, he considers the general principles that ought to govern mathematical teaching, and then proceeds to draw up in a page of fine print a scheme of instruction headed "Practical Mathematics: Elementary Stage." He solicits criticism from three classes of persons: first, from those who think his method fit only for evening classes; second, from those who think it should be adopted in every school; third, "from other persons." We cannot disregard the summons in this third clause to testify concerning this universal interest. Let us say, then, that the destructive part of Prof. Perry's doctrine, vigorous as it is, is not a bit exaggerated. No other subject ever was, from the beginning of the world, so absurdly taught as mathematics in the old schools; and the new pedagogical methods have in this department been at their worst. In Professor Perry's constructive proposals, there are excellent features; but they relate to details into which we have no space to enter. He belongs to the generation of those who think that the end of education is to enable students to make money, and who look upon pure science with some contempt, except so far as it may subserve that great aim of life. Such, at least, is the general impression his various writings have left upon us. In his last article, for instance, he says: "Those engineers who can most readily apply mathematics to engineering problems, almost invariably descend to the position of teachers and professors in schools and colleges." This may be taken as a statement of the obvious truth that those who delight in the exercise of intellectual powers more than in the business side of the profession with its rewards, attach themselves to positions where they can enjoy their preference. But the word "descend" applied to a passage from money-making to the cultivation of mathematics betrays Professor Perry's opinion about a fundamental question of ethics. Men of science of the old school will say that here is the worm at the root that threatens the decadence of the twentieth century.

—Still, the most elementary mathematics ought, no doubt, to be taught in a practical spirit, mainly. More pertinent, therefore, is another general objection, namely, that Professor Perry's scheme is a mere piece of tinkering, not professing to ground itself upon any thorough analysis of the evil it seeks to remedy, not by any means erected as an engineer like Professor Perry would construct a real suspension bridge, resorting to every light of science, but rather in the old no-method by which dark ages built that crazy structure that the very asses balked at, the *pons asinorum*. Broken up into educational junk, it would afford some valuable half-ideas and lesser fractions. We can only give a single example of what we mean. Professor Perry is quite right in protesting against the notion that logarithms should not be taught until their theory is first mastered. One might as well forbid people to take photographs until they perfectly understand the molecular actions involved. But the other half of this idea is, that you should never teach the theory of logarithms until interest has been excited by seeing what marvels they will accomplish; and, in general, you should try not to teach any theory, especially if it be one requiring a good deal of effort to comprehend, until the subject it explains has been, as far as may be, brought

out of cloudland, so that there may be an intellectual incentive to seeking the why of it. This is particularly important all through mathematics. Not only is it permissible, as Professor Perry demands, not to keep the Pythagorean proposition a secret until it is proved, but it should be suggested and applied to measurements of some triangles in such a way as to create a doubt as to its exactitude. Then the demonstration will mean something.

—An interesting summary of the information regarding the northeasterly portions of the American continent which was obtainable in England at the end of the sixteenth century, is provided by the facsimiles of the more important English maps drawn between 1578 and 1600, which illustrate Mr. Miller Christy's "The Silver Map of the World" (London: Henry Stevens, Son & Stiles, pp. 71 and 10 maps). Mr. Christy has written a very suggestive treatise on a silver medallion which appears to have been designed to commemorate Drake's circumnavigation of the globe, by the same hand that produced the beautiful map dedicated by "F. G." to Richard Hakluyt, and published in the latter's edition of Martyr's "Decades," issued in Paris in 1587. Mr. Christy finds a cartographic test in the representation of the discoveries made by Frobenius on the Labrador coast in 1576-78. Frobenius and the map-makers who worked under his immediate inspiration realized the actual relations of the various points of land which he encountered, and succeeded in rearranging the previously accepted cartography so as closely to approximate the real geography of Greenland, Iceland, and Labrador. A generation later, however, the cartographers began to find difficulty in distinguishing between what Frobenius had seen and what he had surmised. The result was confusion in the whole subject, which ended in the location on the maps of Frobenius's Straits in Greenland, making an island of the point of that peninsula. This cartographic error persisted, despite the explorers and the whalers, on maps drawn within the last forty years, and was not permanently done away with until the publication of Mr. C. F. Hall's discovery of the remains of Frobenius's settlement and arctic gold refinery, in the bay north of Hudson's Straits. In elucidating the origin of this error, Mr. Christy uses the evidence of the contemporary maps, of which the originals are available only in the larger libraries. Two of these maps are placed within the reach of students outside of London for the first time. He has secured a projection of the North Atlantic portion of the Mollineux globe, which is sometimes mentioned in geographical discussions, but very rarely examined, and he also reproduces an extremely interesting working sea-chart drawn by William Borough for the use of Frobenius in 1576, which had not before been known.

—Of more than ordinary "presence," in its large-folio dress, and of content to justify so expensive setting—which includes fifty-five large full-page illustrations from Rinehart's admirable (if rather "galleried") Indian photographs—"The Indians of To-day," by George Bird Grinnell (Stone), is a worthy contribution to our too-small catalogue of *Indianiana*; and, in its due subdivision, a large contribution. It is not, indeed, "scientific," in the severe sense. It harbors more inexactitudes than ethnology, strictly applied,

could excuse; and its pitch is not critical, but soberly "popular." But, unlike much that is "popular," it deserves to be. Its whole point of view is from that height of tolerance taught not by "mere learning," but only by knowledge—knowledge, not alone from intelligent reading, but from a personal experience few modern writers upon the American aborigine have equalled and still fewer have surpassed. Written straightforwardly and unaffectedly, from broad comprehension and no mean insight, this presentment is most readily classified as a "common-sense, matter-of-fact" view of the surviving Indian. The only structural criticism to be made is that the writer's deep familiarities are with the nomad Plains Indians; as to the sedentary (and nomad) tribes of the Southwest, his equipment is rather palpably hearsay evidence, and not always from the most authoritative witnesses. If, "when the white men first set foot in America they found it inhabited by any people who were absolutely primitive," that was not the character of its aboriginal population on the average. Nor is it at all true that "all used movable tents or lodges." An overwhelming majority of the natives in America did not use any such devices, and even in what is now United States a very large population did not. There were hundreds of ancient "cities" here, stone-built, castellated, many-storied, so long abandoned that they were a mystery even in the folklore that was vital when Columbus was born; and hundreds of others still occupied. But, for these superficial flaws, and too much acceptance of the Southwestern tribes from the reports of agents neither scientific nor acquainted, Mr. Grinnell largely atones by a generic comprehension of Indians anywhere. Nothing could be more quiet or more true than his arraignment of our "Indian system" in general, and particularly of the great print-factory schools, remote from home, where Indian children are spoiled as Indians and not, of course, converted into whites—the same philanthropic, stupid, far-reaching tragedy of which Zitkala-Sa has so naively yet so poignantly drawn a simple personal outline.

—With parts 28-32 the important "Dictionnaire Général de la Langue Française" of MM. Hatzfeld, Darmesteter, and Thomas (Paris: Ch. Delagrave) comes to an end. It makes two large octavo volumes of 2,272 double-column pages, besides introductory matter of 23 pages, and a supplementary Treatise on the Formation of the French Language in 289 pages. As is well known, M. Darmesteter died early in the course of publication, but his colleagues have maintained the high authority of the work, which has been a boon to the editors of the Oxford English Dictionary. A severe compression has been exercised, but the Dictionary abounds in illustrative quotations, dated and located with particularity, the collection of the "Grands Écrivains" being as a rule referred to when the author cited is found in it. The pronunciation is indicated, and the etymologies in brief, with little or no discussion, though this is the scholarly feature *par excellence*. To the admirable Treatise we may return hereafter. We shall here only direct attention to it for the sake of some convenient lists (sometimes exhaustive) of words derived from Latin, Greek, Gaulish, English, Germanic, etc., etc., and of the principal adverbs, prepositions, and interjections; for

the detailed examination of affixes and prefixes; for the history of pronunciation, etc. The English list just mentioned is confined to words which appear to have been definitively naturalized in France; the editors regretting that their countrymen's love of novelty has not caused them always to stand out sufficiently. It begins with *abolitioniste* and ends with *yacht*, while intermediate are *baltast*, *banknote*, *bifteck* and *rosbij*, *boston*, *boxer* (v.), *cab*, *club*, *cold-cream*, *confort*, *draw-back*, *gentleman*, *hawra*, *jockey*, *jury*, *lunch*, *macadam*, *meeting*, *pamphlet*, *pounding*, *reporter* (s.), *revolver*, *schooner*, *snob*, *speech*, *sport*, *steeple-chase*, *tunnel*, *verdict*, *vole*, and other forms more or less calculated to make the French Quintilian stare and gasp. But they form a curious politico-sociological chapter. "Job" is not in this list, though the French still have the thing if not the name, as one of their statesmen lamented.

—*Yacht* occurs in Part 29 (which contains, by the way, all of W and X, filling but a third of a page each, and Y, half a page; while U, in Part 28, owing to the fact of our prolific negative un-being unknown to French, needs but six pages). The pronunciation is far from established, with a choice between "hyakt," "hyak," and the English "hyot." *Tramway* has its pronunciation unaltered, and this may partly account for its admission by the Academy as early as 1878 along with *tomakawck* (pronounced as in English but without the aspirate), which, nevertheless, figured in Chateaubriand's "Atala," and the indispensable *truisme*. The same year witnessed the tardy recognition of *rendetta* from the Italian. On the whole, the English borrowings are but little modified or assimilated in spelling—not more than the German *Vermut* in *vermout* or *Wiederkomm* in *vidrecome*; less than the Dutch *wimbelkin* in *vitbrequin*. By the dropping of the hyphen, *egalitar* becomes, in a French list, almost unrecognizable. Five-sixths of the substantives are masculine, and those which are feminine would seldom fail of being distinguished by one familiar with French rules of gender. From the Slav a very small group of vocables has been taken over, and we may write *tsar*, *tzar*, or *czar*, *ukase* or *oukase*. *Veto*, from the Latin, is pronounced as if the *c* had the acute accent. *Vif-argent* sounds the *f* like *f* or like *v*. In *vide-bouteille* the first word becomes dissyllabic in verse, as happens in other like instances. Numerous compounds of this sort occur in the parts before us. Those beginning with *tire* (from the verb *tirer*), which go back as far as 1549, are still being multiplied, whereas the *trainé* series is quite obsolete and uncreative. In conclusion, we are glad to record the fact that this Dictionary has, in addition to the Grand Prix Jean Reynaud, of 10,000 francs, awarded by the Institut, just received the Grand Prix of the present Exposition.

RECENT POETRY.

It is possible that the best memorial of what is called "Home Week" in our older States may turn out to be in volumes of dialect poetry which will preserve, better than any other monument, the traditions of the founders. Many such attempts will doubtless fail; they will be as moribund as Bret Harte, or as bewildering as Kipling when he picks up phrases from all parts of the United States and mingles them all in the