

of the methods used, and show that in three places there are errors; for it is manifestly impossible that in 1894 or 1904 there could be more students taking algebra or physics than would take it were the subjects required. Besides, these columns tend in the clearest way to show the effect of the elective system; the ratios measure in a rough way the popularity of a study, when it is elective.

TABLE IV

Study	Per Cent. Schools Offering	
	1904	1904
Latin, four years	46	80
Physics	97	100
Chemistry, mostly in year III.	74	66
Astronomy	63	31
Physiology, mostly in years I. or II.	81	57
Trigonometry	23	44
English, ⁶ four years	52	68
English, less than four years, more than three years	12	32

For example: in spite of the great increase in the percentage of students taking Latin, the subject had in fact declined in popularity, as shown by the ratios, 1894, 0.63, 1904, 0.55; further, these ratios show that, after all, relatively few students took the subject in comparison with the opportunities.

TABLE V
The History Branches

	1894		1904	
	Per Cent. Offering	Length of Year	Per Cent. Offering	Length of Year
American	57	0.7	86	0.64
French	0	0.0	7	0.50
English	39	0.5	51	0.66
"Intensive"	0	0.0	5	1.00
Greek	47	0.5	57	0.50
Roman	50	0.5	57	0.50
General	46	1.0	61	1.00

Examining the table with this in view, we see that French has hardly changed, while German draws increasingly on the affections

⁶The separation into English literature and rhetoric or composition is not sharp, and is hard to tabulate.

of secondary students—may this be a reflex of the great influence of German thought in the universities, brought into the secondary schools by college-bred teachers? But both French and German have a low popularity, lower than any science. Algebra is the universal study, not generally elective, and so it is not surprising that its "popularity" should be represented by a number in the neighborhood of 1. The excess gives a rough idea of the errors inherent in my data, and the amount of guessing which has crept in. Geometry was in 1904 not so generally required as in 1894, and so shows a fall of popularity. Physics was in 1894 more generally required than in 1904, which accounts in part for the drop from about 1.00 to 0.72. The balance means real dislike for the subject. Geology and physical geography and physiography stay about where they were in popularity.

I am inclined to conclude from this table that, in spite of a general impression to the contrary, American boys and girls like the sciences, both exact and natural, better than they like the languages, *provided they only have as good a chance to get at them*; and the way to save the situation for science is to give them the chance early in the course. I assert with confidence that, had 80 per cent. of Dexter's schools in 1904 offered four years of chemistry and physics, instead of four years of Latin, as they did, we should have found the figures of percentages just about reversed, or even worse for Latin.

WILLARD J. FISHER

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*THE SMITHSONIAN BIOLOGICAL SURVEY
OF THE PANAMA CANAL ZONE*

THE Biological Survey of the Panama Canal Zone, begun in December, 1910, and continued through the major part of 1911, is being pushed to completion before the opening of the canal in 1913. The second expedition sailed on January 9, to take up the work for another season, the botanist, Professor

Pittier, being the only naturalist who has remained in the field since the beginning of the survey. Although much interesting information has been collected, and a great many specimens secured, nothing like a complete report is ready.

The party will include Dr. Seth E. Meek, formerly of the Bureau of Fisheries, but now representing the Field Museum of Natural History; Mr. S. F. Hildebrand, of the Bureau of Fisheries, who will collect fishes, reptiles and amphibians; E. A. Goldman, of the Biological Survey, Department of Agriculture, who will collect birds and mammals, and Professor Charles D. Marsh, of the Bureau of Plant Industry, Department of Agriculture, who will collect and study the microscopic plant and animal life of the fresh waters of the zone.

Leaving New York on the steamship *Panama*, they will proceed to Cristobal, Canal Zone, their headquarters on the Atlantic coast, and there make preparations for a sojourn of four or five months in the field.

The life-areas on the zone will become confused as soon as the canal is opened and the waters of the Pacific and Atlantic watersheds are intermingled. It is particularly important on that account, that the present geographical distribution of animals and plants be recorded prior to that time, and this is especially true as regards the life of the fresh waters and the sea-coasts.

The work of the survey is carried on through the united efforts of the Smithsonian Institution, several of the government departments and the Field Museum of Natural History of Chicago, and the hearty cooperation of the Panama Canal Commission has been an important factor in the success of the undertaking.

As a preliminary of the work already accomplished, the Smithsonian has published four pamphlets. The first two (Nos. 2015 and 2053 of the Smithsonian Misc. Colls.) are by E. W. Nelson, of the Biological Survey, and describe a new humming-bird, a motmot and a bird of the genus *Pachysylvia*. The third, by E. A. Goldman, one of the naturalists of

the survey, contains a description of a new kingfisher.

Mr. Maxon, of the Division of Plants, National Museum, who accompanied Professor Henry Pittier to the Canal Zone last year, has published a description of a remarkable new fern (Smiths. Misc. Coll. No. 2055).

After all the new forms of animals and plants have been described it is proposed to publish general accounts of all the various collections and also one or more volumes containing a summary of the whole fauna and flora of the Canal Zone.

SCIENTIFIC NOTES AND NEWS

DR. J. A. ALLEN, curator of mammalogy and ornithology in the American Museum of Natural History, has resigned the editorship of *The Auk*, and the council of the American Ornithologists' Union, at the recent meeting in Philadelphia, chose Mr. Witmer Stone as his successor. Simultaneous with Dr. Allen's retirement Mr. Frank M. Chapman resigned as associate editor. Beginning in 1876 with the initial volume of the *Bulletin* of the Nuttall Ornithological Club, Dr. Allen guided the course of this journal and its successor *The Auk* since its establishment in 1884.

DR. J. WALTER FEWKES, of the Bureau of American Ethnology, has been reelected president of the American Anthropological Association. The next annual meeting of the association will be in Cleveland, Ohio, beginning on December 30, 1912, in affiliation with Section H of the American Association for the Advancement of Science.

DR. THEOBALD SMITH, professor of comparative pathology at Harvard and exchange professor at the University of Berlin during the present academic year, delivered his first lecture on January 8. His subject was "The Relation between Parasitism and Disease."

PROFESSOR GEORGE GRANT MACCURDY will be the delegate from Yale University to the eighteenth International Congress of Americanists to be held in London from May 27 to June 1, 1912.