

states, Massachusetts, New York, Ohio and Illinois, as it was in South Carolina, Georgia, Alabama and Mississippi, indicating that climate has a significant effect upon almshouse pauperism.

No figures showing number of paupers by states for 1923 are available. Such figures may be obtained, however, from the 1910 census of paupers in almshouses. In New York Negroes contributed 1.5 to the general population and 1.6 to the almshouse population. In Illinois, the figures are 1.9 in the general population and 2.6 in the almshouse population; in Indiana Negroes contributed 2.2 and 3.9, in Pennsylvania 2.5 and 4.1 and in Ohio 2.3 and 5.1, respectively. In every state mentioned above the Negroes contributed to almshouse pauperism in excess of their representation in the population.

Nearly 40 per cent. of paupers in almshouses are over 70 years of age. Pauperism, then, is predominantly associated with old age. Consider that fact in connection with the figures of national immigration. According to Professor Pearl's diagram Italian and Russian immigrants showed the smallest proportionate contribution to the almshouse population; German and Irish the largest. Half of the Irish immigration came before 1867, half of the German before 1874, but half of the Russians have arrived since 1907 and half of the Italians since 1906. Patently, therefore, there is a much larger proportion of Irish and Germans who are over 70 years of age. No such conclusions as those of Professor Pearl can be drawn from the figures of the Census Bureau unless these considerations are allowed for.

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IN my former paper on almshouse pauperism (SCIENCE, Vol. 60, pp. 394-397) I attempted only to *describe* accurately and clearly, by both verbal and graphical methods, the latest *facts* about almshouse paupers in the United States. I drew no conclusions about the *reasons* why these facts are as they are, nor did I even discuss reasons. Nothing has so far disturbed my faith in the accuracy of the Census Bureau's collection of facts on this matter.

The essential point of Mr. Clark's paper seems to be that the Census Bureau figures do not furnish all the data necessary to determine the probable causes or reasons for the observed facts about almshouse pauperism. I was aware of this, and accordingly confined myself to a statement of facts.

The reasons put forward by Mr. Clark perhaps play some part in the case, but he has apparently overlooked some factors which my as yet inconclusive study of the matter leads me to believe are more im-

portant than those he discusses. For example the Negro (and in passing one may remark that Mr. Clark's excesses in Negro pauperism in selected northern states in 1910 would be more convincing if it were not for the fact, which he himself emphasizes, that most Negroes live in the south, and also for the fact that Negro almshouse pauperism has decreased since 1910 relatively more than has that of native whites) has a strong aversion to almshouses. The Negro people take care of their own poor and their orphans in their families to a degree which makes it difficult to maintain an almshouse or orphanage population. Occasionally in parts of the south even endowed institutions of this type have to shut down and go out of business because of lack of inmates. This same factor operates with certain other racial groups, particularly some of those of the recent immigration. Social workers among our foreign-born groups know this well. It is probably a much more important factor in explaining the lower incidence of almshouse population in these racial groups than the age distribution factor which Mr. Clark mentions, though of course that probably also does play some part. But Mr. Clark's contribution on this point is slightly misleading. He says: "Nearly 40 per cent. of paupers in almshouses are over 70 years of age." In 1910, the last year for which the age distribution figures for almshouse paupers are available, there were 84,198 paupers enumerated in almshouses on January 1. Of these 25,586 were 70 years of age or over. This works out to 30.4 per cent. This figure seems to be nearer 30 than 40.

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AN APPARENTLY OVERLOOKED SOURCE BOOK OF BIOLOGICAL HISTORY

THE translation of Aristotle's "*Historia animalium*," prepared by Armand Gaston Camus and published in Paris in 1783, has recently come to my attention for the first time. As a translation it is probably only one of many—lacking exceptional qualities. One may find a few references to it in the critical studies that have appeared since. In one regard, however, its possibilities have been largely overlooked. As a source book of biological history it seems to deserve more recognition.

The first of the two volumes contains the translation, the Greek and French being printed on opposite pages. The second volume is devoted to the "notes." Ordinarily the notes accompanying a translation from the classics are meaningful only to a Greek or Latin scholar, but that is not the case with those of Camus. In addition to a twenty-seven page résumé of the

history of "l'Histoire naturelle" from pre-Aristotelian times to near the end of the eighteenth century, Camus considers in order and at some length all the forms mentioned by Aristotle. I am unacquainted with any other notes that include as much. Notes may be found in "Aristoteles Thierkunde" of Aubert and Wimmer (Leipzig, 1868), but of a meager sort compared with those of Camus. Aubert and Wimmer did us the favor of assigning specific names to many of Aristotle's animals, but made little effort to do more in a biologic way. One finds in the older work, however, an analysis of the errors and truths in the "Historia animalium." More than that, Camus analyzes Aristotle's work not only in the light of that of Linnaeus, Buffon and others among his contemporaries, but in comparison with that of other ancients—Hippocrates, Aristophanes, Aelian and others—as well. In other words, the notes of the second volume of Camus's translation analyze Aristotle's statements in the light of more than twenty centuries of biological ("natural history") writings.

Needless to say, a work completed in 1783 can not be relied upon explicitly for all information it is purported to contain. But as a useful reference it surely has possibilities. The zoologist who is interested in tracing back to the very sources certain ideas (with regard to particular forms) stated or foreshadowed in Aristotle may be able to use this volume to good advantage as a limited bibliography. It is certainly worth reading by all who, having read the "Historia animalium," marvel at the remarkable number of facts accumulated by Aristotle.

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A PERPETUAL CALENDAR

I ASSUME that it is generally known that there is an organization in California with headquarters in San Francisco, I believe, whose purpose is to secure a revision of our present calendar. This organization proposes to introduce a calendar in which the year shall consist of 13 months of exactly 4 weeks, or 28 days each. They also propose to intercalate the remaining 365th day between the 13th and 1st months, and call it "New Year's Day." In like manner they propose to intercalate another day, every fourth year, at the middle of the year, and call it "Midsummer Holiday," or something similar.

The chief advantage claimed for this plan is that it gives a "perpetual calendar," that is, one that does not change from year to year. This is a very desirable feature, I am frank to admit, and I am heartily in favor of revising the calendar so as to secure this result. But this proposed plan seems to me to have two very serious disadvantages.

In the first place it differs so radically from the present calendar that it is very doubtful whether a sufficiently large number of the important nations of the world could be induced to consent to its adoption.

In the second place, in this proposed calendar the unit, the year, is divided into a prime number (13) of parts. To my mind this is a fatal defect. I know of no table of weights or measures now in use in which this is done.

Every mathematician knows that 12 would be a much better number for the radix of our system of natural numbers than ten. This is because twelve is divisible by 2, 3, 4 and 6, whereas ten is divisible by only 2 and 5. A system using 13 for a radix would be an abomination for very obvious reasons. For the same reasons it seems to me that whenever and however the calendar is revised, 12 should be retained as the number of months in the year.

A large number of business obligations are made to run for three, six and nine months. Interest on long time notes and bonds as well as dividends on most stocks are made payable either quarterly or semi-annually. A few companies pay dividends as often as six times a year. For simple convenience in conducting this enormous line of business, it is vastly more desirable to have the number of months divisible by 2, 4 and 6, rather than to have a prime number.

Furthermore, it is not necessary to make any radical change in the calendar now in use in order to secure a perpetual calendar. The simple plan herewith suggested involves only slight changes. One day is taken from March, and one day from August, and added to February; one day is taken from May and added to April; and the last day of December is set apart for "New Year's Day" the same as in the plan referred to above. Likewise the "Midsummer Holiday." This makes the year consist of four equal parts with three months or 91 days in each quarter. The first month in each of these four quarters, *viz.*, January, April, July and October, has 31 days, and the first day of each of these months will always fall on Monday; the second month of each quarter has 30 days with the first always on Thursday; and the third month in each quarter has 30 days with the first on Saturday. Thus the first day of a month would never fall on Sunday. Also an obligation running for any multiple of three months would always fall due on the same day of the week as that on which it was made.

Such a calendar as this could be put into effect some year when the first day of January falls on Monday without causing any appreciable disturbance in the larger affairs of the world. No important anniversaries in this country would be changed. A