NOTE on the MARRIAGES of FIRST COUSINS. By GEORGE H. DARWIN, ESQ., M.A., Fellow of Trinity College, Cambridge.

AFTER I had read my paper on this subject in March last* before the Statistical Society, Mr. Arthur Browning (a Fellow of the Society) suggested to me another method of determining whether cousin marriages were injurious or not. This method was to discover whether the proportion of offspring of first cousins, amongst persons distinctly above the average, either physically or mentally, was less or greater than the general proportion given by my paper for persons in a similar rank of life.

Mr. Browning and I agreed to carry out this scheme together; but we thought it would be well to delay extensive operations, until we saw what success was attainable in a more limited inquiry. The results are so very unequal to our expectations, that we do not intend to proceed further. The statistics are, however, of some interest, as far as they go.

The boating eights, who race at Oxford and Cambridge in May, are a picked body of athletic men. There are twenty boats at Oxford, and thirty at Cambridge, in the "first and second divisions;" and their crews are 400 men, exclusive of coxswains. We accordingly sent circulars to the stroke-oars of these fifty boats, during their preparatory training, begging them to ask the members of their crews whether their parents were first cousins or not. Where there were several brothers rowing in the eight, they were only to be counted as one case; and cases of refusal to answer were also to be marked. We received answers from nineteen Oxford crews, and from eighteen at Cambridge. Three or four men appear not to have been asked, probably on account of their absence at the time that the circular was being filled up. And there were two cases of two brothers rowing in the same boat, but they were not offspring of first cousins. We here beg leave to return our warm thanks to the gentlemen who so kindly answered the queries.

Besides these answers, the circular addressed to the stroke of the second boat of Corpus College, Cambridge, came back to us with a carefully falsified return; it was by mere chance that I was able to detect the fraud.

One member of a crew was accidentally disabled, but we have thought it proper to include him, as well as his substitute; he is a son of first cousins.

* See Journal for June, 1875, p. 153.

Altogether the parentage of 290 men belonging to different families was ascertained, and of these seven were found to be offsprings of first cousins, and one man refused to answer the query. The result is therefore that 2.41 or 2.75 per cent. (according as we exclude or include the case of refusal) of boating men are offspring of first cousins. The proportion of first cousin marriages to all marriages, amongst the same class of society, was determined at 3 to $3\frac{1}{2}$ per cent. in my former paper. Thus these numbers appear, to some extent, to justify the belief that offspring of first cousins are deficient physically, whilst at the same time they negative the views of alarmist writers on this subject. But taking into consideration the smallness of the number 291, and the uncertainty of my previous methods, the indication is very slight.

The next step was to send circulars to masters at sixty-five of the principal schools for the upper and middle classes in England. We begged them to put the circulars before the School Natural History Club, or else into the hands of any boy who would be likely to take an interest in the investigation. The collector of statistics was asked to form a list of the best cricketers, foot-ball players, and other athletes, such list not to comprise more than 20 per cent. of the whole school; and only one of several brothers was to be entered therein. Each of the boys on the list was then to be asked whether his parents were first cousins or not, and the answers to be returned to us.

Returns were, however, only received from six schools. The work was in most cases undertaken by the masters themselves. We here beg leave to thank all the collectors for their great kindness.

The following table gives the numbers of boys from whom the selection was made, and the numbers on the selected lists :---

School.	Number of Boys.	Selected Athletes.	Percentage of Selected List compared to the Whole Number of Boys.
Rugby	145 130 120	$ \left. \begin{array}{c} 34 \\ 39 \\ 15 \\ 18 \\ 24 \\ 13 \end{array} \right. \\ 143 \\ \end{array} \right.$	19°9 16°0 10°3 13°8 20°0 20°3 16°4

At Rugby and Sherborne the standard of athleticism is high, as also at Lancing and Taunton, where only about one boy in ten was taken from the whole school. At Bury St. Edmunds it would be rather low, but at Giggleswick allowance was made for the ages of the boys, so that the 20 per cent. was distributed over the whole school.

Out of the 143 athletes, one was the offspring of first cousins, a sturdy boy in the highest class of his school; and three either did not know, or refused to answer the query.

These figures are thus almost nugatory, for we have from one to four offspring of first cousins amongst 143 boys, that is to say from 0.7 to 2.8 per cent. Combining the boating statistics with these we get from eight to twelve sons of first cousins amongst 434 athletes, that is to say from 1.84 to 2.76 per cent.

I take the higher number, 2.76, as probably more near the truth than the lower one. The same remarks as those made on the results of the boating inquiry are therefore applicable to the whole.

The following observation of Mr. Browning, with respect to longevity in children of consanguineous parents, is perhaps worth giving.

He is a director and the honorary secretary of the French Protestant "Hospice," where forty old women and twenty old men, descendants of French refugees, find a comfortable home. They are seldom admitted much under 70, and their average age is 77; three or four are over 90. They were questioned as to whether their parents were first cousins. Out of thirtyseven women, four were absent and four were ignorant as to the fact; out of the remaining twenty-nine, one was the daughter of first cousins. Out of twenty men, three were absent and one was ignorant; of the remaining sixteen, none were offspring of first cousins. Thus, out of fifty very aged persons, one was the offspring of first cousins, and five were uncertain as to the fact. The steward, a man of about 40, also a descendant of French Protestant refugees, had married his first cousin. These people are in the fifth or sixth generation from the original refugees. In the earlier generations there would doubtless have been much intermarriage amongst them, but Mr. Browning says that they now have almost entirely lost their French characteristics, and are merged in the general population. If, however, there is any class feeling remaining, cousin marriages would be doubtless more prevalent amongst them than elsewhere.

With respect to intellectual powers, I happen to know that amongst the sixty Fellows of one of our larger colleges at Cambridge, there are two sons of first cousins, and there may be more; the tenure of a fellowship betokens, at least, great power of acquiring knowledge.

Since March last, Mr. Huth's work on "The Marriage of Near

"Kin" has appeared, and I find therein some confirmation of my own results as to the prevalence of cousin marriage in England.

It appears (p. 210) that M. Dally examined the registries of the mairie of the eighth district in Paris, and found that out of 10,765 marriages celebrated between 1853 and 1862, 141 were between first cousins, eight between uncles and nieces, and one between a nephew and aunt—total, 150 consanguineous marriages within the above degrees. "(These numbers may vary from 146 to 152, on "account of three figures which are uncertain). These numbers "give us a proportion of 1.4 per cent., and it appears to me (*i.e.*, "M. Dally) impossible to admit otherwise than this—that in a "district of Paris which is inhabited by foreigners, showing a "considerable floating population, there are many less marriages "between cousins than in the midst of small towns, and in the "country."

Now, it will be remembered that I estimated the proportion of first cousin marriages in London, by a totally different method, at $I\frac{1}{2}$ per cent., which lies very close to 1.4 per cent.; and it would be likely that the proportion of consanguineous marriages in two such immense towns as London and Paris would be nearly the same. M. Dally further considers himself authorised (from the context, I presume by M. Legoyt, the chief of the Statistical Department of France) to say that M. Boudin's estimate of 0.9 per cent. for marriages over the whole of France within the above degrees, is between three and four times too small; according to M. Legoyt. therefore, the proportion for the whole of France lies between about $2\frac{1}{2}$ and $3\frac{1}{2}$ per cent. This estimate may be compared with my results of 3 to $3\frac{1}{2}$ per cent. for the upper classes, 2 per cent. for the larger towns, and $2\frac{1}{4}$ per cent. for the country, and as far as it goes, it tends to confirm my figures. I should certainly expect that the equal division of property under the "Code Napoléon" would tend to promote first cousin marriages, as the family property would be thereby kept together. On the other hand, the Roman Catholic Church discourages these marriages; yet it is stated (p. 209) that legal dispensations are only requisite for marriages between uncles and nieces, and between nephews and aunts, and not for those between first cousins, so that the discouragement would not be likely to be very efficacious.

It cannot be doubted that M. Boudin's estimate of 2 per cent. for consanguineous marriage within the degree of second cousins, is very far too low for France; probably 5 to 8 per cent. would be nearer the mark.

It is stated (Huth, p. 212) that the Irish Census Commissioners found that in 1871 6.7 per cent. of the parents of deaf-mutes were cousins within the sixth degree; in 1861 6.9 were cousins within the fourth degree; and in 1851 4.9 were cousins within the third degree. These figures have been taken to show the appalling injury resulting from consanguineous marriages; if, however, M. Legoyt's estimate for France may be taken as even nearly accurate, and may be extended to Ireland (also chiefly Roman Catholic), these figures would rather show that the evil has been exaggerated. Altogether, considering my own results in combination with these figures, the safest verdict seems to be that the charge against consanguineous marriages on this head is not proven.

In a short criticism of my paper in the "Spectator," it was objected that the women of a family keep up intercourse much more than the men; this reminds me of the old jingle :—

"Your son is your son until he's a wife, Your daughter's your daughter all her life."

And there is probably some truth in the criticism. Now from this cause different name first cousin marriages should be slightly more frequent than they otherwise would be. On the other hand, the mere identity of surnames between two families doubtless tends to keep them together.

But granting the soundness of the objection, the only effect is, that I have under-estimated the extent of first cousin marriage, and it is so much the harder for those, who hold extreme views as to the ills of these marriages, to prove their case.

The "Spectator," however, takes no notice of the fact that my indirect method, partly indirect method, and purely statistical method, all point to approximately the same result.

Mr. Huth says: "We have absolutely no basis from which to "start a statistical inquiry as to the effect of consanguineous "marriage on the offspring." If this is the case, the value of my own imperfect estimate is enhanced.