announcements evolve something like this?—and then everybody will be happy.

T. C. M.

DRESDEN,
November 12, 1906

IS THERE DETERMINATE VARIATION?

PROFESSOR KELLOGG has presented some very interesting facts and arguments regarding the variation of *Diabrotica soror,* under the above title (SCIENCE, November 16, p. 621); but I venture to think that the dilemma has more horns than he has credited to it.

He shows (Fig. 7) that the Sierra Morena collection contains a very large proportion of fused-spots specimens. This material is from a locality about three miles from Stanford University campus. Now why is it not possible that a distinct Sierra Morena strain exists (perhaps the prevalent form of higher levels throughout the region), and that this has in recent years invaded the campus of Stanford University? If this is likely, or even possible, the whole matter may assume a different aspect.

If there exist different strains of *D. soror,* some free-spotted and some with a prevalence of fused spots, it is altogether likely that they differ in other characters, *e. g.,* power of resistance to particular forms of disease. If, in certain parts of the world, people with light complexions have supplanted those with dark, we are not obliged to assume that complexion is in itself a common cause of survival, or else abandon the idea of selection. We know, on the contrary, that the familiar color-characteristics accompany many others, some of which, singly or in combination, may have a high selection-value.

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UNIVERSITY OF COLORADO,
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November 18, 1906

SPECIAL ARTICLES

THE ADVANCING MALASPINA GLACIER[1]

THE Malaspina Glacier lies at the seaward base of Mount St. Elias in Alaska, where a number of large valley glaciers descend from the St. Elias Alps, and coalesce at the mountain base to form a great ice plateau some fifteen hundred square miles in area. The characteristics of this piedmont ice plateau, the Malaspina Glacier, have been made known to us mainly through the splendid work and descriptions of the late Professor Russell.[2]

One of the striking features of the Malaspina Glacier, as described by Russell and others, was its smooth surface due to the general absence of crevassing. So well developed was this characteristic that the glacier has served as a highway of travel for a number of expeditions having for their object the ascent of Mount St. Elias. Twice Russell himself used the Malaspina for this purpose; Prince Luigi Amedeo, Duke of the Abruzzi, made use of the same highway on his successful ascent of St. Elias; and Mr. H. G. Bryant also traveled across the glacier toward Mount St. Elias. Each of these expeditions crossed the Malaspina Glacier on the side toward Yakutat Bay where my studies have been carried on. Other expeditions have crossed the glacier further west. In these expeditions it was found possible not only to move freely over the ice, but also to draw loaded sleds across it.

A second characteristic feature of the Malaspina Glacier is the presence of a moraine-veneered margin, developed by melting of the ice and concentration of the included rock fragments at the surface. In places, this veneer of moraine soil is so thick, and the ice under it so stagnant, that forests have developed upon it.

In the summer of 1905 I looked down upon the Malaspina Glacier from several high points in Yakutat Bay; and late in August

[1] Published by permission of the director of the United States Geological Survey. I wish to acknowledge in this work the assistance of Lawrence Martin and B. S. Butler, in 1905, and of the latter, together with O. VonEngeln, J. L. Rich, and R. R. Powers, in 1906. A paper, with photographs and map illustrating the changes described below, will appear in the forthcoming number of the *Bulletin* of the Geographical Society of Philadelphia.

[2] *Nat. Geographic Mag.,* Vol. III., 1891, pp. 53–204: Thirteenth Annual Report U. S. Geol. Survey, 1891–2, Part II., 1893, pp. 1–91.