We have also in our range a striped form, *trivittata,* hardly distinguishable from vittata.

Thus unstriped and unspotted or striped or spotted, all seem good patterns in the eyes of selection. To me, it is as clear as the

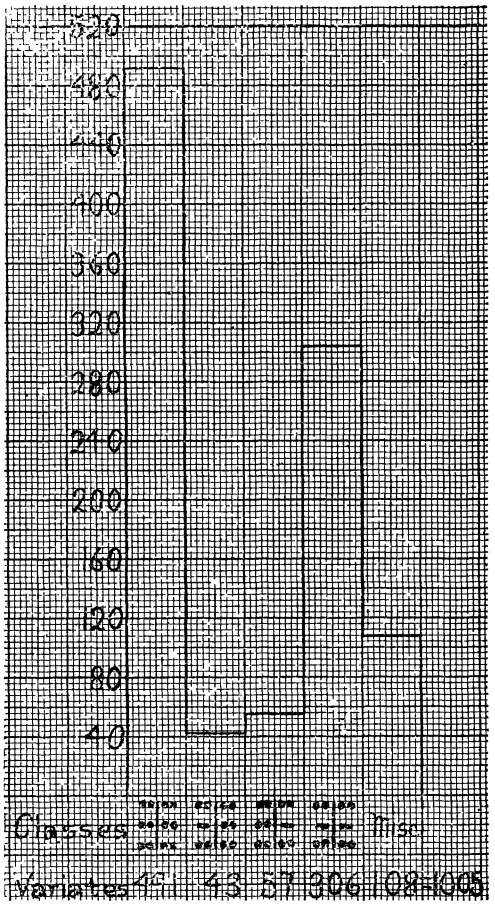

Fig. 9. Frequency polygon of the variation in elytral pattern of 1,005 specimens of the California flower beetle, *Diabrotica soror,* collected at San Jose, California, twenty miles south of the Stanford University campus, October and November, 1905.

significance of any fact in nature is clear, that the change in our locality in *Diabrotica soror* from a beetle species of typical twelve-spots-free pattern to one of eight-spots-free and two irregular transverse blotches in place of the middle four spots is not due to natural selection.

As to the third explanation, that of determinate variation, I have to say, simply, that there remains of our possible three explanations, one, which is that of determinate variation. But, we must note, if determinate variation is the explanation of this change in *Diabrotica soror* it is a determinate variation which is occurring only, apparently, in our particular locality. For in series of specimens of this bettle collected in other parts of California no such change seems to be going on, the old twelve-spots-free form being plainly the modal type. For example, in a series of 405 specimens collected in Santa Rosa, which is about sixty miles north of Stanford University, there are twice as many individuals with all spots free as of those with middle spots fused. (See Fig. 8 and caption.) And in a series of 1,005 individuals collected at San Jose, which is twenty miles south of Stanford University, nearly 49 per cent. are of the twelve-spots-free type and only 30.5 per cent. of the middle-spots-fused type.

Why the species should be changing on our university campus and not changing in the regions south and north of us is a mystery whose solution I do not even dare to guess at. This solution must have to do with the cause of the variation of the species on our campus. But if one asks what is this cause, what it is that is producing determinate variation in *Diabrotica,* or in any other species, I have, in this connection, only to refer to a statement in the beginning of this note, which is to the effect that prior to any attempt to explain how determinate variation might be produced it is advisable to attempt to determine if determinate variation really exists. Is there determinate variation?

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Discovery of an Early Type of Man in Nebraska.

In a circular mound recently opened on a Loess hill north of Florence, near Omaha, Nebraska, various skeletal parts, and eight human skulls of a primitive type were exposed. The credit of the discovery belongs

to Mr. Robert F. Gilder, of Omaha, who described and figured the skulls in the *World-Herald,* October 21.

That there was intrusive burial in this mound is apparent from the fact that the skulls found below a layer of burned clay are of a much more primitive type than those found above it. Already five skulls have been taken from the lower level, and three from the upper, and others are in evidence and will be dug out later. Those of the upper layer probably belonged to Indians of a later period, and may be left out of account for the present. The skulls of the lower layer are low-browed and inferior, the superciliary ridges being thick and protruding, the distance through the temples narrow, and the frontal eminences being as feebly developed as in Neanderthal man. The low arch of the skull is not the result of head-binding, but is normal and characteristic as is evidenced by five crania, two of which are fairly complete. Unfortunately the occiput is fragmentary or wanting in the specimens now at hand.

The skulls are brachycephalic, and extremely narrow in transverse diameter through the temples, expanding rapidly at the parietals. Length of skull 182 mm.; minimum breadth 93 mm.; maximum breadth 160 mm.

In shape and size the mandible agrees well with that of modern man, although the following marked differences are to be noted; the bone, particularly in the region of the symphysis, is far heavier, the muscular scars more prominent, and the third molar in each case is ground to the very gum, while the second and third are ground in a diminishing ratio. The canines are weak and scarcely distinguishable from the incisors, and the space between the molars and the base of the coronoid is wide.

The limb bones indicate a stature of six feet, the femora being somewhat stronger, and the humeri being somewhat weaker than might be expected. The femora, which are massive, manifest an interior curvature more pronounced than ordinary, and in cross section they appear triangular through the great development of the linea aspera, all muscular scars and tuberosities are noticeably prominent, the scar for ligamentum teres being elliptical in outline, deep and nearly twice as long as broad.

The skulls of the Nebraska man seem to be inferior to those of the mound builder, but for the present at least will be viewed as early representatives of that tribe.

In corroboration are the flint implements or chips found associated with the skulls and bones, and the mode of burial. As work progresses a detailed illustrated report will be made.

E. H. BARBOUR,
H. B. WARD.

THE UNIVERSITY OF NEBRASKA,
October 27, 1906.

THE SECOND DECENNIAL OF THE BOTANICAL SEMINAR OF THE UNIVERSITY OF NEBRASKA.

THE botanical seminar of the University of Nebraska was organized, under the name of the 'Sem. Bot.,' as a secret society, by several advanced students in botany, on October 11, 1886. For some years it was an exclusive secret society. About 1891 it changed its policy and became a serious, scientific organization, aiming to promote research and, in particular, to organize the study of the vegetation of the state. Since that time it has admitted advanced students from time to time and has established two preliminary grades to which students are admitted after examination as a preparation for ultimate membership. It has conducted, since 1892, the botanical survey of Nebraska, has built up the survey herbarium and has published three parts of a 'Flora of Nebraska,' eight reports of the botanical survey, and the first volume of the 'Phytogeography of Nebraska.' At the same time that it has been engaged in this serious work, it has kept up the traditional secret organization, which now survives in certain traditional insignia, in the three grades of membership, and in certain traditional ceremonies.

On October 11 the seminar celebrated its second decennial. In the afternoon of that day all work in the botanical laboratories was suspended, and at three o'clock an open meeting was held which took the form of a sym-