

the Gila, in December, 1825. He says: "The next morning accompanied by another man I began to ascend the bank of the stream to explore . . . the first day we were fatigued by the difficulty of getting through the high grass which covered the heavily timbered bottom." If Pattie could only see it now!

This same West Fork of the Gila, where Pattie first set foot, is now, within a brief one hundred years, a boulder-strewn stream, where countless cattle have lived and wandered and died since the white man first brought his herds of domestic cattle, in the early eighties. There is now scarcely a vestige of grass for miles, in what Pattie described as the "heavily timbered bottom" and even the cottonwoods and willows have been eaten off or trampled under foot by the constantly moving cattle. The innumerable canyons and arroyos which are tributary to the west Fork of the Gila are deeply scoured by flood waters due to the grazing off of the adjacent hillsides.

Twenty-five years ago, when the writer first saw the West Fork, conditions were worse, if anything, than they are now. The irreparable damage was done when cattle were first crowded on to the range between the years 1885 and 1895. Nat Straw, an old-time prospector and trapper, informed the writer that on his first visit to the region in 1876 (a period of only fifty-one years after Pattie), trout could easily be taken where now there is a sluggish and unshaded stream, filled from bank to bank with flood waters during the summer rainy seasons. The pity of it is that the West Fork of the Gila River is still within an unsettled and undeveloped region. The damage has been done, not by extensive cultivation or by stock owned by many settlers or farmers but for the most part by individual owners of large herds. The Forest Service has long been attempting to better conditions by reducing the size of the herds and by better distribution, but the damage has been done and the remedy, if effective, will never bring the West Fork back to its pristine glory.

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#### SIZE INHERITANCE

THE inheritance of quantitative characters, particularly of plants, has been explained frequently on the basis of independently inherited, cumulative factors, each of equal weight in determining size. In this hypothesis it is usually further assumed that each factor has one half the effect in the heterozygous condition that it has in the homozygous condition.

Such a hypothesis may be tested directly by determining the correlation between the size character of the  $F_2$  and the  $F_3$  generations. Irrespective of the number of independent, cumulative factors involved in the inheritance of a particular quantitative char-

acter, the correlation coefficient between the  $F_2$  and the  $F_3$  generations for that character will be approximately  $+0.816 \pm E_r$ . This is based on the assumption that the  $F_2$  individuals tested in  $F_3$  truly represent a random sample of all possible combinations in  $F_2$  and further that each  $F_2$  tested is represented in  $F_3$  by the same number of individuals. The number of individuals necessary in  $F_3$  will, of course, depend on the number of factors involved.

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#### FUNDAMENTALISM IN NORTH CAROLINA

ON May 4 a semi-political organization of fundamentalists called "The Committee of One Hundred" (one hundred counties in the state) met in Charlotte and passed a lengthy resolution from which the following paragraphs are taken:

We are unalterably opposed to the union of church and state.

Inasmuch as our state supported schools are not permitted to teach the Bible we are strongly opposed to their teaching any doctrine which tends to destroy the faith of our people in the scriptures as the authoritative word of God. We want to emphasize the fact that we are not seeking to cripple any of our state schools but to strengthen them and thereby inspire our people with confidence in said institutions as safe places for our boys and girls.

We hold that it is not sufficient for a teacher to justify himself in his disbelief that the Bible is the word of God upon the ground that he does not teach this in his class, inasmuch as education is by life as well as by lip and by example as well as by precept.

This organization has nothing to do with either denominational schools or those that are privately owned, inasmuch as they are supported by voluntary contributions.

We do not question the right of freedom of thought or research. "We believe in freedom by the truth," and in freedom to search for the truth, but we challenge the right of those in charge of our state schools to employ teachers who hold views fundamentally contrary to the simple teaching of the Bible and force the taxpayer to pay the bills.

The duties of the directors will be to endeavor by conference with proper authorities and by treaty to correct the abuses complained of. In case of failure to accomplish the desired results by conference and treaty it is incumbent upon us to avail ourselves of our constitutional rights and apply to the legislature for redress of our grievances.

The boards of trustees and the administrations of the three state institutions, the University of North Carolina, the North Carolina College for Women and the North Carolina State College, now face a mod-