

the soil soggy, and when a whole procession of "little lows" came marching along, dumping their moisture, there was nowhere for the water to go but off. And up came the rivers.

That, in a nutshell, is the story of the present record-breaking flood disasters, as stated by the U. S. Weather Bureau to Science Service.

The floods of the early spring of 1936 followed a somewhat similar situation, Weather Bureau scientists continued. In fact, persistent high-pressure areas in the Southeast are not unusual phenomena, though nobody knows as yet why they develop. However, as a rule they do not hang over that corner of the country for more than a few days, whereas this one has been an affair of weeks.

The present flood situation differs from that of 1936 in one important respect. Then, one single tremendous storm, deluging the upper watersheds of the rivers with downpours of as much as six inches within twenty-four hours, did all the mischief at once. The present situation has arisen from a whole procession of lesser storm areas, none of which has brought more than an inch, but all cumulating into a terrific aggregate of water.

*Science News Letter, February 6, 1937*

#### SOIL CONSERVATION

### Flood Storm Carried Off 300,000,000 Tons of Soil

**L**OSSES of best farm soil during the present flood period reach almost astronomic figures, according to calculations of the U. S. Soil Conservation Service. From the Ohio watershed, where most of the rains fell, it is figured that the prolonged storm period carried away three hundred million tons of topsoil at a very conservative estimate. The very fact that the rain has been long drawn out, indeed, operated toward making the losses less; the same amount of precipitation concentrated into a shorter time would have washed away an even greater mass of soil. Even as it is, gullying has been exceedingly rapid.

Careful measurements were made by the Soil Conservation Service of the run-off from certain fields in Ohio. From plowed land the run-off has been eight inches for the period of the rains; from comparable areas under grass and trees the run-off has been only two inches. Soil losses from the plowed land were of course several times as great as from the protected soil.

*Science News Letter, February 6, 1937*

#### ECOLOGY

## Half-Hearted Measures Won't Succeed for Flood Control

By PROF. PAUL B. SEARS, University of Oklahoma

**L**ANDSCAPE architecture on an imperial scale is our problem now.

Modern civilization must design its own landscape no less than its cities if it is to survive.

Because the disaster of flood is so ghastly and spectacular it is regarded as the disease itself, whereas it is but a symptom. The location of the worst suffering is not at the actual seat of trouble, yet much so-called flood control has been confined to downstream areas. This is not quite so sensible as treating appendicitis with pain killer.

The general principles of preventing flood damage are well understood, but great need remains for fundamental studies on climate and soil, and particularly the social sciences. The problem is really one in human ecology.

Any thorough plan of upstream engineering is headed for trouble with conflicting special interests. Moreover, such engineering alone is not adequate. The entire landscape must be reorganized. The average engineer works with great biological and social forces he has not been trained to interpret.

I agree with the statement credited to Colonel Younghusband, famous British explorer, that only two kinds of landscape are tolerable: one where man has made no change, the other where he has complete control as in western Europe.

The latter has been largely reconstructed and a working balance established following the chaos of early exploitation. The same must be done here. The white race is on this continent with both feet and must see it through. We can not restore original conditions except in limited areas and even to do so would not end floods or other symptoms of diseased environment.

Land use, highways, water supply, soil conservation, forestry, grazing, recreation, and flood control are merely facets of the major problem of creating a new landscape adjusted to the modern culture pattern. This is too vital a matter to be left any longer to chance. Industry, finance, agriculture, and science should cooperate to the limit with the Government instead of waiting to be pushed. The problem is bigger than any group of interests for it concerns the physical framework of civilization on this continent.

*Science News Letter, February 6, 1937*



#### TOO MUCH EVEN FOR MUDLARKS

Some racehorses are handicapped by a wet track. Here is one of the country's finest racecourses, near Louisville, Ky., too wet for anything but seahorses.