

# Nature Note

## Flood Plains



**FLOOD PLAINS** are the low, broad, flat areas that border nearly every large river of the world. Lined with sediments that have been transported and deposited for centuries by the restless river, the plain is usually dry except for the channel the river is using at the present time.

In seasons of heavy rain or melting snow, however, the river rises and spills over the channel banks across the valley floor it has created, flooding the plain. These floods result in severe damage to life and property wherever man has built his cities, factories or houses upon this specific area.

Besides the river channel, which can wind like a snake, coiling back and forth as the water constantly seeks easy new channels in its long flow to the sea, a flood plain contains bands of swampy ground, tufts of shrubs and bushes, and oxbow lakes where the river bends back upon itself so far that it makes a complete loop and then bypasses it. All this is bounded by cliffs or bluffs that define the sides of the plain.

For thousands of years, man has been tempted to build and live upon these areas, some of the naturally richest and most fertile soils in the world. The availability of water for his uses, the easy transportation and the flatness of the area have also attracted man. But he pays for this relative comfort every few years by the destruction he suffers from floods. In spite of dams, levees and other controls, when the surplus water rises, there is little to stop the river from flooding onto the lands it claims as its own.

Some of the world's greatest civilizations have risen on these rich and dangerous flood plains—the Egyptians beside the Nile, the Mesopotamians between the Tigris and Euphrates, the early Indians beside the Indus, and the Chinese beside the Hwang Ho, a dynamic river also called China's Sorrow.

# Do You Know?

In preparing spacecraft for a journey to Mars, scientists will use *sterilizing heat and gas* to develop methods that will reduce to an infinitesimally small probability the chance of any live earth microbe arriving on that planet.

Turkey eggs sometimes develop *embryos* even though they have not been fertilized.

Laser rods, *smaller than a cigarette* only a few years ago, are now giants, reaching three feet and more in length.

The chemical form in which a *pesticide* is applied to fields may significantly influence the amount that is washed off the soil during rainstorms.

Two nuclear detection spacecraft, traveling in a 60,000 nautical mile near-circular orbit, are marking their *third year in space* and constitute the oldest continuously operating U.S. spacecraft still providing useful data.

Japanese schoolchildren spend an *average of two hours daily* watching television.

An estimated *165,000 elderly persons* living independently in the United States are so senile they seriously endanger themselves and their neighbors.

The use of atomic batteries to provide *power for lighthouses* is being considered by authorities in Britain, Sweden and other coastal European countries.

The "Flame Queen," a *233-carat black opal*, considered to be the rarest of all known opals, measures 2.8 inches in length and 2.3 inches in width.

If man is to have enough food to satisfy immense populations in the future, *genetic improvement* of animals and plants, and chemical and biological synthesis of foods will be required.

New textiles are being created by *treating cotton fabrics* with chemicals and then with atomic radiation.

Flexible *nonmetallic shrouds* that contain and carry off vapor or fuel line damage or leakage in aircraft have been developed.

Vitamin E added to a cow's diet, if it is not eating green pasture grass and forage, *will prevent milk* from having a cardboard-like, tallowy or painty flavor.

Peel oil, squeezed from fruit peels during juice extraction, plays an important role in *determining flavor*, and the amount going into juice must be carefully controlled.

Six major *conservation bills* were recently signed into law by President Johnson.

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