



Tame Them Young!

► WE ARE SO USED to thinking of the width of rivers in terms of maxima that the idea comes hard, that somewhere in their upper courses are places where a man could cross them with one stride. True, official geography says that the Mississippi has its source in Lake Itasca, Minn., that the Ohio is formed by the confluence of the Monongahela and the Alleghany at Pittsburgh, and that the Missouri comes into being by the union of three rivers, Jefferson, Madison and Galatin. But on the other side of the lake, and at the upper ends of self-immolating rivers that lose their identities in that of the larger streams, there are certainly those same dwindlings down to mere brooks.

A few rivers are born big; they burst forth from underground drainage like Minerva from the forehead of Jupiter. But they are exceptions; the normal thing is for a river to start small and grow large, as babies grow into men. This

analogy fails at one point, however; rivers are simultaneously infants in one place and giants in another; and the giant is a giant because so many infants feed it.

This long prelude leads up to a very practical point. The giant, as we have had tragic occasion to know this year, becomes unruly at times and wreaks terrible destruction. And that is because its thousands of infant feeders start gorging it with water they have received from the clouds at the same time, or nearly the same time.

With only one of two notable exceptions, we human beings who are all too often the victims of streams that should be our servants think of taming the raging giant only in straitjacket terms. We build levees along the banks. The more the giant rages, the higher we raise the earthen walls, until finally comes a night of terror when the giant's strength becomes too great for even the

thickest, stoutest straitjacket. Then we pay for our folly, always with our wealth, often with our lives.

There are a few prophets abroad in the land who see clearly how the giant can be kept in more or less orderly mood all the time. This is not to be done by any improvements in direct restraint but rather by an indirect restraint consisting in taming the little feeder streams.

This can be accomplished in many different ways, all of which can be employed simultaneously. We can build thousands of small, cheap check-dams where the rivers are less than three feet wide. We can terrace and contour-plow sloping fields, putting the brakes on run-off water. We can re-sod and reforest denuded areas. Every pint of water held back at headwaters means less trouble for folks farther downstream when heavy rains do come.

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BALLISTICS

N.Y. in Nazi Bomb Plan

► THE GERMANS planned a bomb to cross the Atlantic and blast New York. It was a rocket to be started on its long journey by another rocket which detached itself when its job was done.

This was revealed by Brig. Gen. William L. Richardson of the U. S. Army Air Forces.

General Richardson, chief of the AAF Guided Missiles and Air Defense Division, spoke as a guest of Watson Davis, director of Science Service, on Adventures in Science, heard over the Columbia network.

The Germans, he said, developed several rockets known as the "A" series. The V-2, used against London, was one of these and although it was the only one of this series to be used operationally in the last war, it is not hard to visualize what might have been in store for the Allies had the Germans been given sufficient time to complete developments.

Each of the "A" series was developed primarily for research with the exception of A-4, later known as the V-2. The A-10 was the end result toward which this whole program was directed. This is the weapon which the Germans expected to use in bombing New York.

The A-10 was described by him as a booster rocket placed behind the A-9 giving it two-step cooperation to secure ranges of 3,000 miles. The A-9 was

much like the A-4, more familiarly called the V-2, with wings added to give increased range and using acid as an oxidizer in its fuel.

The A-10 was never actually constructed. However, all design studies and computations had been completed, and it appears that it could have been built and served its purpose provided the Germans had been given another year of development and production.

The total weight of the A-10 was to have been 190,000 pounds, of which 140,000 was fuel. The weapon was nearly 12 feet in diameter and 25 feet long. The 29,000-pound A-9 was to have been accelerated to a speed of 2,500 miles an hour by the use of the A-10 as a launching rocket, which detached itself and would drop free after serving its purpose.

It is the A-9 that would reach the target. Its rocket motor would be turned on when the A-10 dropped. This would increase its speed to about 6,000 miles an hour. It would have carried a warhead of about 2,000 pounds. This is a payload of only 1% of the starting weight of the weapon, but there is evidence to believe, he stated, that the Germans intended to utilize an atomic warhead which would have made this weapon a very serious menace.

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