

ENGINEERING

Tunnel Men Shun Women

An ancient mining superstition that women in tunnels cause disaster keeps female reporters out of the nearly complete Chesapeake Bay Bridge-Tunnel—By Elizabeth Hall

► AN OLD MINING superstition that women in the tunnels mean a disaster kept women from previewing one of the five future wonders of the world—the Chesapeake Bay Bridge-Tunnel.

The contractor's prejudice against women visiting the four man-made islands and tunnels prevented any female reporters from going on a press tour of the nearly completed engineering feat.

"Last year a woman visited the bridge-tunnel project for three days, and three men were killed," project official Edward G. Joyner Jr. said. "Since that time no women have been allowed to set foot on the islands or go down in the tunnels."

The superstition about women in mines goes back to Great Britain before mid-nineteenth century. Miners' wives worked right alongside their husbands at a back-breaking, hazardous task. The miners spent several hundred years trying to get their women out of the mines, and the tradition of keeping them out still holds.

Like ancient mariners who shuddered at the thought of a woman at sea, the miners stick to their superstitions today. Although nothing specific has ever been written down, tales of accidents "caused" by women going down in the tunnels and stories of strikes in protest to this invasion are passed by word of mouth.

Seventeen of the 28 coal mining states have laws prohibiting women working in or about the mines, and in all but a few cases, women requesting permission to visit the subterranean passageways are politely refused.

Visitors to the bridge-tunnel project were shown four man-made islands, approximately eight acres in size, dotting the stretch of ocean between Norfolk, Va., and Virginia's Eastern Shore; two underwater tunnels more than a mile long connecting the islands and three spans of bridges and trestles totaling 17.6 miles.

How do you build an island? The easy way is to pump up a lot of sand and pile rocks around it. The engineers on the tunnel-bridge found it necessary to build oval rock dikes, gradually pumping in the sand.

One unforeseen complication arose when they discovered a peat bog, lying 20 feet beneath the floor of the bay. It was necessary to drive deep wells and through the pressure of the island, dredge the water out of the bog, to prevent the island from sinking later.

The tunnels were laid in sections 300 feet long and 37 feet in diameter, with the highway already constructed inside. The sections were towed out by barges and dropped, while divers checked to see they were in the right places.

When the bridge is completed, early in 1964, Maine-to-Florida travelers will cut off an hour's time usually spent in crossing the bay by ferry. Travelers will experience a breathtaking over-and-under the water ride, as they drive on the world's longest tunnel-bridge and one of its engineering wonders.

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PUBLIC SAFETY

Deficiency in Coal Mine Rock-Dusting Discovered

► ROCK-DUSTING practices in U.S. coal mines may have to be modified to cope with certain hazards posed by fine particles of "float coal," the Department of the Interior warned.

Rock dusting is a way of reducing the chances of a coal-dust explosion by neutralizing the coal dust with ground limestone. The Bureau of Mines found that in return airways—passages that carry "used" air out of the mine—dusting will have to be carried out with more than usual care in order to deal with the ultrafine float coal that often settles out of the air stream in dangerous amounts, covering the rock dust layer.

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ENTOMOLOGY

Mid-Summer Is Busy Season for Butterflies

See Front Cover

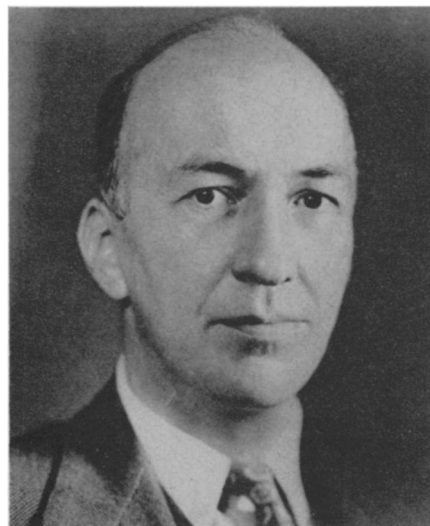
► SUMMER LANDSCAPES are now being brightened by colorful butterflies flitting from flower to flower.

Butterflies like the skipper on this week's front cover are busily gathering nectar from deep within flowers with their long probosces, or hollow tubes, which they keep curled up and hidden beneath their heads when not in use.

Soon they will lay eggs in the protection of leaves on which the larvae will feed when they hatch. For the skippers, the leaves will not only provide food, but also shelter for the pupae, from which the butterflies will emerge the following year. This metamorphosis of caterpillar into butterfly is one of the most spectacular wonders of nature.

The skipper belongs to the large family of butterflies (*Hesperiidae*) whose body is stouter than that of the typical butterfly but not quite as stout as that of the moth. Butterflies generally have slender bodies, one of the characteristics distinguishing them from the moths. These butterflies called skippers because they dart around in quick jerks, are common in fields and gardens from southern Canada to South America.

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Smithsonian Institution

Dr. S. Dillon Ripley II

GENERAL SCIENCE

Smithsonian Institution Elects New Secretary

► THE ELECTION by the Board of Regents of the Smithsonian Institution of Dr. S. Dillon Ripley II as Secretary of the Smithsonian Institution to succeed Dr. Leonard Carmichael, the present secretary, on January 1, 1964, has been announced by Chief Justice Earl Warren, who is also Chancellor of the Smithsonian.

Dr. Ripley, who will be the eighth man to serve as secretary of the 117-year-old Smithsonian, is at present director of the Peabody Museum of Natural History at Yale University and professor in the biology department at Yale. A world-famous scientist, Dr. Ripley is well known for his research and publications in zoology and especially in ornithology. He was born in New York City in 1913 and is a graduate of St. Paul's School and Yale University. He earned the degree of Ph.D. from Harvard in 1943. In 1942 he served as assistant curator of birds at the Smithsonian Institution.

Dr. Ripley has participated in zoological expeditions to the South Pacific, Southeast Asia, India and Nepal.

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TECHNOLOGY

Compact Cars Save Space Only on Parking Lots

► COMPACT CARS use the same amount of space out on the highway as big cars.

Two surveys by traffic engineers, one in Michigan and one in Maryland, have shown that traffic patterns are not significantly influenced by the size of cars involved.

The small-car drivers operate like those driving standard-size cars, the Highway Research Board of the National Academy of Sciences reported in Washington, D. C.

Apparently, it is only on parking lots that compact cars save space.

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