

OCEANOGRAPHY

Study Surf Sand by Color

► BAGS OF SAND dyed in nine bright luminous colors will soon be dumped into the churning surf of Fernandina Beach, Fla., in an effort to see where waves and winds carry the sand grains.

Each year tons of sand disappear from beaches into the sea, eroded away by the action of wind and ocean, especially by the littoral currents—those sea streams that run parallel to the shore.

But no one knows where the sand goes, nor how much is dragged away.

Coastal engineers from the University of Florida in Gainesville intend to solve part of the mystery this spring by dumping especially colored sands onto the shore, then catching samples and identifying them as they drift to other areas. This experiment will be the first of its kind in the United States.

A Navy helicopter will dump 50-pound plastic bags of tracer sand in parallel rows extending from the outer breaker line to the shore, explained Dr. Per Bruun, head of the University of Florida's Coastal Engineering Laboratory, Gainesville. Each row will be a different color. The soluble bags will dissolve in water, releasing the sand.

An instrument called a bedload trap attached to a 1,000-foot pier will catch samples of the sand at varying depths as the current sweeps them by. Other instruments will also take samples, record tide and wave height, current and weather conditions.

The trapped sand samples will then be taken to the laboratory and scanned under a special fluorescent lamp that can distinguish the most subtle shades of colors. By comparing the amount of sand captured with the amount dropped in each test, engineers hope to estimate the amount of sand churned up from the ocean floor.

Since the colored sand must match that of the beach, engineers are bringing the Fernandina sand to their campus laboratory for dyeing.

The helicopter will be used because the experiments will be done in weather too stormy for boats to operate safely inside the breaker line.

• Science News Letter, 83:221 April 6, 1963

TECHNOLOGY

Clothing for Protection From Nuclear Heat Tested

► CLOTHES for protection from the heat of nuclear blasts are being subjected to heat ordeals by scientists Michael M. Chen, Joan Berkowitz-Mattuck and Peter E. Glaser at Arthur D. Little, Inc., Cambridge, Mass.

A "light tunnel" is used to collect the intense heat produced by a solar furnace and distribute it over the sample of material to be tested.

The furnace, also being used to study the effects of intense heat on animal tissues, is reported in the American Optical Society's Applied Optics journal.

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Do You Know?

Some Arctic fish prepare themselves for a winter in sub-freezing waters by producing an anti-freeze in their blood.

Rock inscriptions found in Nevada and California are believed to have been made by some Indian tribes as a ritual to insure successful hunting.

The German measles virus is one of the known causes of cerebral palsy.

The U. S. Patent Office has a library of more than 3 million U. S. patents which is divided by subject into 300 main classes and 60,000 subclasses.

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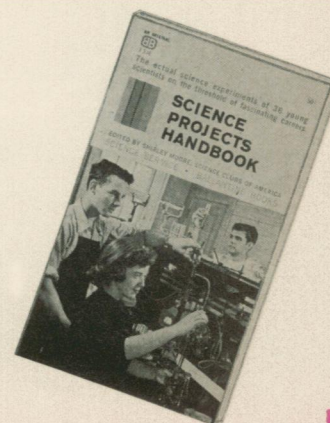
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