

"Clear evidence has only recently been developed that in the healthy body, even during complete bodily rest, the tonic contractions of the muscles maintain continually a pressure within the tissues sufficient to send a continuous stream of blood through the veins to the heart," Prof. Henderson said. "This pressure between the fibres of a muscle under tension arises in much the same way that pressure between strands of a rope is produced by a longitudinal pull upon the rope."

The tonus—which may be roughly described as the liveliness—of human

muscles, and thus of the whole body, distinguishes a living man from a corpse "more fundamentally than any other feature," states Prof. Henderson. Among influences which decrease tonus are anxiety, anaesthesia—particularly spinal anaesthesia—and surgical shock.

Tonus returns fully only with the recovery of vitality and health, Prof. Henderson adds. It is increased temporarily by frequent change of position—even turning over in bed—by strychnine and by inhaling carbon dioxide.

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report (*Biological Bulletin*, February), that in their laboratory experiments "sunlight has a feeble lethal effect on bacteria in the uppermost few millimeters of sea water, but even shallow layers of sea water are not sterilized by prolonged exposure."

"Virtually no bactericidal radiations penetrate sea water 3 meters," they continued, "and the intensity is materially reduced by passage through 10 centimeters of sea water."

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#### ARCHAEOLOGY

## "Stone-Plated" Florida Mound Resembles Mexican Pyramids

COVERED with thick slabs of limestone, a rectangular Indian mound recently discovered on Key Largo, off the southern tip of Florida, has some features of resemblance to the much more highly developed pyramids built by the Indian nations of Yucatan and Mexico. It also has some suggestions of the type of mounds built in the Ohio and Upper Mississippi valleys by the ancient Hopewell Indians.

Preliminary examination of the mound has been made by Matthew W. Stirling, chief of the Bureau of American Ethnology of the Smithsonian Institution, who hopes to return and carry out a complete excavation next winter. Mr. Stirling also intends to investigate statements made to him by Seminole Indians, that there is another stone-faced mound in the middle of the Everglades.

The Key Largo mound is in the shape

of a very low, rectangular, truncated pyramid. The stone slabs, averaging six inches thick and roughly a foot and a half on the sides, are not dressed smooth but are fitted together as closely edge to edge as their natural shape permits.

The Maya and Mexican pyramids were much higher rectangular earth mounds, flat-topped and covered with stone-slabs, which, however, are dressed smooth and fitted into regular masonry courses. The mounds of the Ohio valley often have a few rows of stone laid about their bases, but the main structure was left as naked earth, over which grass and trees have grown.

A completely stone-faced mound is a wholly new thing in Florida, where all previously known structures of the kind have been simple heaps of sand.

The purpose of the Key Largo mound cannot be known until it is excavated. Some mounds contain more or less elaborate burials, others seem to have served as foundations or platforms for ceremonial buildings. The flat-topped, stone-faced pyramids of Yucatan and Mexico belonged to the latter class, usually bearing temples on their summits.

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#### BACTERIOLOGY

### Sunlight Has Little Effect On Bacteria in Sea Water

BACTERIA that live in the sea are relatively safe from the action of sunlight, it has been discovered by Drs. Claude E. Zobell and George F. McEwen of the Scripps Institution of Oceanography, the University of California. They

#### FORESTRY

### Portable Power Saw Makes Pruning Easier

LIFE grows easier for the forester. No longer will it be necessary for him to wear out his shoulders pushing and pulling a saw on the end of a long pole, pruning trees to make them produce better timber.

At the U. S. Forest Products Laboratory a light-weight power saw has been developed. It consists of a small gasoline engine, that drives a small circle-saw mounted on a long pole, by means of a flexible shaft. The whole kit can be dragged about the woods on a toboggan or light wheeled carriage.

Use of the portable power saw greatly increases the amount of work a forest worker is able to accomplish, and at the same time it produces cleaner cuts that heal over more quickly.

The new tool is described by John B. Cuno, of the Laboratory (*Journal of Forestry*, August).

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#### ECOLOGY

### Mediterranean Fruit Fly Causes Rise of New Industry

AN INSECT from Europe has been responsible for the establishment of a new food industry in Hawaii.

The insect is the Mediterranean fruit fly, which caused a furor in the southern states a few years ago when it gained a temporary foothold in Florida. It has unfortunately long been established in Hawaii, so that most of the islands' fruits cannot be exported to the continental United States.

The industry is the manufacture of avocado paste, used in salads. Hawaii grows good avocados but the "Medfly" embargo keeps them at home. So the growers have turned to processing them into the palatable paste which is beginning to find an outside market.

*Science News Letter, August 24, 1935*

### RIIS EXPEDITION

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