Prosperity Threatens Species

Biology

Prosperity, easy living, no need to struggle very hard, have been cited as the underlying causes of the decay and downfall of historic civilizations like Rome and Persia, and are being regarded with some anxiety for modern parallels by modern philosophers. Comparable conditions hold in the natural world, according to Prof. O. Abel of the University of Vienna, who spoke before the meeting of the British Association for the Advancement of Science.

The early stages of the evolution of a species, he said, are apt to be marked by signs of a battle with a hard and unfavorable environment, which will let the fittest survive, but will ruthlessly scrape off the less fit. But after the species has conquered its place in the sun, or if the climate or other environmental factors themselves become changed for the better, second-rate individuals survive along with the strong and fit, and by crossing with them perpetuate their own defects and drag down the general level of the whole race.

Professor Abel found a striking example of his thesis in the bones of a certain extinct species of cave bear, found by thousands in an Austrian cavern. The fossils in the lower layers, marking the early days of the species, were all strong, healthy, vigorous animals; but among the bones farther up in the deposit, laid down during the days of fat living for cave bears, there were bones indicating that even crippled, diseased and dwarfed bears were able to make a living. And finally there were no bear bones left in the cave at all—the species had degenerated and become extinct.

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Wetting Safest in Storm

Meteorology

If you are out in the open and a thunderstorm suddenly comes up, don't raise your umbrella to keep dry. Go to as low a place as possible, sit down. or even lie down. Then you may get soaked to the skin, but you will probably not be struck by lightning.

This is the advice of Dr. W. J. Humphreys, professor of meteorological physics at the U. S. Weather Bureau, given to Science Service in commenting on the recent deaths of three people by lightning on a Montreal golf course when their umbrella was struck.

"Personally, I would prefer the ducking to the risk of being killed," said Dr. Humphreys.

A low place is safer than the top of a hill, and the lower the person is the safer he is. Nothing should be held above the head. A few years ago a man on a Washington golf course was killed when lightning struck his golf sticks held over his shoulder. If a person lies down on the ground there will be little danger. It may be uncomfortable to be soaked, but the wetting is a further protection. Wet clothes are a pretty good conductor, so the lightning will be carried off, even if the person is struck. If the clothes are dry, the current will probably travel through the body—with fatal results.

An isolated tree is an exceedingly dangerous shelter in a thunderstorm, said Dr. Humphreys. A small tree in a wood is reasonably safe, however.

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Joy, as well as grief and anger, may upset digestion, according to recent experiments.

Light Affects Use of Salts

Plant Physiology

Plants need comparatively minute amounts—often mere traces—of certain elements such as boron, zinc, copper and manganese, in addition to the larger quantities of the more familiar things such as phosphorus, potassium and calcium. The quantities of these "trace minerals" that will benefit any given plant seem to be governed by the intensity of the sunlight under which it is growing, according to Dr. Winifred E. Brenchley of the great British agricultural laboratory at Rothamstead, who spoke before the meeting of the British Association for the Advancement of Science.

Too bright sunlight appears to increase the harm done by the absence of some of these lesser elements, Dr. Brenchley said. One somewhat puzzling practical aspect of the problem has been that the benefits of copper applications to peat soils in Florida, a treatment much used in the truck-farming regions, can not be duplicated by similar treatment of peat soils in England.

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Old Constantinople Church

Archaeology

The most ancient Christian church in Constantinople, one of the churches which vies for the honor of having possessed the head of John the Baptist, is now being excavated. The edifice, known as the Church of St. John of the Studium, was built in 463 by a Roman senator named Studius. Its long and eventful career was terminated definitely when a fire and later a heavy snowfall wrecked it in the past century.

Authorities of the museum at Stamboul have undertaken to restore the ruins, according to a report in the British journal, *Discovery*, and the place has now become one of the most beautiful of the ancient monuments in Constantinople.

The interior of the church has been cleared of tall weeds, and the mosaic marble floor can be seen. Large portions of the mosaic patterns are missing, because at one time tourists carried off bits of flooring as souvenirs. The remaining patterns are formal geometric designs and figures of strange animals, some heraldic and some naturalistic. This mosaic apparently dates from the Middle Ages when the church was repaired.

The columns at the entrance have been cleaned of plaster and whitewash which the Turks spread over them in later centuries when the old church was turned into a mosque. The columns so revealed are of green marble, with finely carved Corinthian capitals.

In its earliest days the church was attached to a monastery of the so-called "Sleepless Ones," an order which held services day and night unceasingly by a relay system.

Various emperors paid visits of state to the Church of St. John in the centuries when it was an outstandingly important institution.

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