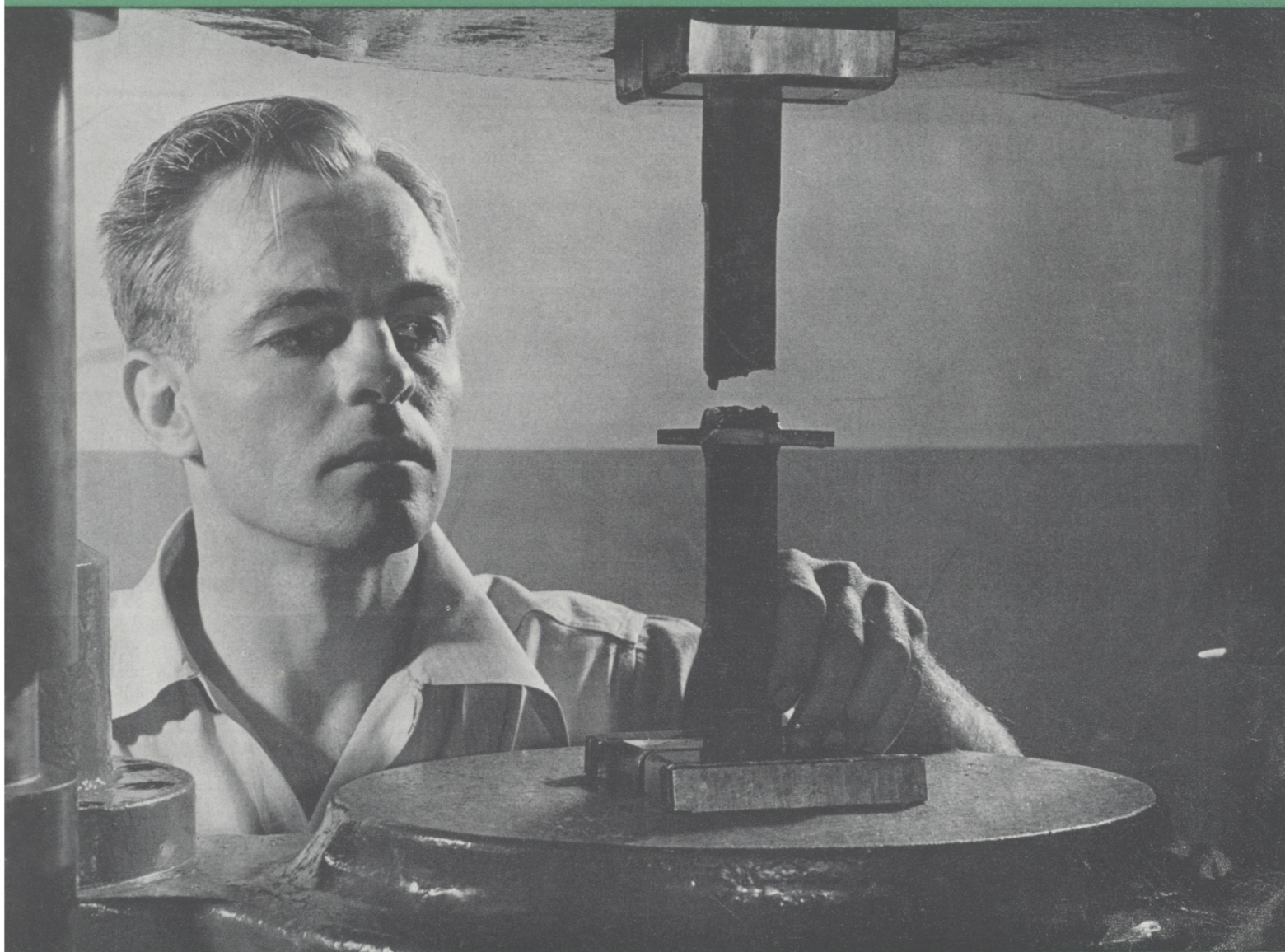


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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • NOVEMBER 14, 1942



Failure

See Page 312

A SCIENCE SERVICE PUBLICATION

Do You Know?

Plastic buttons are replacing metal on British uniforms.

Darkness is important to stored *potatoes*, as light may spoil their taste.

Modern *dehydration* can reduce 80 pounds of peas to 15 pounds in less than ten hours.

The only *native diseases* of Iceland are amebic dysentery and scurvy, which are easily prevented.

The *thrasher*, which is a member of mockingbird family, can mimic human conversation as well as bird songs.

Louisiana and South Carolina have passed laws requiring the *enrichment* of flour and bread, as a measure for improving nutrition of the populations in those states.

An estimated 25,000 or 30,000 *blind* persons could be used in war industries; they would not only equal normal production rates but would actually decrease accident rates.

The *broad nose* of the Negro is adapted to breathing air at relatively high temperatures, while the longer, narrow nose of the white is better adapted to low temperatures.

While there is no nourishment in *water*, it is vital for at least five reasons: lubricating human joints, diluting blood and lymph to promote circulation, regulation of body temperature through evaporation, and assisting in digestion and excretion.

Question Box

Page numbers of Questions discussed in this issue:

AGRICULTURE

What new spray will control blue mold of tobacco? p. 312.

BOTANY

What would make a mold moldy? p. 309.

CHEMISTRY

What will be done with Lalor Fellowship funds during the time that they are suspended? p. 313.

EDUCATION-MILITARY SCIENCE

What pre-induction courses are planned for high schools? p. 314.

ENGINEERING

To whom was the 1943 John Fritz Medal awarded? p. 312.

MEDICINE

How is Pennsylvania caring for men rejected in draft? p. 308.

How would a proposed bill add to the burdens of the Veterans Administration? p. 308.

What disease-fighting chemicals have been secured from fish sperm and sweetbreads? p. 313.

What new method has been devised for watching the process of healing in a wound? p. 316.

What special provisions are being made for caring for Navy casualties? p. 307.

Most articles which appear in SCIENCE NEWS LETTER are based on communications to Science Service, or on papers before meetings. Where published sources are used they are referred to in the article.

What step has been taken toward developing a better anti-typhoid vaccine? p. 316.

With what sort of splint can a broken-jawed patient eat regular diet? p. 310.

Why is the number of epilepsy cases expected to increase during the war? p. 307.

MEDICINE—PSYCHOLOGY

How is a victim of hot chowder contributing to the knowledge of stomach ulcers? p. 312.

PHYSIOLOGY

What new effect of vitamin K deficiency has been observed in animals? p. 313.

PUBLIC HEALTH

How can a post-war depression be avoided? p. 309.

How long can working hours be without interfering with health and efficiency? p. 309.

Of what health conditions has Brazil complained to our Government? p. 313.

PUBLIC HEALTH—GEOGRAPHY

In what part of the country are draft rejections for blindness most numerous? p. 312.

RADIO

How can a woman trained in radio contribute to the war effort? p. 315.

The 42 *strategic materials* which we had to import for the last war have now been reduced to 15.

Sage and other cooking *herbs*, once imported from Europe, can easily be grown in this country.

British tests show that *Diesel* trucks can be run successfully on vegetable oils, such as peanut oil, but mineral oil is needed to start the engines.

Most of the *flies* we see in the fall are not house flies, but cluster flies, a parasite of earthworms.

Wooden *fence posts* treated with chromated zinc chloride last three to ten times longer than if untreated.

Empty *beer bottles* are salvaged in the Middle East, by converting them into drinking glasses; even their necks are used—for insulators on telegraph poles.

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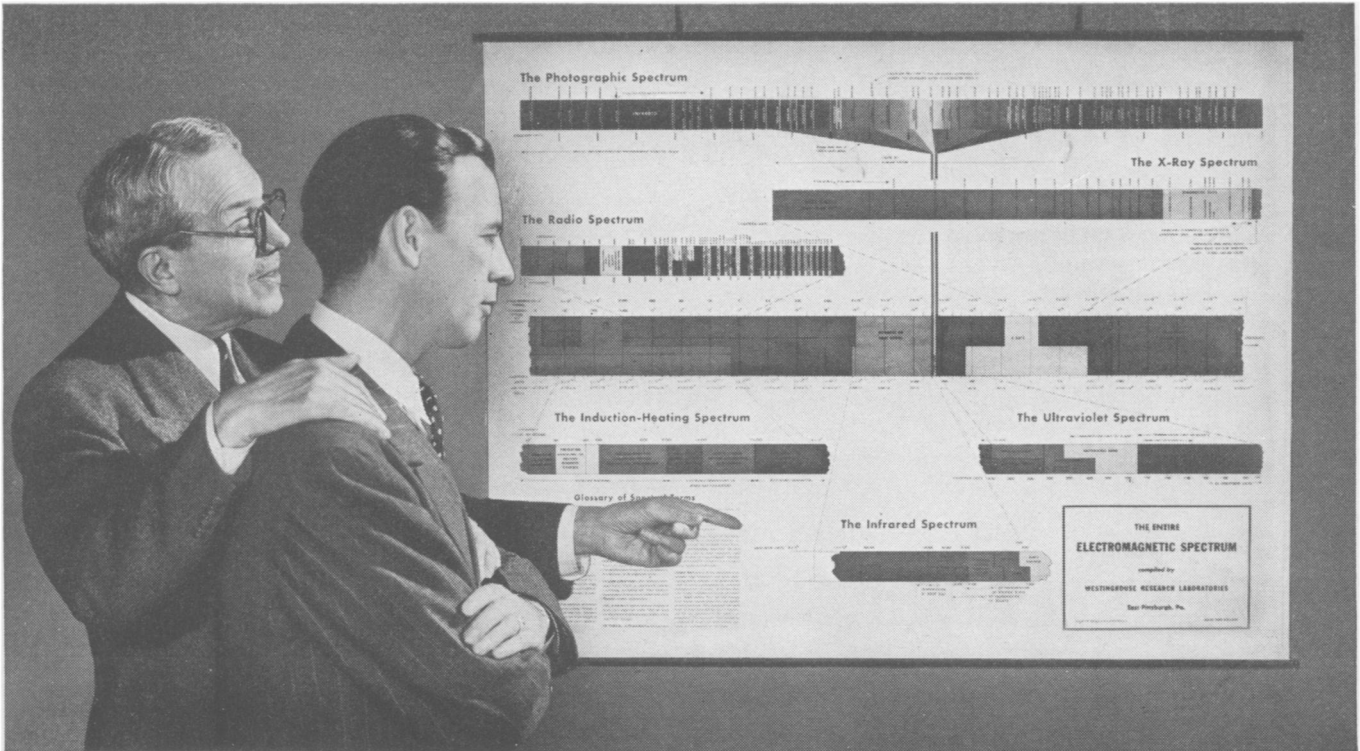
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When you look at a rainbow in the sky, you see nature performing a fascinating experiment in optics. Tiny drops of moisture, acting as prisms, have broken the sunlight into its component parts.

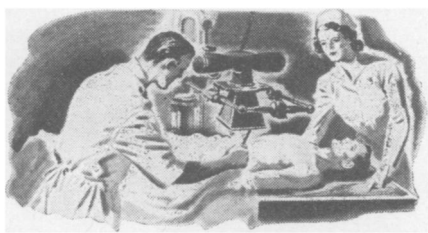
The familiar white light we know as sunlight is really a combination of many rainbow bands of color, making up the visible portion of the Photographic Spectrum.

But there's another rainbow in nature . . . an *invisible rainbow* that benefits all mankind.

This is the complete *Electromagnetic Spectrum*, with bands of radiation that stretch out in an infinity of wave lengths on both sides of the Photographic Spectrum.

• • •

To the right of the Photographic Spectrum lie the shorter wave lengths of the *Ultraviolet Spectrum*. Here we find the



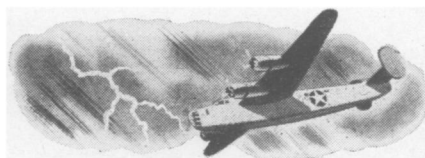
invisible radiations that make fluorescent tubes glow . . . erythral rays that tan the skin . . . bactericidal rays that kill air-borne bacteria.

Further to the right is the *X-Ray Spectrum* . . . still shorter radiations that science has harnessed to diagnose and heal many human ailments . . . rays that penetrate heavy armor plate.

At the very end of the scale are the *Cosmic Rays* . . . unknown, mysterious cosmic particles that constantly bombard the earth.

• • •

To the left of the Photographic Spectrum are the longer wave lengths of the *Infrared Spectrum* . . . invisible radiant heat



waves from the sun that penetrate window glass . . . rays emitted by electric heaters and steam radiators to help warm our homes.

Next, is the *Radio Spectrum* . . . microwaves that guide planes and ships to their destinations . . . longer waves that

bring us radio and television entertainment.

And finally, the longest waves of all, the *Induction-Heating Spectrum* . . . extensively employed by industry in the annealing and heat treatment of metals.

• • •

Westinghouse Research Engineers have played a major part in exploring and putting to useful work the myriad radiations in the Electromagnetic Spectrum.

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