

types. On the other hand, two-thirds of the men and women of 70 to 80 years have the convex and only one-third scaphoid types of shoulder blades.

Not only did Dr. Graves find this curious occurrence of the different types at different age levels, but many other observers reported the same thing. The straight and concave types, which Dr. Graves groups under the name scaphoid, are more frequent to young people, but get less and less frequent in occurrence as the age of the people examined increases. The convex type becomes more and more frequent among the progressively older groups of men and women.

Puzzling over this, Dr. Graves thought that it might be explained in one of several ways. The change in type might be the natural result of growth and development; the concave type shoulder blades of the child might become straight and later still convex. The second explanation was that some childhood disease, particularly rickets, might change one type to another. The third explanation was that occupation and environment might change the type of shoulder blades as a man grew older.

Further study showed that none of these explanations was true. In the first place, it is extremely unlikely that the type of the shoulder blades would change materially during the normal processes of growth, or even under the influence of disease or occupation or environment. Biology has no examples of such changes in type during the life cycle. Nor is there any disease known which changes the type of a bone.

"I have found that each type is equally common in males and in females, and it is known that both sexes are subject to the same laws governing development, growth and old age," Dr. Graves said.

Only One Explanation

It has seemed to Dr. Graves and to many others following his work that there can be only one plausible explanation of why the straight and concave types occur more frequently in the young and the convex more frequently in the old. This explanation is that those who have straight and concave types are often the people who are unduly susceptible to disease, poorly adaptable and short-lived.

"However, one should not conclude that every person possessing straight or concave types of shoulder blade is a weakling and will die young," warned Dr. Graves. "I have found that some of

the best types, both physically and mentally, are possessors of straight and concave shoulder blades, and some of the worst types are possessors of convex shoulder blades.

"It cannot be too strongly emphasized that a shoulder blade type should never be used as a positive index of a person's constitution or his tendency toward disease or health with the anticipation that the possessor of the one

type will die young and the possessor of the other will live to old age."

The person with an inherent susceptibility to disease must be strengthened and given special guidance and protection. Dr. Graves calls this susceptibility the soil factor. Shoulder blade types may have their greatest usefulness in aiding the physician to recognize this soil factor.

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CHEMISTRY

Margarin Made From Palm Oil Becomes Competitor of Butter

PALM OIL, heretofore used mainly in soap making, is proving a slippery customer for the butter makers who thought they had their market well protected by means of a ten-cent per pound tax on artificially colored oleomargarin.

Margarin makers have been experimenting with palm oil for some time. Lately they have succeeded in refining it to a point where it would not give a peculiar taste to margarin.

On Nov. 20 last they asked for a ruling from Internal Revenue Commissioner David Burnett as to whether margarin made with palm oil would be subject to the ten cent tax. They pointed out that the yellow color of this margarin was not produced artificially but came as a result of using the unbleached palm oil itself.

The Commissioner read the law and noticed the words "artificially colored" and ruled that palm oil margarin did not come within the scope of the law. Straightway one manufacturer ordered 700 barrels of palm oil and the wholesale price of butter fell. Protests from the dairy industry and from congressional representatives from dairy states immediately followed. The commissioner has been in many conferences during the past few weeks with representatives of the dairy industry, representatives of the oleomargarin industry, and congressmen.

It is the concensus of opinion that in order to take care of the palm oil competition the law will have to be amended. There is every desire to guard the butter industry of the country, inasmuch as butter and milk contain highly necessary vitamins for both children and adults.

In fact, so desirous is Congress of guarding the dairy industry that it is very probable that an embargo will soon be placed on imported butter and cheese for a period of about one year in order that conditions may better themselves in this country for the producer. Dairy men are pointing out that with conditions as they are at present palm oil margarin might be marketed as real butter.

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ELECTRICITY

Hot Photocells Give Largest Currents

THE photoelectric cell, magic lamp that has made possible television and talking movies, yields the most electric current when it is hot—at a temperature of a little less than 1,400 degrees Fahrenheit.

To the American Physical Society in Cleveland, Dimiter Ramadanoff, instructor in electrical engineering at Cornell University, reported his researches on the effect that temperature has on the current that comes from the photocell when light shines on it. With cells using the metal barium, he found that the current increased greatly as the temperature was raised, and was at a maximum around 1,364 degrees Fahrenheit. He also found a secondary maximum for the current at 1,040 degrees, but this was only observed when the cell was illuminated with an intermittent light.

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An old Roman inscription, lately deciphered, is a will in which money was left for the support of one hundred orphan girls.