

## PSYCHOLOGY

## Typical Sex Offender Found Shy Introvert

► THE TYPICAL sex offender is more likely to be shy, introverted and religiously-inclined than brutal and violent.

This is indicated in a psychological survey of a group of sex offenders at the Metropolitan State Hospital by Dr. James Marsh, psychologist at the University of California at Los Angeles Medical School.

The survey shows that sex offenders, in contrast to a comparison group of students, tend to shy away from group activities and dislike parties. Many are unusually fearful of lightning and earthquakes and apprehensive in the dark.

The majority read the Bible and pray frequently. In general they have a strong moral sense. They dislike "dirty" stories and burlesque shows. They do not believe in women smoking and think "drinking" is wrong, although most have used alcohol excessively.

Most of them are conscience-stricken about their sex offenses. In many instances, the "victim" was found to be the initiator of contacts and often maintained sexual relationships over a period with an offender, who because of fear or guilt wished to terminate the relationship.

The key to their difficulties seems to lie in unfortunate family relationships. Their childhood was marked by broken homes or consistent family discord. Many have never married and, in fact, are afraid of women. A majority of the married ones have had extreme marital difficulties. Their problems result in a deep seated neurosis.

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## MEDICINE

## New, Longer Lasting TB Drug on Trial in Patients

► A NEW drug for fighting tuberculosis is now on trial in a group of some 40 or more patients, Drs. Helen C. Dickie and Frank C. Larsen of the University of Wisconsin Medical School, Madison, Wis., announced at the meeting of the National Tuberculosis Association in Atlantic City.

There is hope that the new drug will be even more effective than isoniazid because it is absorbed more slowly and stays in the blood serum longer, but it is too early yet to be sure about this.

The new drug has no name so far and is called by its laboratory title of RO-24969. It is derived from isoniazid and was developed in the laboratories of Hoffmann-La Roche, Inc., in Nutley, N. J.

So far, the drug has shown no toxic action and is as effective against tuberculosis as isoniazid.

Because no one knows yet whether tuberculosis germs will develop resistance to the new drug, the Wisconsin doctors advise using it with streptomycin or, preferably, with PAS.

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*A NEW FIBER—Long fibers can be obtained easily from the cattail, the tall, spiked plant that grows in swampy areas. Leland Marsh of Syracuse University is shown here examining some of the strands.*

## AGRICULTURE

## Predict Cattail Growing

Harvesting cattails may some day be a profitable business for farmer's swampy lands. Raising this spiked plant could help to solve the world's food problems, it is suggested.

► HARVESTING CATTAILS growing in swampy areas will become a highly profitable business some day, two Syracuse University plant scientists have predicted.

Swamp land may turn out to be as valuable as some of the golden wheat fields of the Middle West, Dr. Ernest Reed, chairman of the University's department of plant sciences, and Leland C. Marsh of the department's Cattail Research Center believe. The center was established after research showed that the tall spiked plant has almost unlimited uses.

The world's food problems could be solved in part by growing cattails on a large scale, Dr. Reed said. This plant is known to botanists as *Typha*. Laymen sometimes call it a reed, tule, flag, rush or reed mace.

Nearly a dozen by-products have already been obtained from this "weed," and scientists expect to find several more in the next year.

This is how the center says the plant can be used:

The "root," or rhizome, can be eaten like potatoes, or ground up to make a flour for baking. Cattail cookies taste good, the scientists said. The starch content is high

enough for it to be used as a substitute for cornstarch in pudding. The flour can be fermented to produce ethyl alcohol, valuable as anti-freeze, for medicinal purposes, as a cheap industrial solvent and many other purposes.

In addition, the flour makes a good substrate for growing some molds from which antibiotics are produced. Fibers can also be produced from the "root."

The stem of the cattail has traditionally been used to caulk the ends of barrels to make them watertight. For centuries the leaves have made rush furniture, baskets and mats. Three companies in northern New York fill the limited demand of barrel makers and supply all of the cattails for rush furniture in this country.

Much more important uses for the stem have now been revealed. Mr. Marsh has extracted soft fibers from the stems and leaves by treating them chemically. He believes these fibers can be used for most of the purposes that jute is used today—to stuff furniture, make string, burlap, webbing, etc.

Mr. Marsh has also extracted from the stem an adhesive substance, a polysaccharide, that may prove useful as an adhesive for paper, as sizing for paper, and

as a smoothing agent for such products as facial creams and shaving creams. The stem is also a good source of ethyl alcohol.

The cattail flower, often thought of as the spike, is also valuable. During World War II, a Chicago company processed several million pounds of the fluffy, fibrous portion of the cattail spike to stuff life jackets, baseballs and mattresses. The fluff also was compressed into sound and heat insulator board.

The minute seeds have three possible uses. A drying oil, somewhat similar to linseed oil, can be extracted from them. This oil might be refined for cooking purposes. A

wax can be produced from this oil, and the seed meal that remains is a good cattle or chicken feed.

A tremendous yield of cattail "roots" can be obtained. Mr. March found that he could harvest 140 tons of rhizomes per acre near his home in Wolcott, N. Y. This is more than 10 times the yield of potatoes per acre. The dry weight, as measured by the tons of flour which could be produced, is 32 tons.

Farmers should not start harvesting their cattails, Dr. Reed warned, until there is a demand for them from industry.

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## ENGINEERING

## Study "Gay White Way"

► THE BRIGHTEST and probably shortest "gay white way" in the nation has been lighted by scientists at the University of California.

The strip, just 400 feet long, is an experimental laboratory where the scientists hope to learn how to improve roadway lighting. Some 60 lighting units of 20 different commercial types line the sides of the four-lane experimental thoroughfare.

Prof. Dan M. Finch, an electrical engineer in the University's Institute of Transportation and Traffic Engineering, is in charge of the investigations.

Prof. Finch said the roadway, reported to

be the most complete of its kind, was built because roadway lighting is becoming increasingly important and technical knowledge in the field is not well developed.

He pointed out that night driving has increased. He said that while night driving is only about one-third that of daytime, fatalities from after-dark auto accidents are three times as great. Also, many cities have street-lighting systems that are nearing the end of their serviceability, and should be replaced by up-to-date illumination.

The job to be tackled in the new laboratory will be a study of the visual effects of roadway lighting. Illumination measurements will be taken with a photometer to determine the amount of light reaching the surface of the road with different lighting systems.

A brightness meter will measure the amount of light reaching the driver's eye. A new instrument, called a "contrast meter," will measure how visible an object is in terms of the amount of contrast it presents against a background.

The roadway laboratory now includes incandescent, mercury vapor, sodium vapor and fluorescent lights. They are mounted on tall poles spaced about 50 feet apart on both sides of the road, and each pole bears five to six lamps. A cable grid structure allows changes in spacing of the lamps as needed.

In the future, different types of paving will be tested to determine the role of roadway surface in visibility. One 1,000-foot section will simulate conditions in a two-lane residential street. A second 1,500-foot strip will represent a street in a metropolitan area. The present black-top roadway represents a four-lane highway.

The research project is being sponsored and partly financed by the Illumination Engineering Society of America.

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California has almost 10% of all motor vehicles in the U. S.

Women, especially older ones, frequently drink less milk than the men and children in the family.

## ENGINEERING

## Fires Started by H-bombs Can Be Put Out by Blast

► THE HEAT of A-bombs and H-bombs may start fires, but the winds they create may also snuff out such conflagrations.

This is indicated in studies in the University of California at Los Angeles engineering department.

One phase of the study was concerned with the effect of the bomb on wooded areas surrounding urban targets. Simulated A-bomb blast winds were set off with special equipment, which contained materials found in wooded areas. These included pine needles and other leaves, punk (or chunks of rotting wood), and grass.

It was found that when the bomb's heat ignited the material, the fire was completely extinguished in most cases by the blast effect. The punk, however, continued to smolder and was rekindled with fanning.

Urban materials such as cloth and newspaper were also tested. The blast extinguished the newspaper fire. However, the cloth was pleated as it might be in curtains, and portions behind the pleats continued to smolder.

The research was sponsored by the U. S. Department of Agriculture Forest Service. A. G. Guibert, P. R. Dahl, V. N. Tramontini, S. F. Mulford and E. L. Venturini performed the studies.

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## PSYCHOLOGY

## TV Violence Symptom Of Our Social Ills

► THE MURDER and mayhem that children see on TV is probably a symptom, not a cause, of our social ills.

Dr. Franklin Fearing, professor of psychology at the University of California at Los Angeles, suggested here that a child's preference for violent TV programs may be an indication that he is not getting along well with his playmates.

He turns to such programs because they momentarily help him to overcome his feeling of social inadequacy. His search for excitement or thrills may involve nothing more than a harmless, even healthy, safety-valve response.

In general, TV programs and movies tend to reflect existing attitudes in our culture rather than create new ones, Dr. Fearing believes.

"Current films often depict an atmosphere of general insecurity where everybody is afraid of everybody else," he said. "Uneasiness stirred up by the spectacle of a world full of deceit and unimaginable horrors is not allayed by a happy ending. The impression conveyed is that nothing can be done about it."

Psychological surveys of film content in pre-Hitler Germany and that in the United States today revealed a striking similarity, Dr. Fearing noted.

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"INTEGRATING SPHERE" — To measure the total amount of light coming from a light source, this sphere has been built at the University of California. Final adjustments to calibrate the test lamp on the left are being made.