

Young Criminals Not All Defective

Psychiatry

Boys of normal intelligence who go wrong commit crimes different from boys of lower mentality who become delinquent, according to an investigation of 200 boys who have appeared before juvenile courts in Ohio. One hundred of these law-breakers, all in their teens, were normally bright. One hundred were subnormal, though not dull enough to be called feeble-minded.

The normal boys committed chiefly crimes against property, such as stealing, burglary, forgery, and larceny, whereas the subnormals got into trouble more frequently on account of truancy and immorality. C. H. Calhoun, of the State Bureau of Juvenile Research, reports in the *Journal of Juvenile Research*.

Money, jewelry, automobiles and other property stolen or damaged by the normally intelligent boys amounted to more than \$158,000,

whereas the mentally inferior boys caused only \$860 worth of property loss. Ninety-nine automobiles were stolen by the normally bright, whereas the subnormal boys stole only one. Altogether more than twice as many offenses were charged against the boys of normal intelligence as against the hundred who were mentally dull.

The evidence indicates that the bright child no less than the subnormal, may develop into a criminal if his environment and emotional make-up lead him that way, Mr. Calhoun concluded. His recommendation is that children who come into conflict with the law should be at once recognized as problems and steps should be taken to remedy their maladjustment, whether the child be normal or deficient in intelligence.

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"Knockless" Gasoline

Engineering

Petroleum chemists of the United States are straining every resource to obtain "knockless" gasoline. They are succeeding, partly by carefully segregating a naturally knockless stocks and partly by improvements in cracking processes, Dr. Gustav Egloff, Chicago chemist, told the recent meeting of the Independent Oil Men of America in Chicago.

But if automobiles were designed differently there would be no need for specially prepared knockless fuel. "It is well established that regardless of their type or composition, when a non-knocking condition exists in the motor, all gasolines burn with practically the same efficiency," he said. "There is scarcely one per cent. difference between the work, or the miles per gallon, which may be obtained from the noisiest straight run gasoline and the smoothest burning knockless fuel, so long as knocking does not occur. From this it is patent that the auto engineer should strive to design a knockless engine which will utilize all the energy of even our worst knocking motor fuels."

The difficulty is, that the greatest efficiency can be obtained from high-compression engines and high compression is what causes knocking. Hence the engineers have accepted it as an unavoidable evil, and are trying to adjust the fuel rather than the engine.

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History in Trees

Archæology

A tree, certified by its rings to be 3,233 years old, probably the longest continuous year record in the world, has aided Dr. A. E. Douglass of the University of Arizona to construct what will soon be a record of climate, sun activity and weather extending far back into antiquity. Four trees, giant Sequoias of the Pacific Coast, each over 3,000 years old, have offered up their cross-sections for Dr. Douglass' study. Forty-nine other trees, most of them about 2,000 years old, are being measured. Trees' rings are being used by archæologists cooperating with Dr. Douglass to date the ancient Indian ruins in the Southwest.

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Now Hairless Rabbits

Zoology

Russian hairless rabbits may yet appear on the scene, pursued by the already familiar—perhaps too familiar—Mexican hairless dogs. In the *Journal of Heredity*, D. A. Koslovsky, of the State Institute for Experimental Veterinary Medicine of Russia, tells of several hairless young rabbits that appeared among normal litters in hutches of his experimental animals. Some of them were partly clothed, having hair on their noses, ears, shoulder blades, and other bits of their anatomy. So far, however, all the hairless young ones born have died without issue.

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NATURE RAMBLINGS

By FRANK THONE

Natural History



Crossbill

There is a pretty legend, in the minor key, about the crossbill. It tells that the little bird, seeing the suffering Christ on Golgotha, vainly strove to tear the nails out of his hands, and so got its beak bent out of shape and its feathers all stained red, and that these stigmata of its charity have remained with it to this day. It seems rather a pity to disturb so pious a fancy by stating that this apparently distorted beak is really a great advantage to the bird, because it is able therewith to wrench edible seeds out of the cones of evergreen trees, which other birds cannot reach at all.

As for its color, the legend might well be called on to account for that, for the bird is certainly red enough, except for its wings, which are black. The female, however, apparently was not privileged to receive this sanguinary baptism, for her feathers are a soft olive except, again, for the wings. There is another nearly related species, the white-winged crossbill, which has conspicuous white bars across the wings, and which is of a duller crimson over the body than the true red crossbill.

Both species are birds in which that gentlest of naturalists, Saint Francis of Assisi, would have taken great joy. They are gentle, quietly-behaved nomads, willing to work for their food, singing cheerfully though not ostentatiously, and avowedly having no regular homes. They would be Franciscan tertiaries, to be sure, for they do mate and rear offspring, but they seem to leave a great deal more to Providence than do most of our careful forest fowl, for their nests are turned up in all sorts of places and at any odd time in late winter or early spring, regardless of snow or sun.

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