



Raccoon

► A CHUBBY little bandit with the brain and dexterity of a second-story man no longer furnishes college sophomores with the touchstone of campus success, but the raccoon is the reason why many youngsters think Daddy was awfully fat while still a member of the Class of '28. In those days there was many an athlete who was a lithe demon on the gridiron and a Bacchus, at least in bodily outline, off it. So much for the effects of the coonskin coat.

Raccoons are relatively primitive animals in zoology's family tree, although they more than live up to the black burglar's mask Nature gave them. Like the hands of monkeys and men, the raccoon's paws are unspecialized: they can be used for a variety of purposes, and usually are. They can unlatch chicken coop gates, husk sweet corn, break open a mussel shell or solve the special marauder-proof lid of a garbage can. In zoos, raccoons have nearly the pulling power of the monkey house. They handle things incessantly, and in addition splash around fondly in the monkey's bane and horror—water.

It is not true, however, that raccoons instinctively wash everything before eating it. If a crayfish is covered with mud, back into the stream with it for a quick rinse. If an earthworm looks dry and wrinkled, let it soak for a time. The raccoon washes for a reason: despite his fabulous appetite, he cannot be accused of drooling over his food, for his mouth is poorly equipped with saliva glands. He uses water to help him soften dry, harsh items on his menu. Give him a tree full of red-ripe cherries, or a fine fat frog, and there will be no time lost in needless scrubbing.

With mice, earthworms, birds, fruit, milk corn, frogs, fish, insects, turtle eggs, shellfish and clams on his diet the coon is no lank and stringy specimen. He spends most of his waking hours gorging himself, sleeps off the lethargy of an over-stuffed stomach, then begins another feast. The result is a well-rounded contour which makes raccoon a choice item at sportsmen's dinners, and lets him sleep away long

winter weeks without so much as an acorn stored in his hollow tree.

When treed by dogs or backed into a tight spot with his family, however, the roly-poly raccoon is a fierce and reckless fighter. Any hound that lives to an old age after a life of coon-hunting will be covered with scars from slashing paws he could not dodge.

Wary old raccoons resort to many tricks to befuddle dogs hard on their heels. Instances are reported where a coon will lead a dog into a stream, jump on the dog's head from the bank, and thereupon ruthlessly drown the pursuer.

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ENGINEERING

Reflecting Aluminum Cools and Heats House

► BY LIVING within rooms that are covered, ceiling, walls and floor, with heat-reflecting aluminum foil, Dr. and Mrs. Clarence A. Mills are able to keep cool in summer and warm in winter without conventional heating or air-conditioning, insulation or weatherstripping.

In the experimental residence named Reflection Point now open for inspection in Cincinnati, the University of Cincinnati authority on climate has applied reflective radiant conditioning so thoroughly that no attempt is made to heat, cool or change the moisture content of the outside air admitted summer or winter.

Around the top of the walls is an aluminum trough containing cooling coils for summer use and electric heating elements for winter. Figured aluminum foil on walls and ceiling, and similar foil atop the concrete floor slab covered with foam rubber and nylon carpet, reflect the heat in winter to the bodies of people in the room. The occupants are comfortable regardless of the room's temperature. In summer the process is reversed.

The system is turned off and on like lighting by a wall switch, and it is used only when a room is occupied. Unheated air from the outside is filtered electrostatically to remove dirt and dust. Sufficient indoor pressure is created to give an outward draft through all cracks and openings through which dust might enter.

Operating costs can be reduced by the system, Dr. Mills reports. With a 96-degree exterior heat, the reported cost of cooling persons in all seven rooms was two kilowatts an hour for actual operating times or roughly 25 cents per ten-hour operating day.

The system can be applied to old buildings as well as new construction, it is claimed. The principles are also being investigated for use in hotels, high-speed jet-propelled airplanes, army tanks, ships, temporary housing in polar cold and tropical heat, farms and even in clothing.

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AGRICULTURE

Young Forests Given Help by Weed-Killers

► WEED-KILLING chemicals used widely on farms and gardens are being tested as a possible aid in making young forests grow.

When a forest burns, replacing it is more than a matter of simply planting seedlings. Underbrush, weeds and scrub trees with little value but prodigious powers of survival move in and choke the desired trees, robbing them of sunlight and moisture from the soil.

Working on the notion that seedlings might take firmer foothold on land wiped clean by chemical poisons, scientists at a U. S. Forest Service experiment station at Upper Darby, Pa., began decimating test plots in the Allegheny National Forest with weed-killers.

The chemical ammonium sulfamate, better known to home gardeners under the trade-name Ammate, proved effective. Sprayed on at the rate of 435 gallons per acre, it killed all vegetation on the treated plots. Two years later, the plots were still fairly open. Test trees planted after the first year in the poisoned soil apparently were not affected, however. They were free to grow straight and tall.

There is one small hitch to the new technique for preparing planting sites, the scientists admitted. At present, the most successful ammate treatment would cost about \$50 an acre. In a burned-over area of thousands of acres, the bill for helping a new forest along apparently would give pause even to the U.S. government.

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AERONAUTICS

Doubling Navigator's Work With More Space, Equipment

► IF airplane navigators on flights in the middle latitudes were given proper equipment and workplaces, they could do not only their own work but that of an additional crew member. Psychologist Julien M. Christensen, Wright-Patterson Air Force Base, reported his conclusion, based on a study of 12 navigators during some 120 hours of flight, to the meeting of the American Psychological Association in State College, Pa.

The present arctic navigational crew could be reduced from two or three men to one. The arctic navigator spends 34% of his active time on paper work, Mr. Christensen found. Less than half his time is spent on instruments. The navigator in the middle latitudes spends an even greater proportion of his time (46%) on paper work.

Techniques such as log work and celestial solutions must be made more efficient if they are to work in modern high speed aircraft, Mr. Christensen concluded.

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