

forks now, but their gesture is eloquent of more primitive table manners.

But would you know what it meant if somebody tilted up his chin and then flicked his hand under it, back outwards? It means, "I don't care!" Formerly, when all men were bearded, a flick of the beard signified indifference; now it is used even by clean-shaven men. The French know and use this gesture, too: they call it "la barbe."

## PSYCHOLOGY

## Mothers-In-Law May Cause "Hay Fever" of the Mind

**T**HE MIND can have "hay fever" too. It is not caused by ragweed, that obnoxious pest that brings on so many sneezes this time of year. But it can be caused by a mother-in-law.

That the mind can become supersensitive to certain irritants just as the unfortunate hay fever victim is supersensitive to certain pollens is pointed out by Dr. Wallace Marshall of Appleton, Wis., (*American Journal of Psychiatry*, July). He explains this parallel between mind and body in reacting to persistent irritations as a long-sought link or common ground for both biology and abnormal psychology.

The effect of ragweed pollen on the person sensitive to it is well known. This peculiar sort of sensitiveness to what is harmless to another person is called "allergy" by the physician. The similar sort of sensitiveness in the mind is termed by Dr. Marshall "psycho-allergy."

Bombardment by pollen will sensitize the allergic person so that thereafter the least whiff of that pollen will start a paroxysm of sneezing. In a comparable way, Dr. Marshall explains, overexposure to an irritative mother-in-law may make a person supersensitive to that particular irritation. Thereafter even a mention of the mother-in-law may be sufficient to start a paroxysm of rage or a tirade. The father-in-law, in this case, does not precipitate any violence any more than daisies cause hay fever.

The hay fever victim can be relieved of his symptoms by a process of desensitizing. He is given gradually increasing doses of the pollen in the form of injections until he is taking it in such large amounts that he is rendered immune to the ordinary irritation of pollen-laden air.

Equally cryptic, to a non-Italian, is this one: hand at coat-pocket level, horizontal, palm up; then drop it suddenly three or four inches, keeping same position. That stops any kind of financial approach. Without the addition of a spoken word, it means, "I'm broke!"

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Likewise, Dr. Marshall encourages, the son-in-law can obtain mother-in-law "immunity" by psychoanalysis.

The "mental ragweeds," or psycho-allergens, as Dr. Marshall calls them, can be revealed by the psychiatrist's word-association test, one sometimes used with the "lie-detector" to trap those suspected of a crime.

When the person hears a key word, the "lie-detector" shows his response in the form of a change in the electric potential of his skin. That is because he has previously become sensitized mentally to that particular word. It has become for him a psycho-allergen. The record made by the "lie-detector" is an index of the emotional upset that word produced in him. In the investigation of a crime, the response may indicate the

suspect's guilt. In the patient with "mental hay fever" it identifies the irritating mental factor, as a scratch test identifies the pollen in true hay fever.

Other examples of psycho-allergy are mentioned by Dr. Marshall:

"The respiratory embarrassment which the stutterer suffers, is a psycho-allergic reaction which may have an inferiority as its basis.

"The individual who faints at the sight of blood suffers a psycho-allergic reaction which can be traced to a specific emotional upset caused by a specific psycho-allergen.

"The criminal, who kills people without the slightest sign of an emotion, may develop a refractory period and lose his nerve completely.

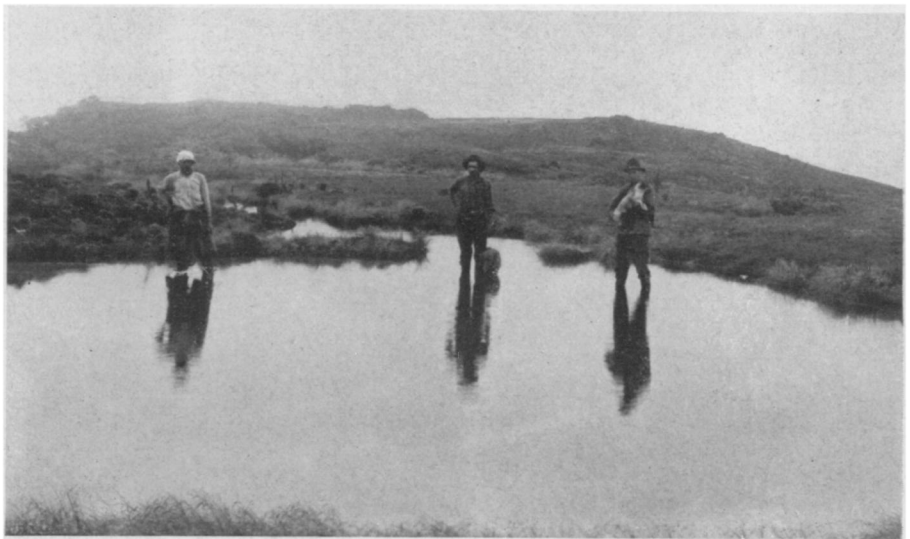
"The dyspso-maniac (drunkard) seeks a flight from reality in liquor. He does not drink for the sport of drinking; he imbibes because he needs a retreat from the definite psycho-allergens to which he has developed a state of hypersensitivity."

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## CLIMATOLOGY

## Mountain in Hawaii One Of World's Wettest Spots

**D**ROUGHT-WORRIED Uncle Sam Downs at least one bit of real estate where there is no lack of rain—the top of Mt. Waialeale, in the middle of the island of Kauai, westernmost of the larger islands of the Hawaiian group. There the average annual rainfall piles up to the impressive figure of 451



**NO DROUGHT HERE**

*Near the top of one of Hawaii's mountains is this "lake." Here it is always wet.*



### TO CATCH RAIN

*The raingage for Mt. Waialeale must be big. This one holds 900 inches of rain without overflowing.*

inches, and total precipitations in single really rainy years have reached as much as 600 inches. It is one of the world's wettest spots.

To keep an accurate official record of this extraordinary rainfall, a huge rain-gage, bigger than a barrel, has been set up on the mountaintop. It is stoutly made of copper, and it will take care of 900 inches of rain without overflowing.

The gage is read only once a year, because it is such a nuisance to get to the summit of Waialeale. Part of the way is a ceaseless struggle with dense, wet, matted trees and shrubs, and the rest of it lies across an open stretch of low vegetation, with endless rivulets trickling between grass hummocks. And everywhere there is thick, sticky, seemingly bottomless mud. Getting stuck in the mud as a peril of mountain-climbing sounds a bit funny—but those who have had the experience on Waialeale are emphatic in their declarations that there isn't a bit of fun in it.

Earlier raingages on Waialeale were smaller, necessitating at first monthly, then quarterly ascents. The mountaineering meteorologists were not sorry, therefore, when these developed defects, and the huge, once-a-year gage was built to replace them.

At one time an effort was made to get data on evaporation rates on the summit. But the sheltered copper evaporation pans stood month after month without losing any water at all, so the

scientists gave it up as a bad job. In reading the raingage, it is simply assumed that evaporation is zero—though actually it probably does occur to the extent of some unimportantly small fraction of an inch a month.

Mt. Waialeale achieves its wetness partly through the simple fact that it thrusts its more than 5,000 feet of altitude directly into the path of the moisture-laden subtropical trade winds. Even more than this, however, it acts as a moisture trap for winds that blow near its base. Together with the slightly higher Mt. Kawaikini about a mile to the south, it is the focus of a whole nest of deep canyons, up which the

winds swoop, bringing with them condensed moisture from lower levels. Thus the summit receives a double portion of rain.

The extreme wetness of Waialeale receives dramatic emphasis from the almost desert-like conditions that prevail at a sea-level locality only fourteen miles distant. This spot, blocked off from the moisture-bearing winds by the mountains themselves, has an annual rainfall of only about eleven inches—just about that of the drier parts of Arizona. Probably nowhere in the world is there such a sudden contrast between rain-forest and desert.

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### PALEONTOLOGY

## Find Well-Preserved Sloths In Cave Resembling Stable

**D**ISCOVERY of exceptionally well preserved ground sloth remains in a cave located by an Indian near Pierces' Ferry, Grand Canyon, is spurring scientists on in their quest for additional proof that man lived 10,000 years ago in what now is the United States. Hope is felt that remains of prehistoric man will be found. First indication that man lived on this continent in ancient times was uncovered four or five years ago in Gypsum Cave, near Las Vegas, when scientists uncovered ashes and arrows in association with ground sloths.

An Indian, Willis Evans, exploring for archaeological sites along the Colorado River at the behest of Dr. M. R. Harrington, scientific adviser to the National Park Service, came upon the ground sloth cave and another containing remains of an old Indian culture.

In the ground sloth cave, eight miles from Pierces' Ferry on the Arizona side, were found two ground sloth skulls, some hide and hair of the ancient animals, dried internal parts, and dung. No internal parts were found in the Gypsum Cave excavation. CCC workers removed remains to Boulder City, 80 miles distant.

Excavation of the sloth cave, which extends irregularly 200 feet into the wall of the canyon, is expected to start at once under the direction of the Park Service. The cave is around 800 feet above water level and 4,000 feet from the brim of the canyon.

The second cave contains Indian relics

and is believed to hold traces of prehistoric animals. It lies three quarters of a mile farther up the canyon, and will be opened later for investigation. Experts anticipate that additional caves will be discovered.

When Mr. Evans spotted the first cave he instantly recognized its value to science in adding new links to the record of the continent at the close of the ice age. Dr. Chester Stock, professor of paleontology, California Institute of Technology, Pasadena, Calif., was requested by the Park Service to inspect the prehistoric remains.

Dr. Stock said:

"This discovery is easily as important as the Gypsum Cave which threw new light upon the past, especially in view of the fact that from the remains just uncovered can be obtained additional information about animals that existed at the end of the ice age and into recent times. It is a remarkable preservation from which we can get valuable information about animal forms and appearances."

Dr. Stock viewed the caves with enthusiasm because of the possibility of finding remains of ancient man. Eustace L. Furlong, curator in vertebrate paleontology, California Institute of Technology, accompanied Dr. Stock.

The interior of the ground sloth cave, on discovery, resembled a stable. Man can stand erect in the caves. Some time ago CCC workers excavated a cave near Pierces' Ferry of Indian relics.

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