

CLIMATOLOGY

Winter of 1934-35 Warmer Than Normal

WINTER, just ended, was warmer than usual over almost the entire United States, J. B. Kincer of the U. S. Weather Bureau announced after an examination of the season's weather data. Between 85 and 90 per cent. of the country had super-normal temperatures for the months of December, January and February. Lower-than-average temperatures ruled in a limited area in the Northeast, and along a narrow Atlantic coast strip the records show a just-about-average winter. This warm-winter trend has now lasted for nearly twenty years.

February in particular was warmer and drier than average, Mr. Kincer states. This was especially the case in the Northwest. For example, at Bismarck, N. D., only one February in the past sixty years has been warmer than the month just closed. Eleven of the past twelve Februaries in that region have been warmer than normal, and the average temperature for all twelve has been ten degrees above the normal for the month.

Science News Letter, March 16, 1935

BOTANY

Orchids Picked From Trees By Botanists in Canoe

ORCHID collecting among the treetops of a Panama tropical jungle, by botanists standing in the bow of a native canoe, was the dreamlike but none the less actual experience of a scientific expedition from Washington University and the Missouri Botanical Garden, under the leadership of Dr. Carroll W. Dodge. Not only did the venturesome botanists paddle their craft up among the treetops, but the road they followed was the ancient Spanish camino real, or King's highway, over which once trotted caravans of horses and donkeys bearing the treasures of Peru.

The apparently upside-down adventure was made possible by the flooding of a large area of primal jungle with water backed up by the new 170-foot dam at Alalhuela, forming Madden Lake, to control floods and supply power and lockage water to the Canal.

Areas formerly reached only by arduous trips on paths cut through the

dense jungle were easily explored in canoes. Since the expedition reached the lake before it was filled to its final level, regions now completely under water were studied as well as lower levels in the forests whose tree tops are still exposed. The party had the opportunity, also, to study the plants of the upper portion of the forest before the trees died. So far as Dr. Dodge knows, this is the first time that such a chance has ever been offered to botanists anywhere.

More than 5,000 plants, representing about 1800 species, besides a large number of living lichens, orchids, and tree-dwelling relatives of the pineapple, were added to the herbarium of the Missouri Botanical Garden in St. Louis and the collections of the Garden's tropical station at Balboa.

The expeditions are being financed partly by the Washington University Science Research Fund, established by the Rockefeller Foundation, and partly by the Missouri Botanical Garden.

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ASTRONOMY

Metal-Plated Insect Enshrined in Telescope

ATINY insect, that probably could not see more than a fraction of an inch when alive, is now permanently enshrined in metal on the newly aluminized face of the great 100-inch mirror of the Mt. Wilson telescope, through which astronomers peer quintillions of miles into space.

During the recent evaporation resurfacing of the great mirror, a tiny insect flew into the vacuum chamber of the apparatus; it died and received an aluminum coating in which, like the gold-plated scarabs of the ancient Egyptians tombs, it will be encased for years. The defect caused by the tiny insect tragedy, however, will do no damage to the usefulness of the great telescope.

When the 100-inch mirror was taken from the telescope mounting for its new aluminum coating by Dr. John Strong of California Institute of Technology, it was the first time the mirror had been removed from its metal framework, or "cell," since it was installed.

Astronomers have found out that aluminum has much better reflecting characteristics than silver, and when applied by Dr. Strong's technique is much more permanent.

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IN SCIENCE

NUTRITION

Faulty Diet Hurts False Teeth as Well as Nature's

FALSE teeth as well as the set provided by nature are affected by diet, in the opinion of Dr. Russell Tench, former professor of prosthetic dentistry at New York University.

A faulty diet which damages the natural teeth also may change the shape of the ridges of the mouth so that perfectly fitted "store teeth" become loosened and misfits within three weeks.

When the natural teeth become so damaged that they must be extracted, it is due to conditions within the body brought on by faulty diet, and removing the teeth does not remove the condition of poor nourishment, Dr. Tench pointed out. The rest of the mouth continues to be affected by the original condition that caused the loss of teeth. As a result, artificial teeth cannot be made to fit properly.

This opinion, Dr. Tench said, is based on his observations in the course of routine practice as a dentist.

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PUBLIC HEALTH

Widespread Scarlet Fever Increase Reported

ANEW high figure for scarlet fever cases has been reached in the present widespread outbreak. A total of almost 8,000 new cases were reported by state health officers to the U. S. Public Health Service at Washington, D. C., during the week of March 2, latest for which figures are available.

More new cases are being reported than at any time in the past seven years, the federal health authorities state. The present increase throughout the nation coincides with the usual seasonal rise and will therefore probably continue to the end of the month, as the peak of the seasonal rise in scarlet fever cases usually is reached by the end of March or the first week in April.

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E FIELDS

PALEONTOLOGY

'Possums Not Good Hunting 35,000,000 Years Ago

POSSUM tracks 35,000,000 years old have lately been studied by C. Lewis Gazin, paleontologist of the Smithsonian Institution. They were printed on a slab of shale that once was soft mud, away back when the Colorado mountains were flat lowland.

The opossums of that ancient species, however, would not have been good hunting—except maybe for tabby cats—for they were no bigger than small mice. There are still mouse-sized opossums in the world, in tropical South America; although these are not regarded as descendants from the “mouse-’possums” of the ancient Colorado rocks.

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ECOLOGY

Drought Effects Severe On Prairie Trees

DROUGHT, that blasted pasture and crop lands in the West last summer, took toll of the prairie groves of trees also. Careful observations made last summer on the trees that form natural outposts bordering on the great grasslands have been made available to Science Service by Dr. J. E. Weaver, professor of ecology at the University of Nebraska. Few of these trees and shrubs were killed outright, but the varying degrees of injury suffered by the different species are considered worthy of study in connection with plans for the Great Plains shelterbelt, now under preliminary experiment to the west of Lincoln, Nebr.

Along the valleys, where the soil moisture is normally most abundant and evaporation rates somewhat lower than those obtaining on the uplands, there was nevertheless a great deal of drought injury. Dr. Weaver and his associates noted willows and wild cherries nearly leafless in the heat. The leaves of boxelder were wilted and dried, and those of the silver maple were “discolored as though by frost.”

Ash and elm, among the most favored trees for shelterbelt purposes, Dr. Weaver records as having “wilted crowns”; the ash, especially, was “half dried and brown.” Of the elms, “the scorched leaves did not turn brown or bleach white as did those of other species, but took on a bluish-gray color and soon fell to the ground.”

On the other hand, black walnut “was scarcely affected, perhaps on account of its excellent root system; nor were trees of this species found on even dried sites injured. Hackberry appeared in fair shape.”

A contrast between two associated species in the same environment is recorded by Dr. Weaver: “In the bordering belt of linden and red oak on a steep north slope, one-third to one-half of the leaves of the shallow-rooted linden were brownish-yellow and functionless; many had fallen to the ground. The more deeply-rooted red oak had shown as yet no permanent injury although the portions of the crown most exposed to the sun were wilted in early morning.”

In the bur oak forest that covered the slopes of the hills, even greater drought prevailed. From a vantage point on a ridge, one could clearly see that many of their tops had been badly scorched and that the leaves were dried.

Most convincing to many people, no doubt, will be the notation that the drought was too mean even for poison ivy. Dr. Weaver states that “Long-established vines, two inches in diameter, bore wilted leaves even in the shade in early morning from the crown to the base of the supporting tree.”

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PALEONTOLOGY

Postoffice “Pork” Dug Up In St. Louis

POSTOFFICE “pork” discoveries have been dug up in St. Louis; but for once they need not cause Jim Farley a headache. They date back to a considerably previous administration.

They consist, in cold fact, of the jawbones and tusks of an Ice Age peccary, a pig-like animal, excavated in the course of erecting a new postoffice building at St. Louis, Mo. At the Washington University department of geology, they were identified as belonging to the species *Platygonus leptorhinus*, a giant relative of existing peccaries.

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ASTRONOMY

Nova Herculis May Break Stellar Endurance Record

A STELLAR endurance record is in the making as scientists peer at the exploded star Nova Herculis which first flashed into brilliance just before Christmas. If the star will stay in sight for one day more than six months it will break the present record held by the Nova of 1891.

Nova Herculis has a good chance of breaking the nova record according to Leon Campbell of Harvard College Observatory.

“Since its discovery last December 13,” said Mr. Campbell, “the star has acted in an unusual way for a nova. It has sustained an exceptional brilliance for a long period. The only nova I know that can be compared with it is the nova of 1891 which lasted six months. Nova Herculis has an even chance to break that record.”

“After rising to peak brilliance, it began its normal decline but stopped falling and held a fairly steady level of about two and one half magnitudes. There was a sharp drop in brilliance at the end of January but the star has since recovered.”

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ZOOLOGY

House Cats Turn Wild; Prey On Desert Rodents

TAME cats gone wild have become a problem in Death Valley. These animals, once pets at the Furnace Creek Ranch, multiplied as is the way of cats and spread out into the mesquite thickets adjoining the ranch. Reverting to the primitive, they have become quite wild and to some extent have replaced the native meat-eating animals, particularly the little desert kit fox.

The especial problem involved in these cats gone wild is their liking for native rodents, which, because of abundance of shelter, food, and water, live largely in the mesquite thicket. Cottontail rabbits, wood rats, antelope ground squirrels, and kangaroo rats, as well as Gambel quail, all fall prey to these feral house cats.

Control of the “wild cats” now is being planned by the National Park Service of the Department of the Interior, which has authority over the Death Valley National Monument.

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