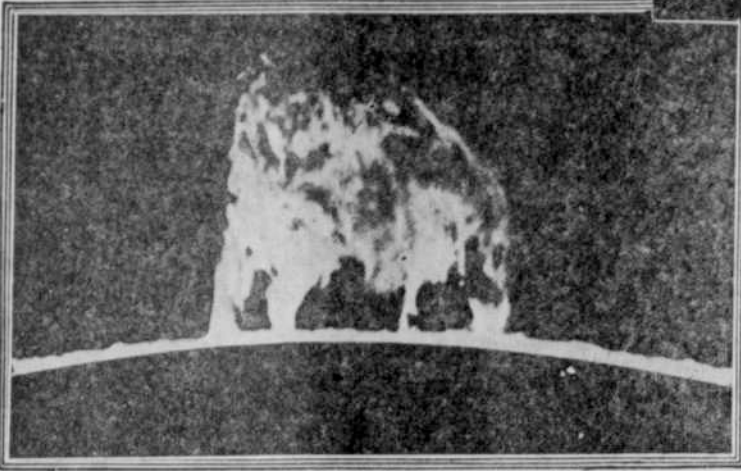


WHY STUDY ECLIPSES?



Flames Shooting Out From Surface of the Sun.

(Prepared by the National Geographic Society, Washington, D. C.)

ON THE ninth of May the sun and moon staged another of their great periodic dramas in which the Queen of the Night for a few minutes banished the King of the Day and ruled the sky.

No one in America or Europe could see this great show of the heavens, for the moon's shadow swept over only a narrow band extending from the middle of the Indian ocean to beyond the Philippine Islands; and the pencil of darkness traced most of its line over water. But it crossed land in northern Sumatra, the southern tip of Siam and the northern Malay states; just touched southern Cambodia, and swept across the middle Philippines. But so important was this brief blotting out of the sun to the scientists of the world that parties of them journeyed to these far off lands in the path of the shadow, taking with them elaborate instruments and cameras. Yet the total eclipse that brought about all this travel and expense lasted only five minutes in Sumatra, and less than four in the Philippines.

It was not the darkness itself that interested the observers, but rather the haze of light that appeared around the circumference of the lightless moon, for that is the chromosphere of the sun and it holds many secrets. Also, they wanted to see the stars that shine immediately past the edge of the blotted-out sun, for their position may shed new light on the Einstein theory.

Meanwhile the man in the street will be wanting to know what is the use of such investigations anyway; and if the astronomer takes time to answer, it will be to say, "I don't know."

Now could anyone foretell what new truths would be discovered, or foresee what new applications to human welfare they may have.

But new scientific knowledge always has a way of turning men's minds to its application to human necessities.

Today, in peace times, we see the great dirigible, the Los Angeles, flying through our skies without fear of the gas explosion which has wrecked so many superb lighter-than-air craft. And all largely because Lockyer, in 1868, training his spectroscopic on the great flames that shoot out from the rim of the sun, detected a new line in their spectrum. He noticed its close resemblance to the lines of hydrogen and concluded it must be the spectroscopic signature of a light gas unknown to terrestrial chemists.

How Helium Was Found.

Twenty-eight years passed, with everybody thinking that this gas was a stranger to the earth. Then Sir William Ramsay obtained minute quantities of a new gas from uraninite. Imprisoned in a test tube and electrically excited, it began to glow. Studied with the spectroscopic, it showed the same telltale autograph that Lockyer had observed.

More years passed. The world war was on, and America had entered it. The homelives of the plains of Kansas had been complaining of the quality of their natural gas. It didn't make enough heat or sufficient light. A middle-western university professor, H. P. Cady, was sent down to find out the trouble. In his spectroscopic appeared once more the unmistakable signature that had come to Lockyer, Ramsay, and to Sir Ernest Rutherford in his manifold investigations of radio activity. It told him why that gas wouldn't produce sufficient heat and light—it contained helium, as inert as stone and playing the same role in the natural gas that slate plays in coal.

Then the American Chemical society met. The university professor was put on the program to tell of his discovery. He apologized for intruding a theme upon the attention of that great body which could not, by the longest stretch of his imagination, have any bearing on the momentous issue before which all other matters should stand silent. But after he spoke, a venerable British savant declared that he need offer no apology; that if the war went on another two years the professor's contribution would do more to promote victory than all the other contributions to the proceedings.

Thus came helium as the straw that would break the Hohenzollern back, if all other weights should fail. It made possible the construction of

OREGON STATE NEWS OF GENERAL INTEREST

Principal Events of the Week Assembled for Information of Our Readers.

Negotiations have been started in Eugene for the establishment of an airplane factory there.

Building permits taken out in Eugene during the month of April passed the \$64,500 mark in estimated cost of construction.

L. A. Christiansen was arrested and fined \$40 in the justice court at Tigard for driving a truck overloaded to the extent of 15 tons.

Naomi Hohman and Jack Hempstead, both of Portland, headed the scholastic averages at the University of Oregon for the fall term.

The Philippine Islands were the leading market for Astoria district products during the past month, with 15,937 tons worth \$509,000 shipped to that region.

A railroad will soon be completed to Quartz valley, less than 30 miles from Lakeview, and timber in the territory natural to Lakeview will move to Klamath Falls.

When officers raided the soft drink establishment of J. T. McCulloch of Antelope, they discovered the reincarnation of an old-time saloon, it was declared recently.

The drill at the Southern Oregon Oil company's well near Bonanza is now working at the 1300-foot level in a blue shale, a favorable indication that oil will be found.

A second dividend of 25 per cent was paid recently to the depositors of the failed Farmers and Stockholders bank at Vale, prizing the dividends so far paid to 40 per cent.

A fourth dividend of 10 per cent, releasing \$10,000 to depositors of the failed Tillamook County bank, was authorized recently by Judge George Bagley, circuit court judge.

Plans for a new and modern state highway bridge across Klamath river near Klamath Falls, to replace the existing span, are being drawn by the state engineering department.

To speed the filling of rush orders for lumber, the Prouty Lumber company of Warrenton now is operating under a 10-hour schedule and will put on a night shift in a short time.

A special election will be held in Condon May 21 on a \$24,000 bond issue for street and water department improvement, the city council decided at its meeting a few days ago.

A band of about 450 head of antelope was seen on the desert west of Plush recently. It is said they were encroaching on range in Lake county that is needed by sheep and cattle.

The Oregon Dairy Improvement council will hold its first quarterly meeting in Salem June 7. The council was organized at the dairy convention held at Corvallis March 21 and 22.

Josephine county's annual fair will be held at Grants Pass this year on September 4, 5, 6 and 7. A large number of entertainment features have been signed up on the amusement program.

The 19 factories affiliated with the Tillamook County Creamery association received 61,176,726 pounds of milk during 1925, which was manufactured into cheese and butter and sold for \$1,777,579.

Ranchers of the upper Hood River valley are making preparations for a large acreage of potatoes this year. The district last year shipped about 20 cars. Indications this year point to about 75 cars.

Survey of a possible alternate route for its proposed railroad extension south from Klamath Falls to Lookout to meet the Western Pacific has been started by the Great Northern Railroad company.

In response to requests for improved service from the Sisters and Metolius section the telephone company has established an exchange at Sisters and constructed a metallic trunk circuit with Redmond.

Roy Daniels, 19, of Myrtle Creek was injured fatally and Ross Barnes was severely hurt when a snag fell on them as they were working at Camp 3 of the Coos Bay Lumber company near Coquille.

Oregon is now concluding a land exchange with the U. S. forest service whereby the state will acquire a forest of some 70,000 acres in Coos and Douglas counties known as the Millicoma tract.

Fire of undetermined origin destroyed the new barn on the John Walzak farm near Logan, together with its contents, including 14 head of cattle, three horses, fanning mill, besides a large number of farm implements and tools.

Authorities at Klamath Falls are seeking some trace of a rustler who stole three horses on the Klamath Indian reservation, drove them into a deserted barn and locked them in. The horses eventually starved to death.

The new \$100,000 ice storage warehouse at Medford, started March 15, has been completed and the work of storing ice will commence about May 15. The plant will have a storage capacity of 22,000 tons.

Twelve large edible frogs from the swamps of Louisiana have been received by Oregon State college and will be planted in the lakes of Benton county to form the basis of a new sport or industry in this state.

Though a new federal building for Astoria has been authorized and an appropriation for the same approved, the money is not yet available, according to information received from Congressman W. C. Hawley.

Monmouth voters in a special city election balloted 89 yes and 34 no on a \$15,000 bond issue. The money will build a new fire hall, also housing a city jail and recorder's office, and will buy equipment for fire fighting.

In addition to being divided into census districts of which the makeup has already been announced, Oregon counties will be subdivided into 1704 enumeration districts for the 1930 census, of which 295 will be in Multnomah county.

Marion county probably will lose 75 per cent of stock taxes levied against six national banks for 1926, 1927 and 1928, the court announced recently. An effort to settle with the banks on the basis of a 35 per cent payment proved futile.

Hop vines have started splendid growth and the sunny days have given them renewed energy, reports Will Magnus, of Dayton, who has about 45 acres on the Willamette river bottom. All grain is thriving in this vicinity farmers report.

The Oregon state board of horticulture will be asked to place a quarantine against all fruits from Florida as a precaution against spread of the Mediterranean fruit fly, according to announcement made recently in Salem. The fly was discovered a short time ago in Florida.

The big problem of the chambers of commerce of Oregon and Idaho is to advertise the entire northwest, according to sentiment expressed at a meeting of secretaries and executives of chambers of commerce from cities along the old Oregon trail held in Baker recently.

The Apple Growers' association of Hood River began offering its members first opportunity to subscribe to a \$75,000 bond issue recently voted for financing a new cannery department. The bonds, which draw 6 per cent interest, are in denominations of \$100 and \$500.

Total appropriations made by the 35th legislative assembly, not including fixed millage tax items, annual and continuing appropriations, aggregated \$7,878,528.78, according to a statement prepared by the secretary of state in reply to requests received from the state grange.

State prohibition officers participated in 72 arrests for violation of the liquor laws during April. Fines of \$10, \$50 were imposed and jail sentences aggregated 410 days. The officers destroyed 7372 gallons of mash, 790 gallons of liquor and seized 12 stills. Three automobiles were confiscated.

Miss G. Dean, teacher in the Perry Christian high school at Perry, was burned severely and a boy critically injured when a large heating stove fell upon him. Miss Dean lifted the hot stove with her bare hands. She then carried him several blocks to his home, and refused aid until he had been attended.

Unfavorable weather has made the season backward in farm work and vegetation around Cove. Spring seeding is practically completed. Winter wheat, which is in excellent condition, is being pastured by sheep and cattle. Continued cool and cloudy weather has held back fruit buds of all varieties, with cherry blossoms just beginning to open.

Small boys who live in and around Hermiston are now making pocket money killing magpies, according to a communication received by Harold Clifford, state game warden, from Henry Hitt, well-known Hermiston sportsman. A bounty of 2 cents a head is being paid, provided by the Umatilla farm bureau and the Hermiston American Legion post.

A full season's program for Wallawa county road building work has been outlined by J. D. Walker, county engineer and the members of the county court. Work on the link of road a few miles east of town which connects the Whiskey creek and Lostine-Leap market roads has been going on for the past three weeks and the grading work is nearing completion.

Sixty-five new settlers arrived in Oregon during April, bringing the total for the first quarter of the year to 157, as compared with 96 for the corresponding period of 1928, according to W. G. Idle, manager of the Oregon State Chamber of Commerce. The new settlers in April purchased 4605 acres of land and brought to the state a total investment of \$251,900. Their investments represented nearly half of the first quarter total which was \$545,325, as against \$315,650 for the first quarter of 1928.

FLASH The Lead Dog

By George Marsh

Copyright by THE PENN PUBLISHING CO. W.N.U. SERVICE

CHAPTER XI—Continued

Cautiously, with ax poised for a quick blow, he moved in on his shoes, measuring with his eyes the length of the chain on the snow when straightened by the leap of the trapped beast. But the carcajou did not spring and thus open himself to the blow from the menacing ax. Instead, his smoldering red eyes followed the circling Flash, his body slowly pivoting to face his enemy.

Again and again Brock tried to lure the beast to leap to the end of the chain, within range of the poised ax, but with uncanny instinct the wolverine refused to spring.

Provoked at his failure, Brock turned to get his gun from the sled and, with the risk of injuring the pelt, shoot the brute, when he had an idea.

"By golly! I'll poke him into it with a stick!" he cried, with a doubtful look at the plunging Flash struggling to free himself from the rawhide which he, him to a neighboring tree. So, cutting and trimming a sapling, Brock again approached the fifty pounds of living dynamite, that watched him, head lowered, lips curled in a red snarl.

With a cough of rage the carcajou craned the extended pole in his jaws, and with a twist of his head tore away a foot of the spruce stick.

"Mad, eh?" teased Brock, thrilled with the excitement of baiting the most savage denizen of the forest. "I'll make you jump yet!" And the boy fiercely prodded the hairy body.

With a scream the infuriated beast stiffened and sprang into the air. Dropping his pole, Brock leaped back beyond the radius of the chain. As he did, the taut chain jerked the wolverine to the snow. Stepping in, Brock swung the lifted ax, but again the beast left the snow, and ax and hairy body met in mid air with a thud.

As the boy struck again, the carcajou again leaped, tearing his hind foot free of the trap while the ax head buried itself deep in the snow. Springing back, Brock shielded his head with raised left arm as the maddened beast hurled himself upon him.

The shoulder and back of the skin capote were slashed like cloth, as the long skinning knife of the boy plunged deep into the ribs of the raging beast. Again Brock thrust desperately under his upraised arm at the demon whose teeth gripped the back of the skin capote while razor-like claws ripped the hide to ribbons. Then, a great body catapulted into battling carcajou and boy, hurling them to the snow.

Struggling to his knees, free of his enemy, with smeared knife blade aimed for a thrust, Brock stared at the battle in the snow beside him. In a blurred melee of slate-gray and brown, snarling their hate as they fought to the death, thrashed the husky and the wounded carcajou. Hampered by the snapped traces, collar and belly-band of the harness though he was, the charging dog had found his mark as he leaped to the aid of his master. Straight to their goal the great canines of Flash had driven through the thick neck muscles of the wolverine. Desperately the beast, weakened from the knife thrusts, writhed and twisted to reach the husky with the flying falls of his claws. But the tusks of Flash, seeking the spine behind the skull, never lost their conquering grip as they knifed their way to their goal.

Neck clamped from the rear in the vise of the husky's tusks, his cruel paws snapping helplessly on air as he coughed his hate, the wolverine fought to reach his enemy with his feet, but as he squirmed to slice the great body, always with a wrench, Flash threw him and kept to the beast's back, thus avoiding the slash of the claws.

Then, as the excited Brock hung over the battle in the snow with poised knife, the rust-brown body suddenly ceased to writhe; the blood-slashed jaws gaped widely in a red grimace, the great forefeet, with their knives of claws reached out in a last quivering slash at the air.

The long fangs of the Ungava had wrenched through to their mark. The spine of the carcajou was broken.

"Give it to him, Flash!" gasped Brock, suspicious, doubtful of what he saw. "Give it to him, boy!"

Lifting the head of the brute, his teeth still locked, Flash shook him with great wrenches of his iron neck. Satisfied, with a low rumble, he fiercely nuzzled the stiffening enemy. Then with the dead brute between his forelegs, Flash proudly lifted his slant eyes to the master.

"You killed him, boy!" cried Brock, proudly. "You broke his neck—a carcajou's neck—and not a bad slash on you! By the great horned owl, you're a wonder!"

Then, in the custom of his kind, the conquering dog raised his pean of vic-

tory over the body of his foe, in long drawn howls that waked the silent forest.

Throwing off his tattered coat, Brock examined his ripped duffle shirt and the scratches on arms and back.

"Flash!" he cried, "we're two lucky birds! That deer skin was so tough, I'm hardly more than scratched. I got him with that first stab—close to the heart—took the fire out of him, I guess." Brock leaned over and examined the thrusts in the body of the dead carcajou.

"Yes," he added, "and one hind foot was ruined by the trap. If he had had a fair chance to get a purchase with his teeth in my shoulder, he would have slashed my old hide to pieces, boy."

Luckily for Brock the wolverine had hung on his shoulder and side barely an instant—the first snap of his jaws, owing to the thick skin coat, only breaking the skin, and his punishing claws hardly getting into action when the knife thrusts into his lungs and the charge of Flash shook him off. And it was fortunate for Flash he had not met an unwounded carcajou. The neck hold he had got in his leap, had saved him from a ripped pelt.

Finding that neither he nor his dog were hurt beyond painful scratches, Brock donned his torn capote, and hurried back to the main camp to treat the slight wounds on shoulder and left arm, and get his duffle coat. And so, through February, the boys labored on their trap-lines, unmolested by their enemies north of the big lake, while they added to the already rich catch of fur which might never see Hungry House.

Onabani-glass, the Moon of the Crust on the Snow, was ten days old. Higher and higher, each day, swung the sun over the white wilderness of the Yellow-Leg headwaters. With fur



The First Hard Crust Would Find Them Headed North.

and surplus outfit securely hidden in the cache in the swamp, Gaspard and Brock waited for the usual break in the weather, when, for a time, the March sun would daily soften the snow surface and the following frosts, at night, form a crust which would bear the weight of men and dogs, making sledding a delight. With provisions for three weeks, cooking outfit and blankets, lashed in the tarpaulin wrapper, on the big sled, the first hard crust would find them headed north. Deep into the country the Crees were trapping for the red-bellied free-trader wintering on the lower Carcajou, they were going in search of news of the death of Pierre Lecroix. That there might be no return south over the March crust; that the Peterboro, slung from spruce, on wires, in October, to avoid the porcupines, might not, in May, run the roaring Yellow-Leg, bound home for Hungry House, the boys fully realized. (TO BE CONTINUED.)

Fish's Headstone

The purpose of the white stone-like objects found in the interior of the fish's head has not been very definitely determined, but most of the small boys who catch fish think these stones are lucky pieces and seek them for the mere purpose of pocket pieces. It is generally agreed that these stones are in some way connected with the fish's auditory faculties, but according to another theory they belong to the fish's static sense, a term referring to the complex process by means of which fishes are enabled to maintain equilibrium in water. The stones are almost entirely mineral compositions, being soluble in weak acetic acid. They show annular or peridole rings of growth, somewhat analogous to the annular rings of trees, and are frequently used to determine the age of fishes.

Pioneer in Cataloguing

Thomas James, the first librarian of the Bodleian Library, Oxford, where he held office from 1600 to 1620, was the pioneer of English librarians. He compiled the first complete printed catalogue of a public library arranged in one alphabetical order and was the precursor of the subject-catalogue.

Good Manners

All good manners have something theatrical in them; they are not natural; they are a performance and the best inspiration toward acquiring them is a fine desire to be agreeable to others.—American Magazine.



SAME PRESCRIPTION HE WROTE IN 1892

When Dr. Caldwell started to practice medicine, back in 1875, the needs for a laxative were not as great as today. People lived normal lives, ate plain, wholesome food, and got plenty of fresh air. But even that early there were drastic physics and purges for the relief of constipation which Dr. Caldwell did not believe were good for human beings.

The prescription for constipation that he used early in his practice, and which he put in drug stores in 1892 under the name of Dr. Caldwell's Syrup Pepsin, is a liquid vegetable remedy, intended for women, children and elderly people, and they need just such a mild, safe bowel stimulant.

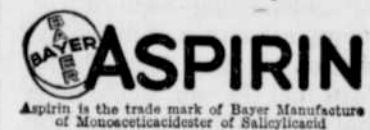
This prescription has proven its worth and is now the largest selling liquid laxative. It has won the confidence of people who needed it to get relief from headaches, biliousness, flatulence, indigestion, loss of appetite and sleep, bad breath, dyspepsia, colds, fevers. At your druggist, or write "Syrup Pepsin," Dept. BB, Monticello, Illinois, for free trial bottle.

"Refuse" Made Valuable

Rubber interests are investigating a new source of revenue, extraction of oil from rubber seeds, which long have been treated as refuse on Malayan rubber estates. Net profits of \$11 a ton is estimated with market prices approximately \$22 a ton. Estate laborers earn about three cents a day collecting seeds in spare time.



WHEN damp days, sudden changes in weather, or exposure to a draft makes joints ache, there is always quick relief in Bayer Aspirin. It makes short work of headaches or any little pain. Just as effective in the more serious suffering from neuralgia, neuritis, rheumatism or lumbago. No ache or pain is ever too deep-seated for Bayer Aspirin to relieve, and it does not affect the heart. All druggists, with proven directions for various uses which many people have found invaluable in the relief of pain.



Suppose There Were No Bids

Mabel—At the pictures the other night we were shown that in Morocco men bid for their wives. Just think of being put on the auction block and having men bid for you. It must be terrible! Mildred—It must be; but just suppose there were no bids!

Russ Ball Blue goes farther, makes clothes whiter than liquid Blue. Large package at Grocers.—Adv.

Necessity

"I have some lovely shoes for the ball. Had them made to measure for \$3." "You are extravagant! You could have got them ready made for half the money." "Yes, but I should have had to pay ready money for them."

An egotist is a man who points with pride—to himself.

Why He Succeeded

Honored politically and professionally, during his lifetime, Dr. R. V. Pierce, whose picture appears here, made a success few have equalled. His pure herbal remedies which have stood the test for many years are still among the "best sellers." Dr. Pierce's Golden Medical Discovery is a stomach alterative which makes the blood richer. It clears the skin, beautifies it; pimples and eruptions vanish quickly. This Discovery, or "Golden Medical Discovery," Dr. Pierce's puts you in fine condition. All dealers have it in liquid or tablet form.

Send 10 cents for trial pkg. of tablets to Dr. Pierce's Clinic, Buffalo, N. Y., and write for free medical advice.

Send 10 cents for trial pkg. of tablets to Dr. Pierce's Clinic, Buffalo, N. Y., and write for free medical advice.