

FERTILE CROSSES IN THE ANIMAL LIFE

Professor Loeb's Discoveries in Producing Distinguishing Species.

EGGS OF SEA URCHIN IS CROSSED WITH STARFISH

Fertilization of Cells Also Produced by Treating Them With Chemicals.

(Special Dispatch to The Journal.) San Francisco, Dec. 24.—Could a well known fact that one of the means which biologists employ to distinguish species in their cross fertility. Those organisms which are cross fertile, which are able to produce fertile offspring are usually said to belong to the same species.

There are some exceptions to this rule as, for instance, the Logan berry, which is a fertile cross or hybrid of a raspberry and a blackberry, two distinct species of rubus. Again, there are hybrids, such as the mule, which do not produce their kind, and are, therefore, infertile hybrids, although both parents belong to the genus equus.

Why it should not be possible to cross organisms not widely separated in classification, such as two species of the same genus is a question for which a number of answers have been given, but which, along with most fundamental biological problems, is still awaiting a complete solution.

Professor Loeb of the University of California succeeded recently in fertilizing the eggs of a sea urchin (strongylocentrotus) with the active cells of a starfish (asterias), (which does not occur under ordinary conditions by treating them with appropriate solutions of chemical substances.

These results have lately been confirmed and extended to an astonishing degree. Not only has strongylocentrotus been crossed successfully with asterias, but with other starfishes with brittle star (crinoid star) and, probably, a holothurian or sea cucumber as well.

When it is remembered that urchins, starfishes, brittle stars and holothurians belong not only to distinct genera, families, orders, but even to distinct classes, the unusual character of the achievement becomes apparent. But the great marvel of it all lies in the rare simplicity of the means employed.

In the original experiments of Professor Loeb, artificial solutions were used instead of sea water. It has since been found that sea water gives the same results. The most rigid precautions were taken to prevent fertilization by active cells of the same species.

At the sea water used was first heated to 140 degrees, at which temperature no germ cells can live. All dishes, tools and the animals furnishing the eggs were cleaned carefully in running fresh water also. Other precautions were taken as possibility of eggs developing without fertilization, that is, parthenogenetically, as when they develop after being treated with proper amounts of magnesium chloride.

These precautions were in the shape of control experiments. For instance, if it were desired to see whether the eggs of the sea urchin would be fertilized in normal sea water by the active cells of the starfish, two dishes of eggs would be prepared under identical conditions. Then into one of them the active cells of the starfish would be introduced. If the eggs in this dish should show signs of development which were not presented by the eggs in the other dish, the evidence would be convincing that the introduction of the active cells had produced the change.

Loeb's experiments show conclusively that the fusion of an active cell with it starts up the development of the egg. This part of fertilization is certainly performed. There is as yet, however, nothing to show that the heredity characters of the two parents become mixed in the egg.

Information Wanted. DeLong—I understand you are studying a treatise on the art of memory culture. Shortleigh—Yes, that's right.

DeLong—Have you got far enough along to remember that \$5 you borrowed me last spring?

What Sulphur Does

For the Human Body in Health and Disease.

The mention of sulphur will recall to many of our readers the days when our mothers and grandmothers gave us our daily dose of sulphur and molasses every spring and fall.

It was the universal spring and fall "blood purifier," tonic and cure-all, and mine you, that old-fashioned remedy was not without merit.

The idea was good, but the remedy was crude and unpalatable, and a larger quantity had to be taken to get an effect.

Nowadays we get all the beneficial effects of sulphur in a palatable, concentrated form, so that a single grain is far more effective than a tablespoonful of the crude sulphur.

In recent years, research and experiment have proven that the best sulphur for medicinal use is that obtained from Calcium (Calcium Sulphide) and sold in drug stores under the name of Stuart's Calcium Water. These are small chocolate coated pellets and contain the active medicinal principle of sulphur in a highly concentrated, effective form.

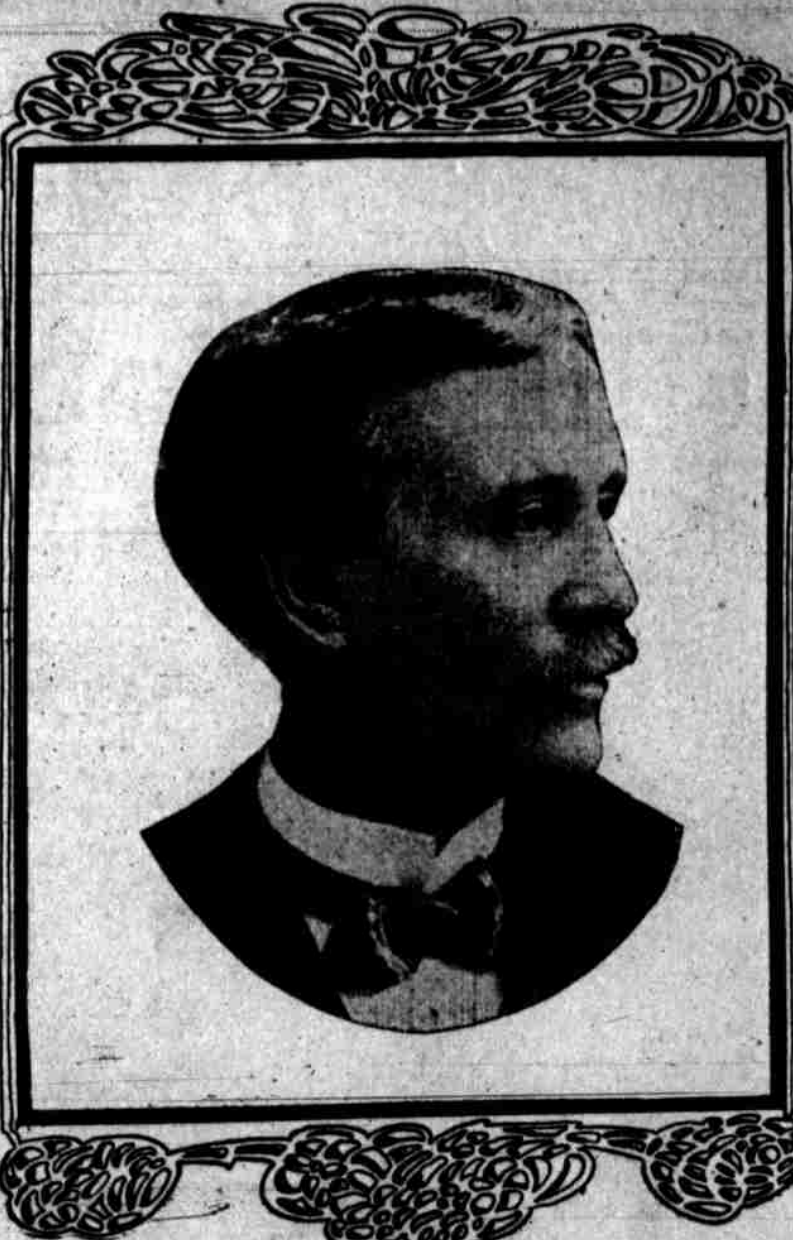
Few people are aware of the value of this form of sulphur in restoring and maintaining bodily vigor and health. Sulphur acts directly on the liver, and excretory organs and purifies and enriches the blood by the prompt elimination of waste material.

Our grandmothers knew this when they dosed us with sulphur and molasses every spring and fall, but the crudity and impurity of ordinary flowers of sulphur were often worse than the disease and cannot compare with the modern concentrated preparations of sulphur, of which Stuart's Calcium Water is undoubtedly the best and most widely used.

They are the natural antidote for liver and kidney troubles and cure constipation and purify the blood in a way that often surprises patient and physician alike.

Dr. H. M. Wilkins while experimenting with sulphur remedies soon found that the sulphur from Calcium was superior to any other form. He says: "For liver, kidney and blood troubles, especially when resulting from constipation or malaria, I have been surprised at the result obtained from Stuart's Calcium Water. In patients suffering from boils and pimples and even deep-seated carbuncles, I have repeatedly seen them dry up and disappear in four or five days, leaving the skin clear and smooth. Although Stuart's Calcium Water is a proprietary article, and is sold by druggists, and for that reason labored by many physicians, yet I know of nothing so safe and reliable for constipation, liver and kidney troubles, and especially in all forms of skin disease as this remedy."

For any one who are tired of pills, cathartics and so-called blood purifiers, will find in Stuart's Calcium Water, a far more palatable and effective purgative.



Franklin Pierce Mays, State Senator, Under Indictment in Connection With the Oregon Land Frauds.

WHITE WOLF HILL CAPTURED BY JAPS

Two More Forts at Port Arthur Taken by Desperate Fighting in Night Attack.

RUSSIAN GENERALS KILLED DURING FIERCE ATTACK

Dynamite Used to Blaze the Way and Hand to Hand Fighting With Grenades.

(Journal Special Service.) Tokyo, Dec. 25.—General Nogi reports that in a night attack the Japanese have taken two more forts at Port Arthur by a desperate attack on White Wolf hill. Dynamite was used to blaze the way and hand-to-hand fighting, in which explosive hand grenades were freely used, ensued. Several Russian commanders are reported to have been killed, among them General Kondratenko and a general not identified. General Stoesel's chief of staff was wounded. A big fire is raging in the outer fort, caused by Japanese shells.

LAWSON INDICTED MANY YEARS AGO

Investigation Shows That He Was Held for Felony Years Ago and Dismissed.

(Special Dispatch by Leased Wire to The Journal.) New York, Dec. 24.—The record of an old indictment against Thomas W. Lawson for the very thing for which many of the startled financiers are now anxious to have him indicted, was found today in the office of District Attorney Jerome. On the heels of this came the news from Philadelphia from former Attorney General James M. Beck, attorney for several of the most powerful corporations in the country, had made a serious arrangement of Lawson in an address before the graduating class of a business college there.

RESPIRE OF A FEW DAYS

Schlierholz has sustained very intimate relations with Binger Hermann, and less than two hours after the congressman arrived from Washington last Friday evening he called at Schlierholz's room in the Lincoln hotel. The latter was not in, however, and Hermann returned to the Imperial.

N. H. Withee, of La Crosse, Wis., arrived in the city yesterday morning and is at the Portland hotel. Withee was the purchaser of the lands secured through the fraudulent entries in township 11-7, and conveyed to the mythical George A. Howe, from whom the title passed to W. A. Salzer and then to Withee.

Mr. Withee says that he is not here to appear before the grand jury, and has no interest in the pending investigation. He is here on other business and does not expect to be subpoenaed by the grand jury.

Henry Ford, the private detective, denied with vehemence that he was in any wise connected with any attempt to "fix" the grand jury or that he made any overtures to any of the defendants in the land fraud case recently tried to tamper with that jury. He denounces all such statements as stories without foundation and intended to injure him in the state where he has lived all his life.

The Mosier neighborhood is getting an apple record.

SERGEANT PARSONS STARTS FOR NEW POST

Brave and Popular Portland Man Won Promotion in Contest Against Many Competitors.

D. L. Parsons left last night for Fort Meade, S. D., where he will assume the office of post commissary sergeant. He will report for duty as soon as he arrives at the Black Hills army post.

BEEF TRUST ACTS WRECK 40 BANKS

(Continued from Page One.) savings institutions alone are regulated by the state. Following is the list compiled by Mr. Cox:

- Fallures in 1903. Hicks Grove—H. S. Green's bank, private. Bow City—H. S. Green's bank, private. Grinnell—Citizens bank, private. Waverly—German-American Loan & Trust company. Clearing—Bank of Pisgah, private. Caswell—Bank of Curlew, private. Gasa—Bank of Gasa, private. Little Sioux—Little Sioux bank, private. Tiffin—Corn Exchange bank, private. Emerson—Farmer's bank, private. Sheldon—Sheldon State Bank. Ireton—Bank of Ireton, private. Germania—State bank. Colfax—Bank of Colfax, private. Bank of Royal, private. Ireton—F. H. McKeever's bank, private. Providence—O. E. Miller & Son's bank, private. Linn Grove—H. W. Main's bank, private.

D. L. PARSONS

years. His new office, to which he was appointed by General Chaffee on December 12, was gained after a severe examination in which non-commissioned officers throughout the United States competed. It is considered one of the best offices that can be gained by one in the ranks, and Parsons' many Portland friends are glad that his Christmas gift from Uncle Sam was of such a nature.

MANAGERS WILL FIGHT ORDINANCE

Dime Vaudeville Houses Would Be Injured by Zimmerman's Proposed Law.

LICENSE OF TEN DOLLARS A DAY IS PROHIBITIVE

Managers Say That the Cheap Theatre is a Great Moral Agency Here.

The managers of the dime vaudeville houses of Portland do not intend to stand idly by and let the ordinance introduced by Councilman Zimmerman, imposing upon them a license of ten dollars a day, to be passed. They are making preparations to fight the measure to the end.

DR. HUTCHINSON'S ACTION ENDORSED

Findings of the United States Inspector of Animals Confirmed by Superior.

STRONG INDICATIONS ARE FOUND OF MANGE

Dr. Hickox, Chief of the Western Bureau, Came From Washington and Made Inspection.

The findings of Dr. E. N. Hutchinson, inspector for the United States department of animal industry, in the case of the Reynolds cattle near Condon, have been affirmed by Dr. Hickox, chief of the western bureau. While the expert who was sent out from Washington to make an investigation did not find actual presence of the mange parasite in the scrapings of the Reynolds cattle, he reported the presence of strong indications of mange. Dr. Hickox held that Inspector Hutchinson was justified in refusing a certificate for transportation of the cattle out of Oregon.

In last August it was reported that mange was present in calves in small numbers in Oregon, and Inspector Hutchinson was sent out to examine the suspected herds. He found symptoms of the disease in several bunches of cattle, and among those held up to him was the Reynolds herd near Condon. Mr. Reynolds was dissatisfied with this action, and he caused another examination to be made by a veterinarian, who reported that no mange existed. Mr. Reynolds complained of the action of Inspector Hutchinson, and Chief Hickox came here, accompanied by Dr. R. H. Tracy, an expert from the department at Washington, to make a thorough investigation. In the interim, the suspected cattle had been taken to markets inside the state. While it is not charged that the suspects were disposed of, it is regarded as possible that most of them may have been shipped. The remainder of the herd was examined by Dr. Tracy, whose report upheld Dr. Hutchinson in refusing certificates. Under the rules of the department of animal industry an inspector must refuse a certificate for cattle in every case where there are "symptoms" of mange.

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- Fallures in 1904. St. Charles—Citizens bank, private. Victor—Iowa County bank, private. Mount Ayr—Citizens bank, private. Sigourney—Sigourney Savings bank, private. Holstein—E. H. McCutcheon & Co.'s bank, private. Corning—Corning State Savings bank, private. Pella—People's Savings bank, private. Colfax—Bank of Colfax, private. Garden Grove—Farmer's bank, private. Maquoketa—Exchange bank, private. Pleasanton—Royal Richardson & Co.'s bank, private. Dixon—Bank of Dixon, private. New Liberty—New Liberty Savings bank, private. Imogene—Citizens' bank, private. Birmingham—E. H. Skinner & Co.'s bank, private. Olin—Bank of Olin, private. It is impossible to give an accurate list of suicides. Among them, however, may be noted the following: Grinnell National Bank—Cashier H. C. Spencer and his son, assistant cashier. Bank of Colfax—Cashier George D. Wood. Citizens' Bank of St. Charles—Cashier Charles Wood. Corning State Bank—Cashier F. L. Larue. Sigourney Savings Bank—Cashier G. D. Hildebrand. Lone Tree—Cashier—Blaine Mead Trust.

Many prominent public men and some of the leading bankers blame the meat trust. Senator Lewis of Page county, a member of the banking committee in the legislature, shares this view. They fix the liability in this way: Those institutions that have failed, in most instances, have been located in small communities, where they have loaned money extensively on farm mortgages or upon chattel mortgages upon cattle.

The purpose of the loans is nearly every instance was to enable the borrower to purchase cattle and supplies with which to feed them. The market was at its height two years ago. Then, according to the views of those who evolve this theory, the meat trust desired that the prices should fall, notwithstanding there was a comparative scarcity in cattle and an increase in population. At the same time the price of dressed meat was maintained. At any rate, many a farmer was ruined by the loss of large investments in cattle and his inability to meet the obligations of the banks, caused the collapse of the latter.

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Portland has half a dozen dime houses, and the managers agree that the raising of the license to \$100 a month would force them to close—some of them, at least. This, they assert, is exactly what the saloon men of the city desire, and that element, the managers say, are behind the movement to drive the little shows out of business.

Chris Brown of the Northwest Vaudeville circuit, which is represented here by the Star and Arcade theatres, when questioned last night, said: "Councilman Zimmerman's ordinance, if passed, will please the saloon men and dive keepers of Portland immensely. It is a well known fact that the vaudeville houses have had a bad effect upon their business. As everybody who knows anything about humanity in this day is aware, the young men and women have got to have some place to go at night. The great majority of them cannot afford to spend much money. The 10-cent houses provide for them an evening's entertainment—two shows each night, we'll say—for the moderate sum of 25 cents each. They take advantage of it and therefore do not frequent bar-rooms and wine rooms as extensively as they used to do."

"This is, after all, a big factor in the question. The dime house has become a moral agency. It has done more for the morals of the young people of Portland than any creation of the past 10 years. It keeps them off the street. No wonder the saloon men complain. We rob them of business every night, but which is the better place for men and women, old or young, the saloon or the vaudeville house?"

"Personally, I do not believe that the council will pass the ordinance. It is altogether too unjust. We are making money, yes; but is that any reason why we should be forced to donate a large amount of our profits to the city? Some houses could not stand it."

"I do not believe the managers of the legitimate houses have anything to do with this proposition, much as they would like to see the little houses go. Other managers expressed similar sentiments last night and it is understood that an organized effort will be made at an early date to defeat the proposed law of Mr. Zimmerman."

EXPERTS REFUSE TO HAVE THEIR BILLS CUT

J. H. Cunningham, Who Examined the Tanner Creek Sewer, Wants Full Amount.

J. H. Cunningham, one of the experts on the Tanner creek sewer, criticized the action of the city council in holding up the bills presented by R. S. Greenleaf and himself for their work.

"There was an understanding," said Mr. Cunningham, "that we were to be paid by the city council, and also that we were appointed by them, although we were selected by the property owners. Both Mr. Sigler and Mr. Zimmerman insisted that we sign the report with the other two men, and we did so. The statement that our charge is excessive is absurd. The sum of \$25 per day for an expert is not too much. I will not consent to have my bill cut down to that of the other two men who are brick and stone masons."

On the bills were presented to the council Wednesday there was objection to the amounts charged. The bill of the former was for \$137.50, and that of the latter for \$162. They were ordered referred to the ways and means committee, where Mr. Zimmerman stated they would be cut down.

A. K. Bentley, one member of the committee, signed the bills yesterday. He stated that he did so for the reason that he thought the city had profited from the investigation and that the experts are entitled to \$25 per day for their work.

TO SAVE MILLION ON EACH WARSHIP

Economy to Be Exercised by Keeping Vessels Tied Up Out of Commission.

(Special Dispatch by Leased Wire to The Journal.) Washington, Dec. 24.—The naval general staff proposes to put naval vessels in reserve for the purpose of economy. It has been discovered that the cost of keeping a battleship in the water amounts to more than one million dollars a year and it is now realized that some provision must be made for maintaining two classes of ships in reserve and to this end, probably during the next session of congress, an appropriation will be required for maintaining ships in ordinary, under a system of serviceability which will admit of the use of the vessels without much delay.

The class will be kept at the navy yards under such conditions of readiness for duty at sea as will permit of their departure from port within 24 hours. This will be accomplished by having the ships in the care of a few officers and few men. The engines turned over frequently, the equipment stored in accessible places alongside when not actually on board. Another class will be in less readiness for service, probably far enough removed from the condition of duty to require a week or more to get the vessel away from the yard.

TAKE NOTICE!

Dr. B. E. Wright, the Painless Dentist, will give away the \$900 Automobile on Thursday evening, Dec. 29, at the Lyric Theatre, corner 7th and Alder streets, at 7:30 o'clock, P. M. Be sure and be present with your coupons, as it will positively be given to some coupon-holder in the house. Come now to have dental work done and get coupons.

Dr. B. E. Wright's Dental Office

342 1/2 Washington St., Cor. Seventh

A Life Insurance Policy for 50c

"WOODLARK" TOLU-FIR is a pleasant, palatable and safe remedy for coughs and colds—it is not a patent medicine—it won't take your physician's place, but it will stop that cough—purely vegetable—contains no opiates.

Don't Lie Awake Half the Night With Cold Feet

When a "WOODLARK" HOT WATER BOTTLE will bring you sweet repose and warm the cockles of your heart.

SPECIAL THIS WEEK 2-Quart, \$1.19 3-Quart, \$1.29

This Lumbago Belt

Has saved thousands of aches and many lives—it may save yours. A protection and comfort these wintry days. Any size, \$1.00

Horn's Standard Woven Flannel Belts, extra heavy, \$2.50

Moleskin Supporters for men and women, at once an aid to nature and a comfort to the weary, \$2.50.

Woodard, Clarke & Co.

WE RENT INVALID CHAIRS AND CRUTCHES.

MANY HUNGRY ONES FED BY CHARITY

Two Thousand Baskets Distributed Among Poor by Volunteers and Salvation Army.

FIERCE STRUGGLE IS MADE TO GET THE FOOD

Police Find That Many Celebrities Need Assistance, and Take Them to Station.

It is estimated that free Christmas baskets were served to 2,000 persons by the Salvation Army and the Volunteers of America yesterday. There were long lines of people waiting at the various posts. Old men and women mingled with young men and children.

There were thieves and honest men in the line—those who accepted and indeed sought charity by stress of pitiful misfortune and those who were mendicants by profession. An old man held the hand of a little girl, his granddaughter, as he pushed and fought his way to the door against strong, robust fellows. A very old woman, who carried a cane and mumbled incoherent jargon, brandished and used the stick to make her way through the crowd.

Tickets with coupons attached were issued Friday. The coupons were attached to baskets at the various posts, and tickets corresponding to the coupons given to worthy poor. A little girl reached corps No. 2, 265 Davis street, early yesterday morning. She seated herself in the huge hall and spoke to no one. She waited patiently till the long lines began to form in the street in the afternoon, then joined the crowd. There she learned that she must have a ticket to get a basket. She was heart-broken.

"I live in Sellwood," she told the officers. "My father and mother are sick. There are three children younger than I who are hungry. I want a basket and have no ticket."

She had spent her last nickel in car fare. A return ticket was given her and the promise of a basket if she returned this morning.

A woman with threadbare clothing but haughty air asked that a basket be sent to her home. She was indignant when her request was refused, and declared the army to be a "set of grafters." A little girl who went away basketless told of a father and three sisters who live on a scow in the river. All except herself are sick and destitute, she said.

The old woman with the cane and unintelligible jargon finally found her way through the crowds into the hall. There she selected a secluded corner and ordered her basket brought there. It was done, and she commanded all to leave her alone and not to approach until she called. She was requested to take the basket home before eating.

"Get out!" she screamed. "I washed 18 blocks to have a Christmas dinner all by myself. I got tired hearing Mollie beat Tom, her husband, to get his wages to buy 'hoose' with, and I ain't goin' to be bothered."

There was no interruption while she ate her basket's contents. A woman who ate her basket's contents. A woman who ate her basket's contents.

AGAINST SOUTHERN PACIFIC

(Special Dispatch by Leased Wire to The Journal.) Washington, Dec. 24.—Colonel Heur, engineer, U. S. A., has made an elaborate report to the war department on the Southern Pacific railway proposition to bridge Carquines straits, and in this report he holds that the bridge as proposed by the railroad would be an "unreasonable obstruction."

Over in Tillamook people allude to the Willamette valley or other parts of the interior northwest as "outside." But it looks as if Tillamook was on the "outside."