

THE DAILY NEBRASKAN

THIRTY-SEVENTH YEAR

EDITORIAL STAFF

Editor Ed Murray
 Associate Editor Don Wagner
 Managing Editors Willard Burney, Helen Pascoe
 News Editor Morris Lipp
 Howard Kaplan, Barbara Rosewater, Ed Stevens,
 Harold Niemann, Marjorie Churchill.

BUSINESS STAFF

Business Manager Bob Waldman
 Assistant Managers Frank Johnson, Arthur Hill
 Circulation Manager Stanley Michael

SUBSCRIPTION RATE

\$1.50 a year Single copy 31.00 a semester
 \$2.50 mailed 5 cents \$1.00 a semester mailed

ON THIS ISSUE

Desk Editor Burney
 Night Editor Churchill

Under direction of the Student Publication Board.
 Editorial Office—University Hall 4.
 Business Office—University Hall 4-A.
 Telephone—Day: B681; Night: B682, B333 (Journal).

1936 Member 1937
Associated Collegiate Press
 Distributors of
Collegiate Digest

Entered as second-class matter at the postoffice in Lincoln, Nebraska, under act of congress, March 3, 1879, and at special rate of postage provided for in section 1103, act of October 3, 1917, authorized January 20, 1922.

REPRESENTED FOR NATIONAL ADVERTISING BY
National Advertising Service, Inc.
 College Publishers Representative
 480 MADISON AVE. NEW YORK, N. Y.
 CHICAGO BOSTON SAN FRANCISCO
 LOS ANGELES PORTLAND SEATTLE

Cabbage, Horseradish Plants Offer Antiseptic; Just Tears

Russians Extract Enzyme Similar to Eye Fluid From Vegetables.

Editor's note: The following article on tears marks the first appearance in the Nebraska of Bruce Alexander. Mr. Alexander has consented to write a weekly feature on the latest developments in science. He is being given free rein to ramble among all the sciences for his topics. We feel that he is qualified.

By Bruce Alexander.
 Science is making tears. Less than a month ago, from the All Union Institute of Experimental Medicine in Moscow, came the announcement that Russian scientists had succeeded in extracting the precious enzyme, technically called lysozyme and commonly known as "tears," from cabbage and horseradish plants.

Not the least of the gifts bestowed by a wisely provident nature upon the members of an erring race is that of tears. Not as an outlet for pent-up emotion, nor yet in cajoling the unsympathetic spouse, but in the vitally important capacity of a natural antiseptic, they serve mankind fully and well. Day and night, asleep and awake, the one portal where infection constantly threatens is guarded with unrelenting vigilance.

Nature's Masterpiece.
 The eye, in addition to being the window of the soul, may justly be termed the window of the body. Here, as with no other organ, structure and function are revealed in detail. Here nerves, tissues and blood vessels are exposed to the physician's critical gaze, so

that, without interfering in the slightest with any physical process, action and reaction may be viewed at will. By means of the ophthalmoscope, a comparatively simple instrument, examination in minutest detail may be made of the retina, or innermost lining of the eye.

The ciliary process, small but mighty, which must alter the shape of the lens whenever the eyes are focused, may be seen and studied as it functions normally in the living, seeing eye. Unquestionably the most vital and important of the sense organs, the eye is more frequently exposed to harmful and destructive factors than any of the others.

Is Crying Worthwhile?
 How, then, is such an exposed, delicate, easily deranged mechanism as the human eye to be protected against the ever present threat of infection? It might be supposed that the processes which have evolved lids and lashes to guard against the more mechanical injuries might have produced some barrier to ward off the insidious onslaught of harmful organisms. And such is the case. The answer to this particular problem is tears.

For years the lachrymal fluid has been recognized as a most effectual lubricant for the eyelid in its passage across the eye; it has even been lauded for its success in floating foreign particles from the surface of the eyeball, but, until a few years ago, no investigation of its antiseptic property had ever been made. Re-

cently, however, considerable energy on the part of pathologists and bacteriologists has been directed toward this research. They find that most harmful organisms which gain access to the eye are protected by a hard, horny shell that renders them immune to the action of ordinary germicides.

Tears Contain Lysozyme.
 They find, also, that the protective layer is attacked and dissolved by an enzyme, namely lysozyme, which is present in the saline "tears" solution. The organisms, devoid of their armor, are quickly destroyed by the weakly antiseptic flow, and cease to present any threat to health or efficiency. Thus is our precious gift of eyesight made secure to us, against all the contingencies of a complex life.

Now, as so frequently in the past, man lends his ingenuity to assist in the natural process of disease prevention. It has been increasingly apparent that solutions of artificially prepared lysozyme, in proper concentration, would have great value in the treatment of conjunctivitis and a host of other optical disorders, but heretofore no source of the substance has been known.

Now for the first time, with the discovery of the chemical substance of tears in cabbage and horseradish by the Russians, commercial development and distribution of the product become possible. Man, it would appear, has taken one more step in that cooperation with nature which may ultimately effect his "release from dusty bondage into luminous air."

a change in color brightness is introduced, the animal becomes confused and dashes around on his stand as if his emotional machinery had been completely upset. In many instances he will refuse to jump.

And why is the scientist interested in the ability of animals to discriminate between colors? Dr. Walton has four reasons: first, because such a test contributes to genetic theories of behavior; second, because such information adds to our knowledge of the behavior of animals; third, because it gives an understanding of the nature of human color vision; and fourth, because it aids animal experimenters in the development of techniques of experimentation.

Mr. Rat Supplants Guinea Pig as Lab's Handy Andy in Experiments Made by Dr. Walton, Bornemeier

That long-tailed, bewhiskered rodent, the rat, has become the scientist's pet. Even the more effeminate women have learned to cuddle and adore him. In fact, Mr. Rat has practically replaced Mr. Guinea Pig as the chief laboratory "Handy Andy." Literally thousands of these animals are subjected to a wearisome number of experiments and studies each year by the technicians in the universities and colleges over the country.

Today the rat is a willing subject for every kind of experiment from vitamin testing to problems in mental and emotional reactions. Because he breeds prolifically, matures rapidly and physiologically is quite similar to the human being, this rodent has definitely established himself as a laboratory subject of top-notch calibre.

Mr. Rat 'Co-operates.'
 Out of fairness to the rat it must now be said that the latest scientific achievement of note coming from Nebraska laboratories was accomplished with the "co-operation" of some 40 members of this species. Up until the completion of this exhaustive piece of research by Dr. W. E. Walton and R. W. Bornemeier of the psychology department, the scientific world was pretty much agreed that the lower animals are color blind.

Now, after many weeks spent in studying this problem with the rat, the two Nebraska psychologists were able to prove before a national meeting of the psychologists in Denver that rodents are able to distinguish color, both on a brightness as well as a hue basis. While similar studies with dogs and cats have been made here at Nebraska, Dr. Walton, while convinced that these animals are also color conscious, says further research will be necessary before one can definitely state which colors they can perceive.

Can Tell Colors.
 The rat, however, is readily able to differentiate red from blue, red from green, yellow from blue and red from yellow. Due to the fact that blue and green and yellow and green are probably too closely associated on the color spectrum, the rodent is unable to distinguish the difference between these sets of colors.

The method used by the Nebraska men to determine whether rats see color is interesting and ingenious. But to Mr. Bornemeier, who has worked with more than 100 rats each day, sometimes getting up as early as 4 o'clock in the morning to complete a set of experiments before his attic laboratory became too hot, the experiment has lost much of its former attraction.

Most Inquisitive Animal.
 "The first step in the procedure," he says, "is to isolate several rats for several days, accustoming them to daily periods of handling. A few days before the tests are to begin no food is given them. When the rats are hungry and after they are accustomed to human handling they are taken to the apparatus room and allowed to familiarize themselves with the testing machine. The rat is a most inquisitive animal and unless his curiosity has been fully satisfied it is impossible to teach him anything."

There are really two parts to Dr. Walton's and Bornemeier's problem, one, testing the animals to distinguish the difference between color brightness and second, to choose between colors on a basis of hue alone. The same machine is used for both tests. It is a simple device, appearing somewhat like an enlarged stereopticon, with two long light chambers extending from the glass squares in front. By the use of color filters, various colored lights are produced which are the rat's signals to jump at the flash of the right color. The filters in use have been scientifically developed so as to admit only one homogeneous band of light. In front of the glass windows are box-like compartments into which the rat is taught to jump for food.

First, he is placed upon a small runway leading up to a platform horizontal to the compartments, but some several inches away. After he has been allowed to become acquainted with the apparatus and the small compartments in the series of tests are begun. The idea is to train the animal to jump into a compartment at the sight of a certain color somewhat in the fashion of the motorist who continues to advance if the green traffic light remains in his favor.

Food Provides Incentive.
 The rat soon ascends the runway platform to the small stage opposite the light compartments. The operator has already turned on his lights. Almost immediately and without hesitation the rat, knowing that food is to be found in the compartments, leaps into one of the boxes. If red, for example, is the positive light, food will be waiting for him if he jumps for the red box, but if he selects the blue, the floor of this compartment drops, and Mr. Rat goes tumbling into a net near the floor.

In other words, the rat soon learns that red is his correct signal. A correct choice is rewarded with food, while a mistake results not only in the loss of the reward, but in punishment as well.

Brightness Matters Not.
 But the skeptic may insist that the animal is not making his choice on the basis of color itself, but rather is jumping in the direction of one color because it appears brighter than another. In order to find out, then, whether the rat can distinguish between actual colors as well as brightness differences, Dr. Walton and Bornemeier conducted a series of brightness tests in which they finally were able to equate the brightness value of colors according to the rat's eye. This test was run in the manner described, except that the operator gradually increased the brightness of one of the lights while keeping the other constant.

When the brilliance of the one light approached that of the other they found that the rat began to make mistakes, which to the scientists meant that the two lights were approaching the same brightness. When 50 percent of the rodent's choices were incorrect the experimenters knew that the brightness values of the two colors were the same. The rat actually was unable to distinguish the difference in the brightness values of the two colors.

Determine by Color.
 Once the brightness of the colors has been equated, it is necessary to employ a new group of rats. The job now is to train them to their choice on the basis of color alone. If the rat can be trained to select the red light in place of the blue, after the brightness factors of both lights have been equated, then the scientists feel that they have proven that the animal is truly determining his selection on the basis of color.

According to Bornemeier, who has completed much of the experimenting while working for his master's degree, it takes the rat about 65 trials to "catch on" when a brightness test is made. When tests are being run to determine color discrimination Walton and Bornemeier found that it required more than 600 trials before the animals were thoroughly trained to select on the basis of color. The farther apart the colors are on the scale the easier it is for the rat to pick them out. They found that it took an average of 200 trials before rats could distinguish between red and blue and red and green and more than 500 trials before they could pick blue from yellow and red from yellow. As for combinations of blue and green and yellow and green, the Nebraskans discovered that after 800 trials the rats were still baffled and unable to make correct selections.

Refuse to Jump.
 "Once after the rat is able to distinguish red from blue he will be able to do so even after one color has been made so dim as to make it impossible for the operator to see the rat in motion," says Bornemeier. "If too radical

Two Young Men.

'...He Gave Me a Hell of a Grade, But I Liked Him.'

Harold W. Stoke left the university yesterday on a year's leave of absence. We feel that Nebraska lost a good man. It is our purpose here to express the vehement hope that this loss is but temporary.

Dr. Stoke came to this campus seven years ago. During his stay he was voted one of the three most popular professors. In Dr. Stoke's case this honor carried no professional opprobrium. He wasn't easy, he was interesting. He made his impression by geniality, a deep seated concern in the real welfare of his students, and a telling manner of teaching something significant.

On hearing that Dr. Stoke was leaving, the Nebraskan began to gather quotations from his students and colleagues expressing an estimate of the man and a sample of the attitude of the campus toward him. Student bits in response to this call are represented by "He taught me something," "I'm glad I got his public opinion course before he left," "He gave me a hell of a grade, but I liked him," "He had a dry humor that made classes a privilege."

When Professor Senning, head of the political science department of which Dr. Stoke was a member, was asked for a quotation, he pointed out that Dr. Stoke was given a leave of absence on the one condition, which he himself asked for, that he return next fall. His successor was hired with this in mind. The department considers his opening in TVA an opportunity for valuable experience in the field.

"Don't print Stoke's obituary," Professor Senning emphasized. "He's coming back. Don't say anything to make him think he's thru. We need him."

He Is Young. He Has an Idea. Much Is Expected Of Him.

William G. Tempel, another enterprising young man, has come up to the university from Lincoln high. He has brought one main idea to the school of music where he will do his work. His idea is to build an organization to be known as the University Singers, a mixed chorus of 40 voices.

There is need for such a choral group on the campus. Many university functions will be embellished by the standard a cappella music which Mr. Tempel intends his University Singers to render. And this group represents an opportunity for further vocal training for students.

Mr. Tempel left an enviable record at Lincoln high where his choir won numerous state championships. He has worked with a number of student singers now in university and intends making them a nucleus around which to form his University Singers. Since his venture was not launched until this fall, provision for it was not made in the catalog. Registration is still open for students in

chorus work as well as for others interested.

A cappella music will be sung, but it will not be confined to church music alone. Mr. Tempel is in full co-operation, not competition, with John M. Rosborough, director of the Great Cathedral choir. His is an effort toward making the "Messiah" an all student production. He is young. He has an idea. Much is expected of him.

Panic, Publicity, and Polio.

... a few hundred cases among many million people.

The following abstract is taken from an editorial printed in the Journal of the American Medical Association under date of Sept. 18, 1937. It gives information relative to poliomyelitis (infantile paralysis) which every student should know because it represents the latest and best thought of scientists and medical men relative to this disease.—Rufus A. Lyman, Director Department Student Health.

In civilized communities, people should no longer be stricken with panic in the presence of disease. Much has been learned concerning the causes, methods of prevention, diagnosis and treatment of many of the infectious diseases. Patients are isolated. Modern methods of prevention are used to immunize those who are exposed. Known contacts are kept under control and in most instances after a reasonable time the disease disappears from the community or returns to what is called its normal incidence.

Toward poliomyelitis in the United States a somewhat abnormal point of view seems to have developed. The total incidence of that disease in any one year in the entire country is certainly less than 10 percent of the number of cases of any one of the other common infectious diseases. Yet because poliomyelitis is a visibly crippling disease, panic appears in the minds of the public, which is frequently reflected in the statements and actions of public officials. Yet if ever rationality was needed it is demanded in the approach to this problem.

How About Scarlet Fever?
 One wonders, for example, whether the number disabled as far as their hearts, kidneys and ears are concerned is any less from scarlet fever than the number of cripples of the arms and legs affected by poliomyelitis. Yet people everywhere are far more afraid of poliomyelitis, not knowing that the permanent "heart cripple" constitutes a much more serious problem. It is possible to splint, to re-educate and to rehabilitate a paralyzed limb. We have not yet found any methods of splinting or re-educating a damaged heart, and the rehabilitation of the "heart cripple" is indeed difficult.

Men fear most what they do not understand. Let physicians and health officers alike admit that there is much that is not known concerning poliomyelitis. We have not yet determined the exact cause of this disease. We know something concerning possible methods of transmission but we do not know with certainty exactly how it is transmitted to most human beings. We seem to know that considerable numbers of people have a natural resistance to the disease so that they would probably not be infected even if exposed.



They're rightly named—the **ARISTOCRAT!**

These Handsome **Suede COATS** with ACTION FIT by Albert Richard

The Aristocrat is tailored like a fine, custom-made coat in double breasted style with patch pockets, belted back and cleverly designed gussets. The body and sleeves are of fine suede, the collar and facing of smooth leather. See this and many other coats at Magee's.

MAGEE'S

\$10 to \$22.50

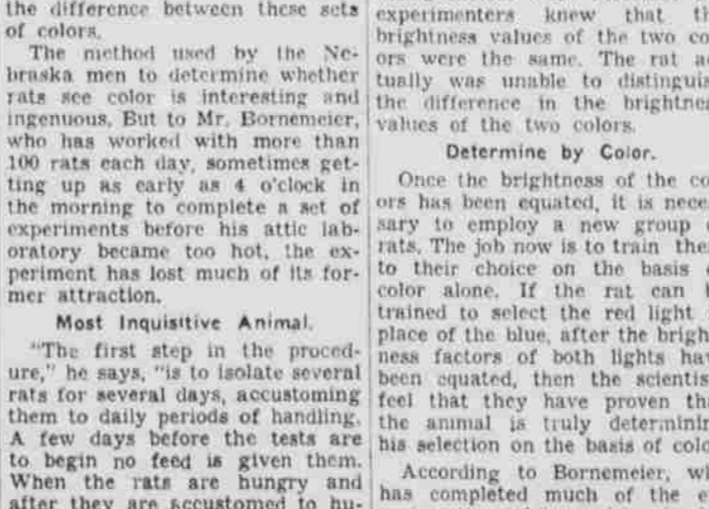


NEWS PARADE by Marjorie Churchill

Fire-Works Over Nanking.
 Seven Americans remain in Nanking today. Departure of the embassy staff followed soon after warnings by Japanese officials that air raids would begin today at noon. Citizens took refuge on warships in the Yangtze. British, American and French warships, remain however, and Japan is warned not to fire upon these vessels. Meanwhile, the far eastern advisory committee meets today, with representatives from each country with property interests, and the action of Japan in today's raids may have a vital part in the decision made.

Britain appeals for United States, German, and Italian aid in maintaining world peace. Foreign Secretary Anthony Eden, harassed and admittedly worried, issues conciliatory proposals.


Adding weight to the conciliatory plea and dispelling any illusions of unpreparedness comes the accompanying announcement that "Britain is rearming to the hilt, and will continue to do so as long as peace is threatened."



BETWEEN TWO WOMEN

FRANCHOI JONE
 MAUREEN O'SULLIVAN
 VIRGINIA BRUCE

EXTRA! For Lafts
 "DuBarry Did All Right"
 Comed
 Betty Boog Says—
 "Service With a Smile!"



STUART
 Next Year's Biggest Musical . . .
 Now!
 Eleanor POWELL
 Robert TAYLOR

BROADWAY
MELODY of 1938

George MURPHY with Binnie BARNES
 Buddy EBBEN Sophie TUCKER
 Raymond WALBURN Willie HOWARD
 JUDY GARLAND

Also Popete's News

RAY RAMSAY TO DISCUSS FRESHMAN ORIENTATION
 Alumni Secretary Will Talk To New Men Wednesday In Y.M.C.A. Meeting.

"How to be happy though a Freshman" will be expounded Wednesday night by Nebraska's inimitable alumni secretary, Ray Ramsay, perennially in demand as a Freshman first nighter. As his speech subject implies, only the men may profit under Ramsay's tutelage since he will be directing his quips toward members of the University Y. M. C. A. in that organization's first meeting of the year.

Dan Williams, Y. M. C. A. president, especially urges all first year men to attend this "get acquainted" meeting which starts in the Temple building at 7:15 o'clock.

Seventy-three nationalities are represented among the 8,800 students at Boston university.

SUN
 2 Features
 Last 2 Days

Fly Over the Edge of the Earth — with — **PAT O'BRIEN** Beverly ROBERTS in **"CHINA CLIPPER"**

Feature No. 2
 Exciting Romance
"MIDNIGHT COURT"
 ANN BYRAN JOHN LITTEL

MATINEE 10c
 EVENING 15c

LIBERTY
 Last Times Tuesday

ZANE GREY'S **"FORLORN RIVER"**
 Plus "Legion of Music Men"

WED.—Two You'll Like
 "Pigskin Parade" and "Sea Racketeers"

TODAY!
 "GIRL OF THE LIMBERLOST"
 "FRECKLES"
 ...and new her best

Gene Stratton Porter's **MICHAEL O'HALLORAN**
 with Warren Hull Wynne Gibson Jackie Moran

AG CAMPUS MONTHLY
 SEEKS STAFF MEMBERS

Applications Must Be Filed In Ag Hall Room 301 By 5:00 Today.

Applications for numerous vacant positions on the Cornhusker Countryman, agriculture college monthly publication, will be accepted until 5 p. m. today. All students interested in working on the publication should present their application in room 301 of Ag hall.

According to Don Magdanz, this year's editor of the publication, the following positions are to be filled:
 Assistant agriculture editor.
 Art editor.
 Business manager.
 Three assistants in the editorial department.
 Three assistants in the business department.
 Three assistants in the circulation department.

It Might Be Found in Books
 (Norman Forester in the American Review.)

If it be true, as I believe, that the mind and will of the 20th century man are sick, it behooves us not to treat the symptoms, as the social planners propose, or to ignore the disease, as the apostles of adult activities and survey courses (in the universities and colleges) propose, but to seek to cure the disease.

That disease, I think we must agree with Irving Babbitt and President Hutchins, is chaos, its symptoms are bewilderment, drifting, loss of standards, loss of appetite for life. Originating as a germ of doubt, it passes by easy stages from general skepticism to self-destruction. The disease is now in the fulfilarian stage, mixed with insanity, but is not quite so far advanced in America as in Europe.

The remedy is the adoption of a humanistic or religious working philosophy, and the cure, it may conceivably turn out, will not be completed until we have built up a metaphysics or a theology as impressive as those of ancient Greece and the middle ages . . . And the first step is the reintroduction into the course of study (in the small liberal arts college and the liberal arts colleges within the universities) of the great books of the world.—From Omaha World-Herald.

OLSEN and JOHNSON
 mat. 15c
 20c eve.

ORPHEUM

Lincoln
 NOW! 3 Days Only!
 The Thrill Successor To "MEN IN WHITE"
 Married to one Woman . . . in love with another . . .

... he must choose

STUART
 Next Year's Biggest Musical . . .
 Now!
 Eleanor POWELL
 Robert TAYLOR

BROADWAY
MELODY of 1938

George MURPHY with Binnie BARNES
 Buddy EBBEN Sophie TUCKER
 Raymond WALBURN Willie HOWARD
 JUDY GARLAND

Also Popete's News